EXPLORING CRISIS COUNSELLOR HELPING STYLES IN ONLINE CRISIS COUNSELLING

by

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Abstract

Crisis counselling via suicide prevention hotlines has demonstrated reduced distress and suicidality in individuals seeking support. Text-based online crisis counselling services (i.e., chats) are becoming an increasingly common way to support suicidal individuals in crisis. Existing research has not yet established a clear understanding of the crisis counselling process and how it relates to outcomes like reduced distress and suicidality. The purpose of this study was to build on current research by examining patterns of different crisis counsellor helping styles and exploring their associations with chatter outcomes, with the goal to develop a theoretical stage model of online crisis counselling. This study also explored whether crisis counsellor behaviours considered to be unhelpful were associated with a lack of chatter improvement. Past chat transcripts \((N = 100)\) from a local crisis intervention centre were collected and coded for different crisis counsellor helping styles (i.e., active listening, collaborative problem-solving, and unhelpful) and chatter outcomes (i.e., affect, suicide risk, and suicide ideation). Analyses of variance were performed. Results indicated that active listening and collaborative problem-solving styles fluctuated over the course of chat, and some patterns of different crisis counsellor behaviours were associated with chatter outcome. Unhelpful crisis counsellor behaviours were associated with lack of chatter improvement. These findings contribute to the growing body of literature on online crisis counselling by generating a theoretical model of what the online crisis counselling process could look like, and how it may support suicidal individuals. Theoretical and practical implications are discussed.
Lay Summary

Crisis centres operate so that individuals in distress can speak to a crisis counsellor, especially when they are feeling suicidal. While these services generally use phone lines, more recently crisis centres have established websites where individuals can talk to a crisis counsellor in a live chat format. This form of online crisis support is still relatively new and not much has been studied about how the process unfolds. The purpose of the present study was to examine the behaviours of crisis counsellors supporting suicidal individuals in an online crisis counselling setting. The findings indicate that crisis counsellors use different techniques at different stages in online crisis counselling, and that particular patterns of techniques could be associated with decreased distress and suicidality in chatters.
Preface

This thesis is original, unpublished, independent work by the author, Agnieszka M. Kotlarczyk, using information obtained in collaboration with the Vancouver Crisis Centre and supervised by Dr. Daniel Cox. The research was covered by the UBC Research Ethics Board Certificate number H15-00724.
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To all those who have struggled with suicide, and the people who support them
INTRODUCTION

Crisis counselling via suicide prevention helplines has demonstrated reduced suicidality and distress in individuals seeking support (Gould, Kalafat, Harris-Munfakh, & Kleinman, 2007; Gould, Cross, Pisani, Munfakh, & Kleinman, 2013; Kalafat, Gould, Munfakh, & Kleinman, 2007; Mishara et al., 2007b). These services are considered a crucial part of global public health action that is imperative in combating suicide rates and mental illness (World Health Organization, 2014, p. 9). More recently, text-based online crisis counselling services (i.e., chats) have become a popular way for suicide prevention centres to provide crisis intervention. Over half a million chats have been accepted annually by chat services spanning the globe (113 Zelfmoord Preventie, 2016; ConnexOntario, 2017; Department of Veterans Affairs, 2017; Draper, 2015; Lifeline Australia, 2017).

While online crisis counselling is rapidly expanding, existing research has not yet established a clear understanding of how this process unfolds, and how it may relate to desired outcomes like reduced distress and suicidality. Two crisis counsellor helping styles that have been linked with outcomes (e.g., decreased suicide risk) in crisis intervention are active listening and collaborative problem-solving (Gould et al., 2007; Gould et al., 2013; Kalafat et al., 2007; Mishara & Diagle, 1997; Mishara et al., 2007a; Mishara et al., 2007b; Mokkenstorm et al., 2016). However, it remains unclear which helping styles at which points in time are beneficial (e.g., Hvidt, Ploug, & Holm, 2016; Zalsman et al., 2017).

Researchers in other helping contexts have found that certain counsellor behaviours are more effective at specific points during counselling than others (Hill, 2014; Tracey, 2002). In stage models of helping, counsellors who can progress through stages successfully are counsellors who can use certain techniques with clients once the time is right, maximizing the
effectiveness of counselling. In phone-based crisis counselling, a stage model of helping has been developed with a specific focus on improving crisis counsellors’ suicide risk assessment (Gould et al., 2013). Althoff, Clark, and Leskovec (2016) found that certain crisis counsellor behaviours differed in effectiveness based on when they were used in interactions with users of text message-based crisis counselling. At this time, no known study has developed a stage model of helping in the context of online crisis counselling. Furthermore, studies like Mishara et al. (2007a; 2007b) and Mokkenstorm et al. (2016) present their findings as crisis counsellors using one type of helping style, rather than investigating whether different helping styles are used in tandem and change over the course of the online counselling process.

This study aimed to build on current research by examining the patterns of different crisis counsellor helping styles and exploring their possible associations with chatter outcomes in online crisis counselling. We sampled past chat transcripts from a local crisis intervention centre and measured different crisis counsellor helping styles and chatter outcomes. The present study contributed to the growing body of literature on online crisis counselling by generating a theoretical model of what the online crisis counselling process could look like, and how it may support suicidal individuals. This model aimed to provide a deeper understanding of the online counselling process by showing how crisis counsellor behaviours are dynamic and change over the course of chats. This dynamic model could also inform how to improve outcome in chat services, help establish credibility as a service, and impact future service delivery.

**Study Overview**

This study examined the use of crisis counsellor helping styles and chatter outcomes in chats. Crisis counsellor behaviours were conceptualized as two general helping styles: active listening and collaborative problem-solving, with different behaviours comprising each helping
style. The study also examined an “unhelpful” helping style, or behaviours that—based on past research—would be expected to be linked to negative outcomes. We assessed chatter outcome via measures of change in affect, suicide risk, and suicidal ideation. This research quantitatively collected and analyzed data by coding variables before conducting analyses of variance to explore crisis counsellor behaviour patterns and potential associations with outcome. The variables examined ultimately helped provide deeper insight into online crisis counselling, and helped establish a theoretical stage model that captured the dynamic nature of online crisis counselling.

**Research Hypothesis and Questions**

This study examined the following research hypothesis and questions:

Hypothesis 1: Use of different crisis counsellor helping styles will fluctuate over the course of the chat.

1a. Crisis counsellors’ use of active listening will *decrease* from the beginning to the end of chats.

1b. Crisis counsellors’ use of collaborative problem-solving will *increase* from the beginning to the end of chats.

Research Question 1: Were crisis counsellor helping style patterns different between chatters who improved and chatters who did not improve?

Research Question 2: Were crisis counsellor behaviours that have been previously identified as unhelpful negatively associated with chatter improvement?
CHAPTER 2: LITERATURE REVIEW

Need for Online Crisis Counselling Research

Over half a million chats have been accepted annually by chat services across the globe (113 Zelfmoord Preventie, 2016; ConnexOntario, 2017; Department of Veterans Affairs, 2017; Draper, 2015; Lifeline Australia, 2017). Despite this significant volume, the current literature is limited in defining theories of the online crisis counselling process, and instead has mainly explored outcomes and chatters’ motivation to use this particular form of crisis counselling. While studies have observed positive outcomes generated from online chat services, the helping processes that facilitate these changes have not been well examined (e.g., Fukkink, 2011; Mokkenstorm, Huisman, Kerkof, & Smit, 2013; Mokkenstorm et al., 2016; Williams, Bambling, King, & Abbott, 2009). Recent systematic reviews of helplines have also highlighted that findings are limited in regards to which specific components of crisis counselling reduce distress and suicidality (Hvidt et al., 2016; Zalsman et al., 2017). This issue is magnified when considering that chatters tend to disclose higher rates of suicidality than individuals using phone-based services (Gilat & Shahar, 2007; Mokkenstorm et al., 2013).

While existing research on online crisis counselling is largely exploratory, findings have shown encouraging signs of counselling processes unique to an online setting. Online crisis counselling has been seen as a distinct modality, particularly due to the notable lack of non-verbal and verbal cues (e.g., body language, voice tone, utterances) (Mallen, Vogel, Rochlen, & Day, 2005). Furthermore, chatters have reported having an increased sense of anonymity; they feel less inhibited and more comfortable to disclose more, and they have more power in deciding how long they use chat for, as they can terminate the session at any time (Suler, 2004a; 2004b). Due to these unique characteristics, certain goals of crisis counselling (e.g., reducing distress and
suicidality) may not be achieved in exactly the same way as in other counselling contexts, and online crisis counsellors may subsequently engage in a distinctive helping process.

**Crisis Counsellor Helping Styles**

Crisis counsellors engage in various helping behaviours to facilitate desired outcomes for clients in crisis. Mishara and Diagle (1997) examined helping approaches of phone-based crisis centres across the United States and factor analytically derived two helping styles of crisis counsellor behaviours: an active listening helping style and a collaborative problem-solving helping style. Subsequent studies validated these helping styles and examined their use in actual practice and their relation to short-term outcomes in callers (Mishara et al., 2007a, 2007b). Both of these styles were linked to favourable outcomes, despite the crisis centres studied having identified as using either an active listening or collaborative problem-solving approach to clients. These specific helping styles were also examined in online crisis counseling (Mokkenstorm et al., 2016), and were similar to crisis counsellor behaviours examined in earlier studies on online crisis chats (Bambling, King, Reid, & Wegner, 2008; Fukkink, 2011; Williams et al., 2009). Both helping styles are discussed below in terms of their characteristics and relation to client outcome.

**Active listening.** Active listening has been a long-standing paradigm in the counselling field. First proposed by Carl Rogers (1957), it has become a mainstay in counselling training and practice (Wilkins, 2015). This helping style conceptualizes the client as the expert of their situation, rather than the counsellor. Instead of counsellors offering guidance or direction on how to resolve client issues, they instead non-judgementally attune to what clients say and support clients in taking the lead on decision-making. Counsellors use this helping style by demonstrating that they are listening and inviting clients to continue speaking. By paraphrasing
and reformulating what clients have told to them, counsellors communicate their understanding of the client’s situation, with less emphasis on suggesting ways to generate change.

The first known crisis hotlines originated within the same decade as Rogers’ (1957) development of the active listening approach. In the United Kingdom, the Samaritans hotline was established with the aim of offering callers a safe, non-judgemental and confidential place to be listened to (Day, 1974). Early evaluations of crisis intervention considered whether crisis counsellors were able to practice empathy and a sense of respect, and indicated that more experienced telephone crisis counsellors exhibited these traits more frequently when compared to novice crisis counsellors (Carkhuff, 1968; D’Augelli & Levy, 1978; Gray, Nida, & Coonfield, 1976).

Use of active listening has persisted to this day, reflected within organizations indicating that their crisis counselling offers a safe, non-judgmental and confidential place to be listened to (Canadian Association for Suicide Prevention, 2017; National Suicide Prevention Lifeline, 2017; Samaritans, 2017). The current definition of active listening in crisis counselling research has mirrored the intentions of original crisis hotlines and Rogers’ theory; active listening is viewed as primarily non-directive, and includes crisis counsellor behaviours such as questions about emotions, reformulating chatter’s statements, reflecting emotions, and empowering callers to decide their own action plan (Mishara & Diagle, 1997; Mishara et al., 2007a).

Use of an active listening helping style has been linked to short-term outcomes deemed important by crisis intervention centres, such as decreased negative mood, decreased suicidality, and increased situation management (Gould et al., 2007; Kalafat et al., 2007; Mishara et al., 2007b). Crisis counsellors’ expressed empathy and sense of respect have been related to more favourable outcome scores in crisis callers, and empathy levels have corresponded to
improvement in emotion, (e.g., hopeless to hopeful, and decreased levels of crying and depressed mood) (Mishara et al., 2007b). The most powerful predictors of positive outcome have included validating emotions, moral support, and good initial contact, while inadequate empathy and disrespect to callers has been associated with undesirable outcomes. When asked for feedback, callers have indicated that the most helpful crisis counsellor behaviours were listening and allowing time for the caller to talk (Coveney, Pollock, Armstrong, & Moore, 2012; Kalafat et al., 2007). Mishara et al.’s (2007b) crisis counsellor helping styles were also studied by applying them to online chat services and were significantly associated with similar chatter outcomes (Mokkenstorm et al., 2016).

**Collaborative problem-solving.** Collaborative problem-solving is a frequent approach to one of the most common purposes of counselling: people seeking counselling want to address problems they are unable to manage on their own. Counsellors can work together with clients to create potential solutions to these concerns. Problem-solving has been established as a coping mechanism in response to stress (Lazarus & Folkman, 1984; D’Zurilla & Nezu, 2010); individuals may not be as capable of problem-solving on their own when in a distressed state, thereby needing the support of counselling. Helping styles based in cognitive-behavioural approaches are characterized by counsellors structuring counselling sessions with questions, creating goals, providing information to clients, and generating ideas to manage the presenting issues (Truscott, 2010). Using these techniques supports clients by focusing their attention on how to actively generate strategies to manage their problem.

In contrast to the Samaritans helpline, the rise of crisis intervention hotlines in the United States appeared to adopt an emphasis on supporting individuals to generate short-term responses to crisis. The problem-solving approach was central to the first American suicide prevention
centre established in the late 1950s (Shneidman & Farberow, 1965). Their helping approach included defining problems, exploring current coping, generating possible solutions, and action planning (Farberow, Heilig, & Litman, 1968). Early evaluations established the links between this approach to positive outcomes (Miller, Coombs, Leeper, & Bardon, 1984).

Use of collaborative problem-solving continues in current crisis counselling, especially in the context of suicide risk assessment and intervention (Gould et al., 2013; Mishara et al., 2007b). Crisis counsellors using this helping style are likely to structure the session by asking questions about the chatter’s situation and steer the conversation towards possible solutions, more so than an active listening helping style (Mishara & Diagle, 1997; Mishara et al., 2007a). Collaborative problem-solving is characterized by crisis counsellor behaviours like asking questions about facts and resources, suggesting resources, and offering ways to solve problems and take action (Mishara et al., 2007a). However, crisis counsellors using this style do not assume an “expert role,” but instead have joined forces with the chatter, reinforcing the collaborative aspect of the approach.

Collaborative problem-solving behaviours such as providing options for concerns, helping clients think more clearly, and creating new perspectives are all crisis counsellor behaviours that callers have found helpful (Coveney et al., 2012; Gould et al., 2007; Kalafat et al., 2007). In phone-based crisis counselling, collaborative problem-solving has been positively associated with change in emotional dimensions (i.e., from feeling confused to more decided, from more hopeless to hopeful, from sad to happy); callers also felt more resourceful, compared to feeling more helpless at the beginning of calls (Mishara et al., 2007b). Improvement in psychiatric symptoms, depression, and satisfaction with life was observed when solution-focused brief therapy was used in a suicide hotline context, an approach which emphasizes collaborative

**Stage Models of Crisis Counselling**

The current literature demonstrates that using either an active listening or collaborative problem-solving helping style has been linked to favourable outcomes in crisis counselling (Mishara et al. 2007b; Mokkenstorm et al., 2016). However, research has not examined whether crisis counsellors use a combination of both active listening and collaborative problem-solving throughout crisis counselling. Furthermore, using a certain crisis counsellor helping style could be more advantageous than the other style, depending at which point it is used in a crisis counselling session. Users of crisis centres have identified more helpful counsellors as being more verbally active, capable of exploring all parts of the caller’s problem, providing structure in calls, and addressing both emotional and practical concerns of calls (Bobevski, Holgate, and McLennan, 1997). Examining how different helping styles change over time could result in a more comprehensive approach to online crisis counselling.

Numerous theoretical frameworks conceptualize traditional counselling in stages, underscoring that counselling is a dynamic process, rather than a static one (Carkhuff, 1968; Egan, 2014; Hill, 2014; Rogers, 1957; Tracey, 2002). Stages indicate how a counsellor’s helping patterns change, depending on whether counsellors are in the beginning, middle, or end of the counselling process. Applying stages in counselling can promote increased counsellor awareness of the helping process and facilitate interventions with increased intentionality (Safran & Muran, 2000). Therefore, examining how crisis counsellor behaviours naturally unfold in a chat-based setting would be highly impactful in terms of understanding how helping patterns fluctuate in
actual practice and inform the development of a stage model. Some training programs have used theoretical stage models to teach crisis counsellors when to use specific skills related to suicide risk assessment (Gould et al., 2013; Halderman, Eyman, Kerner, & Schlacks, 2007). However, these stage models were developed to improve crisis counsellors’ use of suicide risk assessment skills – not to capture the patterns of crisis counsellor interactions with their clients.

Stage models of counselling imply that certain helping behaviours are more beneficial at certain stages (Hill, 2014; Tracey, 2002). Helpers can use stages to focus on being more deliberate with the varying techniques they use at various points in counselling sessions, to maximize effectiveness. Studies related to psychotherapy, phone-based crisis counselling, text message-based crisis counselling, and suicide risk assessment have examined how different counsellor behaviours can be more effective at certain points in counselling (Althoff et al., 2016; Echterling & Hartsough, 1989; Gould et al., 2013; Hill, 2014). For example, crisis counsellors who responded to phone texts from distressed users were linked to more successful outcomes when they managed to move effectively through stages of problem exploration to problem-solving with clients (Althoff et al., 2016). Further, phone-based crisis counsellors trained to assess suicide risk using the Applied Suicide Intervention Skills Training (i.e., a stage model) were linked to more positive client outcomes and a more consistent quality of support than crisis counsellors who were not trained using the stage model (Gould et al., 2013).

Based on the reviewed research, it is reasonable to speculate that crisis counsellors may use different helping styles at different stages in crisis counselling. An active listening helping style aims to reduce immediate distress and build a therapeutic relationship, indicating the likely importance of this helping style in the beginning of the helping process. In general counselling practice, therapists have focused on using supportive strategies when specifically aiming to
reduce distress and immediate symptoms, rather than interventions that interpret and analyse client issues (Milbrath et al., 1999). Use of empathy has been linked to emotional improvement when recounting distressing events (Burleson & Goldsmith, 1998; Jones & Wirtz, 2006). Behaviours where counsellors provide clients with a general sense of validation (i.e., asking questions, recognizing and validating client emotions, providing encouragement) have been strongly associated with increased therapeutic alliance (Duff & Bedi, 2010). The importance of active listening is further highlighted when its absence is linked to hindered therapeutic alliance, which can compromise outcome later on in the counselling process (Bedi, Cook, & Domene, 2012).

In comparison to active listening, the main goals of a collaborative problem-solving helping style in counselling are to focus clients and generate strategies to manage to their problem. This helping style may be especially effective if used after an active listening helping style, because the therapeutic alliance has developed. Collaborating with clients to take action or problem solve has elicited positive outcomes in counselling interventions where there is a specific focus established, such as cognitive-behavioural therapy and brief solution-focused therapy (see Gingerich & Peterson, 2013, for review). Collaborative problem-solving has also been implemented as an effective strategy when decreasing suicidality and safety planning – researchers have argued that a collaborative stance is more beneficial than assessments where the clinician takes the “expert role” (Jobes, 2012; Stanley & Brown, 2012). Collaboration with suicidal clients includes counsellors being willing to ask questions, provide ideas for coping, and suggest resources which can then facilitate safety planning. This approach was preferred by clients and also yielded reduced suicidality when applied by practitioners (Ellis, Green, Allen, Jobes, & Nadorff, 2012; Ellis, Rufino, Allen, Fowler, & Jobes, 2015; Thomas & Leitner, 2005).
**Unhelpful Counsellor Behaviours**

While the main focus of the crisis counselling literature has been examining which counsellor behaviours are associated with favourable outcomes, there is some research on which approaches appear unhelpful. Within telephone crisis intervention, Mishara et al. (2007a) identified a “negative style” of crisis counsellor behaviours, which included telling callers what to do, challenging callers, and offering personal opinions to callers. This unhelpful approach was linked to a lack of empathy and respect towards callers, being hung-up on by callers, and was not associated with positive outcomes (Mishara et al., 2007b; Mokkenstorm et al., 2016).

When studied in the traditional counselling setting, outcomes of these behaviours reveal mixed evidence. Behaviours that clients experience as hindering therapeutic alliance have included non-genuine counsellor engagement or disengagement, inaccurate counsellor statements, and unwanted counsellor directiveness (Bedi et al., 2012). Contradictory findings have been observed regarding directive statements, self-disclosure, and confrontations (see Williams, 2002, for review). The crisis counselling setting may be where the use of such behaviours is particularly discouraged; furthermore, in an online setting, without the aid of verbal and non-verbal cues, such techniques may be experienced by chatters as even more disconnecting and damaging.

**The Present Study**

There is a need to more clearly define the process of online crisis counselling. Currently, online crisis counselling models have been directly based on existing phone-based crisis counselling models (Mishara & Côté, 2013). However, there is mixed evidence on whether particular characteristics of online counselling lessen or improve effectiveness compared to other forms of counselling (Bambling et al., 2008; Gilat & Shahar, 2007; King et al., 2006; Williams et
al., 2009). No known studies have explored the possibility of a chat-specific model of crisis counselling based on actual chats, though researchers have speculated that there are stages unique to an online counselling process (Fukkink, 2011; Williams et al., 2009).

The purpose of this study was to explore how different online crisis counsellor helping styles were used over the course of chat and whether certain patterns of helping were linked to chatter outcome. This research used analyses of variance to examine the chat process. This study had the following hypothesis and research questions:

Hypothesis 1: Use of different crisis counsellor helping styles will fluctuate over the course of the chat.

1a. Crisis counsellors’ use of active listening will decrease from the beginning to the end of chats.

1b. Crisis counsellors’ use of collaborative problem-solving will increase from the beginning to the end of chats.

Research Question 1: Were crisis counsellor helping style patterns different between chatters who improved and chatters who did not improve?

Research Question 2: Were crisis counsellor behaviours that have been previously identified as unhelpful negatively associated with chatter improvement?
CHAPTER 3: METHOD

Data Collection

**Retrospective chart review.** This study collected data from the Vancouver Crisis Centre and obtained their approval to study past chats transcripts, which were selected from their intranet server. The design was considered a retrospective chart review, meaning that we used data that had been collected earlier for a different purpose other than research (Worster & Haines, 2004). This study was approved by the Human Research Ethics Board for the University of British Columbia on October 23, 2015. The collection of chat transcripts was in accordance with a disclaimer within the privacy policy regarding the use of chats for research purposes, which was added on September 18, 2014 to the chat services website.

**Participants.** One hundred chat transcripts (i.e., chats) were selected for data analysis according to the following inclusion and exclusion criteria.

**Inclusion criteria.** Chats conducted between January 1, 2015 and December 31, 2015 were selected. Chatters must have stated their ages as 19 years or older on the website’s pre-chat survey (see Appendix A). Chats needed to be at least 30 minutes in duration to establish a reasonable amount of crisis counsellor and chatter interactions. Chatters also must have said “yes” to current suicidal ideation within the first third of the chat to allow for considerable exploration of suicidality. Only new chatters were selected (i.e., chatters who to the Centre’s knowledge had not accessed the chat service before).

**Exclusion criteria.** Chats which chatters intended as pranks were not included; this determination was made based on crisis counsellors’ documentation.

**Chatter characteristics.** The sample consisted of 100 chat transcripts with chatters that disclosed suicidal ideation during chat. Chatters identifying as female made up 73% of the
sample, followed by male chatters making up 19%, and transgender chatters making up 3%; the remaining 5% of the sample did not report their gender. Chatter age ranged from 19 to 61 years, with a mean of 30.08 years (SD 9.75 years). Chat duration ranged from 33 to 215 minutes, with a mean of 75.80 minutes (SD 31.46 minutes). In addition to having suicidal ideation during chat, 64% of the sample reported having a plan to kill themselves and 76% had experienced past suicidal ideation (see Table 1).

**Measures**

*Crisis counsellor behaviours.* The Psychodynamic Interaction Coding (PIC) System was used to code for crisis counsellor behaviours that constituted each crisis counsellor helping style (McCullough, 1988). Researchers use the PIC by coding behaviours to analyse variables within one type of treatment, as well as to compare behaviours across different treatments (McCullough, 1988). Each complete sentence clause said by the counsellor is coded as a behaviour. Researchers have demonstrated sufficient to good inter-rater reliability ($R_s = .55 – .90$) for the PIC (McCullough et al., 1991). It has produced significant associations between counselling process and outcome in past studies (Taurke et al., 1990). Based on the conceptualization of therapist styles in Town, Hardy, McCullough, and Stride (2012) and Mishara et al.’s (2007a) crisis counsellor helping styles, this study used the PIC’s eight counsellor process categories and grouped them as behaviours that made up three different crisis counsellor helping styles: active listening, collaborative problem-solving, and unhelpful (see Appendix B). This study used two raters for this measure, the researcher and a psychology graduate student. We trained in the measure and subsequently coded for behaviours, yielding an intra-class correlation of .90.
**Chatter affect.** Crisis counsellor-rated outcome variables of change in affect were collected from the Centre’s reports and examined as part of change in chatter outcome. Affect ratings were on a five-point scale and ranged from 1 (*Level mood and emotions; calm*) to 5 (*Strong intensity of feeling; severe negative affect experienced; extremely difficult to control emotions, if can at all*) (see Appendix C for full scale). Affect was rated twice: first at the beginning of chat and then again at the end of chat. A change score was then calculated from these two ratings by subtracting the end score from the beginning score. Chatters with a positive change score were included in the improved affect group; chatters whose change score was zero or negative were included in the not improved affect group.

**Chatter suicide risk.** Suicide risk was coded twice, once for highest presenting suicide risk and again at the end of chat on a three-point scale indicating categories of risk (0 – Low risk, 1 – Non-imminent risk, 2 – Imminent risk). Each category of risk was composed of twelve items which captured common indicators used to assess suicide risk (e.g., ideation, plan, anxiety, hopelessness; see Appendix D for all items). The category with the most items selected was the level of risk coded for; the exception to this rule was when the *Imminent risk* category had three or more items selected. For example, if there were four items coded under *non-imminent risk* but three items coded under *imminent risk*, we ultimately coded suicide risk as *imminent risk*. If there was the same amount of items selected in two categories, we coded for the higher risk category. Suicide risk was coded twice, once for highest presenting suicide risk and again at the end of chat. A change score was then calculated from these two ratings by subtracting the end risk score from the most severe risk score. Chatters with a positive change score were included in the improved risk group; chatters whose change score was zero were included in the not improved risk group. Coding for this measure yielded an intra-class correlation of .76.
**Chatter suicide ideation.** Chat transcripts were divided into four quartiles based on total chat time for this measure. This study then used three items related to suicidal ideation (SI) to assess for change: Desire to Die, Desire to Kill Oneself, and Desire to Live (see Appendices E and F). These items were part of a measure previously developed for this study. The three items were coded four times per chat, once for each quartile. These three items were used to create a composite SI score. A change score was then calculated from two ratings: the most severe SI score and ending SI score. The ending SI score was subtracted from the most severe SI score to obtain a change score. Chatters with a positive change score were included in the improved risk group; chatters whose change score was zero were included in the not improved risk group.

Use of this measure was intended for expert raters who have had extensive crisis centre training and first-hand experience conducting chats and can skillfully detect these variables. Additionally, coders went through training in order to establish clear understanding of how to code variables in this context. Two crisis counsellors, one graduate student and the researcher used the measure to code for change in suicidality. Coding for this measure yielded an intra-class correlation of .71.

**Procedure.** Five research assistants total were tasked with collecting data, in addition to the researcher. Crisis counsellor-rated data was collected from the Vancouver Crisis Centre’s documentation database and entered into Excel files. This data included basic demographic data such as stated age and gender. Chat transcripts were formatted for data analysis and any identifying information was removed. To assess chatter suicidality, ASO items were coded four times across chats. Chat transcripts were divided into quartiles based on their duration, as indicated by crisis counsellor and chatter timestamps. For example, if one chat was 60 minutes in duration, then it was divided into 15-minute increments. This division into quartiles was also
then used in preparation for data analysis to organize other variables collected, namely crisis counsellor behaviours. Chat data was compiled into Excel files for collection and later converted to SPSS files for analysis.

**Data Analytical Plan**

First, to examine whether use of different crisis counsellor helping styles fluctuated over time, we used a repeated measures analysis of variance (ANOVA). By doing so, we could evaluate whether there were fluctuations in how often helping styles were used over the course of a chat. We then used profile analysis to examine whether different patterns of crisis counsellor helping styles were linked to chatter outcome. Profile analysis is an application of analysis of (co)variance to examine profiles of data patterns when variables are measured repeatedly (Tabachnick & Fidell, 2013). Types of profiles examined include flatness (i.e., profiles that are not flat indicate that variables change over time), overall effects of variables on outcome, and parallelism (i.e., profiles that are not parallel indicate links between variables and outcome over time). This method helped determine whether the hypothesis for a dynamic stage helping model was supported by creating such profiles of how crisis counsellor helping style use changed over time in chats, and whether these profiles differed when taking chatter outcome into account. We also examined whether overall use (i.e., not looking at changes across chat) of crisis counsellor helping styles was associated with chatter outcome. Finally, we used profile analysis to also examine whether crisis counsellors’ use of an unhelpful helping style use would be negatively associated with chatter improvement.

Because clients’ severity could influence the helping process (e.g., the helping process for someone with severe SI may be different than for someone with mild SI), in all profile analyses, we controlled for chatters’ baseline severity. Further, because we could only measure
what naturally occurred within chats, we could not calculate change in SI for some cases.

Subsequently, in the analyses examining SI improvement, the sample size decreased ($n=87$).
CHAPTER 4: RESULTS

Overview of Results

This study had three aims: 1) to test the hypothesis that crisis counsellor helping styles would change over the course of the chat; 2) to examine whether particular patterns of crisis counsellor helping styles would be associated with chatter improvement; and 3) to examine if crisis counsellor behaviours that have been identified in previous research as unhelpful were negatively associated with chatter improvement. Therefore, this chapter is divided into three general sections.

Crisis Counsellor Helping Styles and Behaviours Across Chats

The first aim of this study was to test the hypothesis that crisis counsellor helping styles (i.e., active listing, collaborative problem-solving) would change over the course of the chat. When analysing patterns of crisis counsellor helping styles, we also examined the behaviours that constituted each style. Crisis counsellor behaviours that constituted active listening were clarifications, support, and interpretations. Crisis counsellor behaviours that constituted collaborative problem-solving were information giving and questions. Notable patterns are highlighted below. See Appendix G for a complete set of figures to illustrate patterns for all crisis counsellor helping styles and their respective behaviours.

Active listening. Consistent with the first hypothesis, crisis counsellors’ use of an active listening style decreased from the beginning to the end of chats, from 69% to 50% (see Figure 1). Regarding the behaviours that constituted active listening, clarifications decreased from 45% to 24%. Support decreased over the first three quartiles from 23% to 19%, then increased in the final quartile to 24%. Interpretations increased from 1% to 2% in the first two quartiles and decreased for the remainder of chat to 1% in the final quartile.
Collaborative problem-solving. Consistent with the first hypothesis, crisis counsellors’ use of a collaborative problem-solving style increased from the beginning to the end of chats, from 27% to 41% (see Figure 1). Of the behaviours that constituted collaborative problem-solving, information giving significantly increased over time, from 2% to 16%. There was no significant difference between quartiles for crisis counsellors’ use of questions.

Differences between Quartile 3 and Quartile 4. We further examined whether there were significant mean differences between quartiles. In many cases, there was a significant difference in how often crisis counsellor helping styles were used in different quartiles (see Table 2). The largest change between quartiles over time for active listening and collaborative problem-solving occurred between Quartile 3 and Quartile 4, as well as for the crisis counsellor behaviours that constituted these helping styles. Use of active listening decreased from 61% to 50%. When looking at the behaviours constituting active listening, clarifications decreased from 40% to 24%, while support increased from 19% to 24%. Collaborative problem-solving increased from 32% to 41%. This change was driven by crisis counsellors using more information giving – an increase from 6% to 16%.

Overall Effects of Crisis Counsellor Helping Styles and Behaviours

Before we examined whether patterns of crisis counsellor helping styles were linked to chatter outcome, we first examined the overall use of helping styles in chats. Observing overall use of helping styles corresponded with approaches from previous studies on crisis counselling, where use of helping styles over the course of chats was not considered (Mishara et al., 2007b; Mokkenstorm et al., 2016).

Active listening. Crisis counsellors’ overall use of active listening was associated with improved suicide risk, but not with improved affect or suicidal ideation (SI). Crisis counsellors
of chatters whose suicide risk decreased used significantly more of an active listening helping style overall (64% for improved risk vs. 58% for not improved risk). Of the behaviours that constituted the active listening helping style, crisis counsellors of chatters whose risk decreased used significantly more clarifications overall (40% for improved risk vs. 35% for not improved risk). Support and interpretation behaviours were not found to be significant.

**Collaborative problem-solving.** Crisis counsellors’ overall use of problem-solving helping style was associated with improved risk, but not with improved affect or SI. Crisis counsellors of chatters whose risk decreased used significantly less of this helping style in chats (31% for improved risk vs. 35% for not improved risk). Of the behaviours that constituted the collaborative problem-solving helping style, crisis counsellors of chatters whose risk decreased used significantly less questions overall (24% for improved risk vs. 27% for not improved risk). Information giving was not found to be significant.

**Effects of Crisis Counsellor Helping Styles on Chatter Outcome Across Chats**

The second aim of this study explored whether certain patterns of crisis counsellors’ use of helping styles across chats would differ between chatters who improved and chatters who did not improve. Notable findings are highlighted in this section. See Appendix H for tables documenting all mean percentages of crisis counsellors’ use of helping styles and behaviours across chats. See Appendices I through K for a complete collection of profile analysis results for all helping styles and their corresponding behaviours, as they relate to all three chatter outcomes.

**Active listening.** Crisis counsellors’ use of an active listening helping style over the course of chats was not associated with improved outcomes. However, crisis counsellors’ use of support over time showed links to outcome in two ways. First, crisis counsellors’ use of support significantly increased over time for chatters whose risk improved, $F(3, 100) = 3.302, p = .024,$
\( \eta^2 = .094 \). (see Figure 2). Second, while the linear effect was not significant for the association between crisis counsellor support and chatter affect, the quadratic term was significant, \( F(1, 100) = 4.574, p = .035, \eta^2 = .045 \). Figure 3 illustrates that even though use of support started at a similar amount (23%) for both chatter groups, for chatters whose affect improved, support decreased to 19% in Quartile 2 and Quartile 3, before increasing in Quartile 4 to 26%; in contrast, for chatters whose affect did not improve, use of support remained fairly consistent and did not fluctuate (see Figure 2).

While the linear effect was not significant for the association between crisis counsellor interpretations and chatter affect, the cubic term was significant, \( F(1, 100) = 4.150, p = .044, \eta^2 = .041 \). Figure 4 illustrates that from Quartile 1 to Quartile 2, there was a greater increase in crisis counsellors’ use of interpretations for chatters whose affect did not improve (from 1.50% to 2.8%) compared to the chatters whose affect did improve (from 1.1% to 1.7%). From Quartile 2 to Quartile 3, there was a decrease in the not improved affect group (from 2.8% to 1.3%) compared to a slight increase in the improved affect group (from 1.7% to 1.9%). From Quartile 3 to Quartile 4, there was almost no change in the not improved affect group (from 1.3% to 1.2%) and a decrease in the improved affect group (from 1.9% to 0.8%).

**Collaborative problem-solving.** Crisis counsellors’ use of collaborative problem-solving over time was not associated with any improved outcomes. Behaviours that constituted this helping style (i.e., information giving and questions) were also not significantly related to any improved outcomes.

**Unhelpful Helping Style**

The third aim of this study was to examine if crisis counsellor behaviours that have been identified in previous research as unhelpful were negatively associated with chatter.
improvement. When analysing patterns of this helping style, we also examined the behaviours that constituted it: directives, self-disclosure, and confrontations. As with active listening and collaborative problem-solving, we examined the pattern of this unhelpful helping style across chat, its overall effects, and whether its patterns differed depending on chatter improvement.

**Across chats.** Crisis counsellors’ use of an unhelpful helping style increased from the beginning to the end of chats, from 3% to 9% (see Figure 1). Directives increased from 0.7% to 3%. Self-disclosure increased from 2% to 6%. Confrontations increased from 0.2% to 0.4%.

**Overall use.** Crisis counsellors of chatters whose affect and risk improved used significantly less of an unhelpful helping style overall (5% for improved risk vs. 7% for not improved risk; 4% for improved affect vs. 8% for not improved affect). Of the behaviours that constituted the unhelpful helping style, crisis counsellors of chatters whose affect improved used significantly less self-disclosure (3% for improved affect vs. 5% for not improved affect) and confrontations (0.3% for improved affect vs. 0.6% for not improved affect) overall. Additionally, chatters whose risk improved were associated with crisis counsellors who used significantly less confrontations overall (0.3% for improved risk vs. 0.6% for not improved risk). Crisis counsellors used less self-disclosure overall in the improved risk group compared to the not improved risk group (3% for improved risk vs. 5% for not improved risk); however, this difference only approached significance \( p = .08 \).

**Effects on chatter outcome across chats.** The linear effect of crisis counsellors’ use of an unhelpful helping style over time was not associated with improved risk or SI. However, the cubic effect was significant for affect, \( F(1, 100) = 8.667, p = .004, \eta^2 = .082 \). From Quartile 1 to Quartile 2, crisis counsellors’ use of a unhelpful helping style increased in both improved (from 2.4% to 3.2%) and not improved chatters (from 4.9% to 6.4%). From Quartile 2 to Quartile 3,
crisis counsellors’ use of an unhelpful helping style increased for chatters whose affect improved (from 3.2% to 6.7%) and slightly decreased for chatters whose affect did not improve (from 6.4% to 5.9%). From Quartile 3 to Quartile 4, crisis counsellors’ use of an unhelpful helping style only decreased by 1% for improved chatters (from 6.7% to 7.7%) and increased for not improved chatters (from 5.9% to 12%).

When we examined behaviours that constituted the unhelpful helping style, both the quadratic term for crisis counsellor confrontations and the cubic term for crisis counsellor self-disclosure were significant for chatter affect, $F(1, 100) = 5.488, p = .021, \eta^2 = .054$, and $F(1, 100) = 6.938, p = .010, \eta^2 = .067$. As illustrated in Figure 5, from Quartiles 1 to 2, there was a decrease in crisis counsellors’ use of confrontations in the not improved affect group (from 0.5% to 0.3%), and an increase in the improved affect group (from 0% to 0.4%). From Quartiles 2 to 3, there was an increase in crisis counsellors’ use of confrontations in both groups (from 0.4% to 0.6% for improved chatters; from 0.3% to 0.7% for not improved chatters). From Quartiles 3 to 4, there was an increase in crisis counsellors’ use of confrontations in the not improved affect group (from 0.7% to 0.9%), and a decrease in the improved affect group (from 0.6% to 0.1%). Furthermore, use of confrontations for chatters with no improved affect was higher at every quartile than for chatters whose affect improved.

As illustrated in Figure 6, from Quartiles 1 to 2, there was an increase in crisis counsellors’ use of self-disclosure in the not improved affect group (from 3.3% to 5.3%), and practically no change in the improved affect group (from 1.9% to 2%). From Quartiles 2 to 3, there was a slight decrease in crisis counsellors’ use of self-disclosure in the not improved affect group (from 5.3% to 4.3%) and an increase in the improved affect group (from 2% to 3.7%). From Quartiles 3 to 4, there was an increase in crisis counsellors’ use of self-disclosure in the
not improved affect group (from 4.3% to 7.6%) and a slight decrease in the improved affect group (from 3.7% to 4.5%). Similar to use of confrontations, use of self-disclosure for chatters with no improved affect was higher at every quartile than for chatters whose affect improved.
CHAPTER 5: DISCUSSION

The findings from this study offer new insight into how online crisis counselling can be understood and researched. Previous research has generated knowledge on the overall use of helping styles, assuming that crisis counsellors predominantly use one style consistently across chats. When Mishara et al. (2007) asked crisis intervention centres to identify helping styles based on earlier research of defining helping approaches (Mishara & Diagle, 1997), they maintained the assumption that crisis counselling operates mainly from either an active listening or collaborative problem-solving style. Also, only more recently has research started to focus on chat-based crisis counselling; no helping model has been created to conceptualize this modality of support, because the same assumptions used in studying calls have been used to examine chats.

This research aimed to explore whether the online crisis counselling process is more dynamic than how previous research has initially articulated. Because we measured helping styles at multiple points over the course of chats, we saw that use of crisis counsellor behaviours changed over time. We argue for the conceptualization of a dynamic stage model of helping in online crisis counselling, and discuss the rationale and link it to possible outcomes below.

Stage Model of Online Crisis Counselling

The fluctuating use of different helping styles throughout chats supported the first hypothesis, a process which was distinguished by how much crisis counsellors engaged in certain behaviours with chatters. Looking at the sample as a whole, crisis counsellors used helping styles in different amounts as they progressed through chats. Active listening was used the most in the beginning stages and decreased over time, while collaborative problem-solving increased over time, particularly in the later stages of chat. Most quartiles had significant mean differences
between each other on both helping styles, with the largest changes occurring between Quartile 3 and Quartile 4. These patterns of helping styles were consistent with theories of helping stage models, which indicate that crisis counsellors use different behaviours at different stages of counselling to maximize effectiveness (e.g., Hill, 2014; Tracey, 2002). Based on the changing helping style patterns, we conceptualized three different stages of online crisis counselling: recognition and validation, exploration, and action planning.

**Initial stage: Recognition and validation.** The first stage of crisis chats reflects a focus on recognition and validation. We see this initial stage as characterized by crisis counsellors’ use of the active listening helping style, which made up 69% of the total behaviours in the beginning of chat, and was at its highest point relative to any other quartile. In contrast, the use of collaborative problem-solving was at its lowest point, making up 27% of the total crisis counsellor behaviours used. We speculate that crisis counsellors in this initial stage focused on acknowledging that chatters were being listened to and understood, by restating and summarizing the caller’s story and providing empathic reflections and reassurance to chatters to recognize and validate their experiences. To a lesser extent, problem-solving was present in the form of asking questions to gather information. Hill (2014) wrote that the primary goal of counsellors when they first begin working with clients is to build rapport and to show the client genuine interest in their situation. This aim was reflected in chats, considering that the sample was composed of first-time suicidal chatters, who had yet to establish any rapport with crisis counsellors; we surmise that crisis counsellors primarily focused on understanding chatters and validating their emotions.

**Middle stage: Exploration.** The middle stage of crisis chats reflects a focus on exploration. Based on observations, there were gradual but notable shifts in crisis counsellor
behaviours around the midpoint of chats. Without the gradual changes in the middle of chats, changes in crisis counsellor behaviours between the initial and final stage would likely be too disjointed. Beginning around halfway through chats, use of active listening significantly decreased, indicating a shift in crisis counsellors’ use of this helping style. Further illustrating the shift from the first stage was the simultaneous increase in crisis counsellors’ use of collaborative problem-solving. In the beginning of chat, the comparison of active listening to collaborative problem-solving was roughly 70% to 25% (with the remaining 5% comprised of unhelpful crisis behaviours). By the midpoint, this comparison shifted to approximately 60% to 30% (with the remaining 10% comprised of unhelpful crisis behaviours).

These comparisons not only show the shift in use of helping styles, but also that the use of problem-solving never surpassed the use of active listening. Instead, active listening continued to be the helping style most used by crisis counsellors across the entirety of chats. These patterns imply that rather than crisis counsellors using a different helping style to focus on different stages of the counselling process, active listening behaviours may work as a foundation that sustains the working relationship for when more collaborative problem-solving behaviours are being introduced. In the case of chats, crisis counsellors in this stage can shift towards asking chatters about suicide and the extent of their ideation, while also beginning to shape ideas for short-term planning, which often center around maintaining safety. This pattern appears similar to the middle stage of the Applied Suicide Intervention Skills Training (ASIST) model (Gould et al., 2013), which focuses on gathering information about the client’s suicide risk.

**Final stage: Action planning.** The final stage of crisis chats reflects a focus on action planning. We theorized that the final stage of chat could facilitate how crisis counsellors collaborated with chatters on ways to cope with their concerns, as evidenced by the marked
increase of collaborative problem-solving behaviours used. At this stage, the amount in which
crisis counsellors used both helping styles almost leveled out; the proportion of active listening
to collaborative problem-solving became approximately 50% to 40% (the remaining 10% being
attributed to unhelpful helping style). We observed that crisis counsellors in this stage focused
on asking chatters questions about short-term planning, which in crisis intervention is often
centred around maintaining chatter safety with regard to suicide risk (Gould et al., 2013; Mishara
et al., 2007b). Information giving was at its highest use in the final chat quartile, with crisis
counsellors providing information related to coping and additional resources. Consistent with
stage models of helping, these changes in behaviours could signify crisis counsellor intentions
shifting from connecting and understanding the chatter, to formulating goals and moving towards
termination. Similar to ASIST (Gould et al., 2013), the final stage in crisis chats focuses on
establishing safety planning in regards to the client’s presenting suicide risk.

**Associations Between Helping Styles and Chatter Outcome**

We explored the first and second research questions by examining associations between
crisis counsellor helping styles and chatter outcome. In regards to the first question, we saw how
patterns of some crisis counsellor behaviours were different for chatters who improved and
chatters who did not improve. In regards to the second research question, we saw how use of
certain unhelpful crisis counsellor behaviours were negatively associated with chatter
improvement. We speculated that crisis counsellors whose behaviour patterns followed more of
a stage model would be more likely associated with chatter improvement.

**Initial stage.** For chatters whose affect improved, crisis counsellors gradually decreased
their use of support behaviours over time in comparison to the crisis counsellors of chatters
whose affect did not improve – despite the fact that there was no difference in the amount of
support behaviours used at the beginning of chats for these groups. At the same time, crisis counsellors who showed a higher use of interpretations in earlier parts of chat were associated with chatters whose affect did not improve. It may be the case that crisis counsellors who stayed in this initial stage for an appropriate amount of time before transitioning into the next one were linked to improved outcome in chatters. However, interpretations may not be as effective in this initial stage due to not enough rapport having been established. Tracey (2002) characterized the initial stage in their helping model as *rapport-building*, with a focus on conveying understanding to the client and an agreement of how the counselling process is unfolding. Only once this is established can the counselling process effectively move into a stage where exploration can unfold. Similar to this progression is the first stage in ASIST’s suicide intervention model called *connecting*, which focuses on understanding the client’s situation while paying attention to any signs indicating suicide risk, before moving into detailed suicide risk assessment (Gould et al., 2013). If counsellors do not spend enough time in the recognition and validation stage, they could risk decreased progress in later stages due to lack of rapport; if they spend too much time in this stage and don’t shift the proportion in which they use different helping styles, they may not be able to move towards an improved outcome with chatters. While less interpretations were linked to improved chatter affect in the initial stage; later in chats, the inverse relationship was found, indicating the possibility that adequate time spent in the initial stage may be needed for more effective interpretations to then occur at the exploration stage.

**Middle stage.** Though not a significant finding, we noticed a pattern in crisis counsellors’ use of questions that illustrates the balance crisis counsellors may need to strike between using active listening and collaborative problem-solving helping styles. For chatters whose affect did not improve, crisis counsellors used slightly less questions in at the beginning
and end of chats, while chatters with improved affect had crisis counsellors who started with a slightly higher amount of question use, with little change over time. Crisis counsellors in this study appeared to spend the most time in the first two stages before shifting into the final stage of action planning, as evidenced by the greater frequency in which they used active listening behaviours like clarifying, compared to problem-solving behaviours like information giving and directives. Using mainly a collaborative problem-solving helping style in the initial stage could compromise the trust developing between crisis counsellor and chatter, and lead to an impasse in the working dynamic. At the same time, no increase in collaborative problem-solving behaviours as chat progresses could also result in a deadlock in the counselling process, where chatters feel stuck and not motivated towards taking action (Egan, 2014; Hill, 2014; Tracey, 2002). Whether this proportion of helping styles can impact outcome in the final stage of chats could be a direction to consider in future research.

**Final stage.** One of our most compelling observations was the how noticeably crisis counsellor behaviour patterns changed between the final two quartiles of chat. The marked transition between Quartile 3 and Quartile 4 was the best indicator of a shift in crisis counsellor helping styles, and best illustrated a possible transition between stages. Support and information giving behaviours increased significantly over this timeframe at a higher rate than in previous quartiles, while clarifications decreased the most. Furthermore, for chatters whose suicide risk decreased, crisis counsellors tended to use more support behaviours and less interpretations. These patterns indicate that counsellors maintained empathy with a gradual decrease over time; however, the elevated use in the last quartile may signify a reinforcement or validation of the chatters’ experience, but only if they were considered to have improved in terms of their suicide risk. The direction of these relationships is unclear – it could be that crisis counsellors are
impacting chatters with their behaviours. However, it may be just as likely that chatters may be impacting crisis counsellors’ use of a particular behaviour in the final stages of chat. For example, depending on how a chat has progressed, crisis counsellors may be finding themselves using more support behaviours because of the chatter’s positive reaction to them, while more confrontations may signify a chatter negatively reacting to the crisis counsellors’ helping approaches.

Because existing studies have typically only examined crisis counsellor behaviours in chats overall, certain nuances of the counselling process may be overlooked if such behaviours are not closely examined in this last stage. The trajectories in Quartile 4 may have even consequentially reduced the effects found in Quartiles 1 through Quartile 3. The abrupt shift in behaviours could arise from a variety of different factors, such as chatter satisfaction (or lack thereof), limited time resulting from chats being a short-term service, or the particular proportion of different helping styles used in tandem in earlier stages of chats. Since no current research examines the final phase of crisis counselling, we believe this aspect of online crisis counselling necessitates further examination.

**Unhelpful helping style.** Consistent with the second research question, chatter improvement was negatively associated with a crisis counselling style that previous research has seen as unhelpful to clients (Mishara et al., 2007b). While use of this unhelpful helping style increased over time, by examining associations with outcome we saw that use of this helping style only increased for chatters who did not improve. Furthermore, depending on the quartile, some of these unhelpful behaviours were linked to chatters who did improve. We speculated that these behaviours may be unhelpful depending on when they are used by crisis counsellors in chats. Confrontations, self-disclosure, and directives have had mixed evidence regarding their
effectiveness and counsellors dispute whether these behaviours are unhelpful (Hill, 2014; Williams, 2002). In our sample, crisis counsellor self-disclosure was linked to unimproved chatters towards the beginning of chats, while confrontations were linked to unimproved chatters towards the end of chats. We surmised that the initial stage in chats is more agreeable to chatters if the focus is on them, rather than crisis counsellors using self-disclosure. Crisis counsellors who confronted chatters at the end of chats may have been challenging chatters about their difficulty in supporting them or establishing safety.

**Practical Implications**

Though exploratory, the findings from this study expand the knowledge of how online crisis counselling unfolds in practice. The results also offer clues as to how using particular patterns of crisis counsellor helping styles may be linked to chatter outcome, which could become a focus in future research. This study revealed that crisis counsellors can use different helping styles, and that use of these styles changes across the course of chat. Research has highlighted using different techniques at different points in the counselling process (Althoff et al., 2016; Hill, 2014; Tracey, 2002). Online crisis counselling presents a unique challenge where crisis counsellors need to establish rapport within a short amount of time, as well as support chatters in decreasing their immediate distress and suicidality. Structuring such interactions can be more difficult in an online setting compared to other modalities, and there is a need for crisis counsellors to be better versed in maintaining this structure (Stommel, 2012). This need highlights the usefulness of generating a stage model from this study’s findings, which in the future could lead to improved outcome in online crisis counselling and solidify evidence for its credibility as a service for mental health support.
Using a stage model can particularly relate to how crisis counsellors are trained in providing such services. The ASIST model (Gould et al., 2013) already exists as empirically supported training for crisis counsellors to effectively assess risk with suicidal callers, but it does not consider the fluctuating use of different helping approaches. If crisis counsellors already naturally fluctuate in their use of different helping styles across chat, the impact of their work could be further magnified if they used a stage model of helping to increase awareness and intentionality of their interactions with chatters. Training crisis counsellors to move through stages like recognition and validation, exploration, and action planning could have a significant impact on improved service delivery, including improved outcomes in chatters, increased efficiency in obtaining these outcomes, and the ability to support more chatters as a result by maintaining structure in online crisis counselling.

**Limitations and Future Directions**

This study had several limitations that need to be considered for future research. First, the sample size was relatively small, particularly when we had to exclude cases for examining SI change. While we obtained findings with noticeable trends, larger samples are important in future research.

Another study limitation was the lack of client report. We could not collect data directly from our sample, because we examined our data retrospectively. Therefore, we did not know how chatters would personally have reported their change in affect or suicidality, nor did we have the possibility to follow up with chatters to obtain a clearer sense of their outcome, both immediately following the chat and longer-term effects. An opportunity to collect more chatter data directly, like asking chatters to complete a post-chat survey, could facilitate this process in future research.
A strength of this study was using the Psychodynamic Interactive Coding system to code for crisis counsellor behaviours, since it has been previously established as a psychometrically strong measure. However, a limitation of using this measure in this study was losing some of the nuance in certain crisis counsellor behaviours, particularly questions. We coded for when crisis counsellors used questions, but there was no distinction whether these were open versus closed questions, or what the questions were pertaining to (e.g., asking about emotions vs. asking about solutions). Distinguishing between such questions could improve conceptualization of crisis counselling styles in subsequent studies.

The sample was also limited in that it may not be generalizable to all chatters using the service we obtained data from. We only examined chats with chatters who were suicidal. We recognize that many chatters use online crisis counselling for issues that are not necessarily related to suicide, and consider how future research could extend to issues that non-suicidal chatters experience. We also only looked at chatters using crisis counselling for the first time to have chats from 100 distinct chatters. However, we recognize that many chatters are considered to be previous users or even regularly access the service, therefore the findings of this study may not generalize to them in particular. Additionally, our sample was primarily comprised of female chatters (73%), and would aim for a more equal sample size next time in regards to gender representation.

Finally, while this study explored the process of online crisis counselling in more detail, this was only a step towards deepening understanding of how the online crisis counselling process can support individuals in distress. Our findings can be expanded by studying more crisis chat processes, and testing our stage model for links to outcome. Establishing evidence for a dynamic stage model of online crisis counselling will serve to improve upon a service which is
answering the ongoing need to support individuals experiencing suicide and other mental health challenges.
Table 1

*Features of Suicidal Chatters (n=100)*

<table>
<thead>
<tr>
<th>Feature</th>
<th>Yes</th>
<th>No</th>
<th>Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chatter had a past history of ideation.</td>
<td>76%</td>
<td>0%</td>
<td>24%</td>
</tr>
<tr>
<td>Chatter had a past history of attempts.</td>
<td>32%</td>
<td>27%</td>
<td>41%</td>
</tr>
<tr>
<td>Chatter said had thought of a method.</td>
<td>64%</td>
<td>16%</td>
<td>20%</td>
</tr>
<tr>
<td>Chatter had thought of when they would try to kill themselves.</td>
<td>13%</td>
<td>51%</td>
<td>36%</td>
</tr>
<tr>
<td>Chatter suicide was in progress.</td>
<td>1%</td>
<td>91%</td>
<td>8%</td>
</tr>
</tbody>
</table>
### Table 2

**Mean Counsellor Helping Styles and Behaviours Across Chats (n=100)**

<table>
<thead>
<tr>
<th>Counsellor Helping Styles &amp; Behaviours</th>
<th>Quartile 1 (Mean % (SD))</th>
<th>Quartile 2 (Mean % (SD))</th>
<th>Quartile 3 (Mean % (SD))</th>
<th>Quartile 4 (Mean % (SD))</th>
<th>Test of Δ Over Time</th>
<th>Total Mean % (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Listening</td>
<td>69.19 (12.65)(^1)(^4)</td>
<td>66.47 (16.74)(^3)(^4)</td>
<td>61.16 (21.84)(^3)(^4)</td>
<td>49.54 (18.70)(^2)(^3)</td>
<td>37.29*** (\eta = .27)</td>
<td>61.06 (12.48)</td>
</tr>
<tr>
<td>Clarifications</td>
<td>44.72 (16.30)(^4)</td>
<td>44.06 (18.40)(^4)</td>
<td>40.26 (23.75)(^4)</td>
<td>24.19 (16.90)(^1)(^2)(^3)</td>
<td>41.20*** (\eta = .29)</td>
<td>37.37 (13.76)</td>
</tr>
<tr>
<td>Support</td>
<td>23.20 (12.67)(^4)</td>
<td>20.27 (12.01)(^4)</td>
<td>19.28 (13.17)(^4)</td>
<td>24.43 (13.65)(^2)(^3)</td>
<td>3.95* (\eta = .11)</td>
<td>22.23 (8.29)</td>
</tr>
<tr>
<td>Interpretations</td>
<td>1.27 (3.82)</td>
<td>2.13 (5.14)(^4)</td>
<td>1.62 (3.57)</td>
<td>0.93 (2.35)(^2)</td>
<td>2.09 (\eta = .02)</td>
<td>1.46 (2.09)</td>
</tr>
<tr>
<td>Collaborative Problem-solving</td>
<td>27.45 (11.59)(^1)(^4)</td>
<td>29.10 (14.15)(^4)</td>
<td>32.47 (18.43)(^1)(^4)</td>
<td>41.07 (17.08)(^1)(^2)(^3)</td>
<td>21.29*** (\eta = .18)</td>
<td>32.82 (10.18)</td>
</tr>
<tr>
<td>Information</td>
<td>1.59 (3.95)(^2)(^3)(^4)</td>
<td>4.34 (8.40)(^3)(^4)</td>
<td>6.33 (13.15)(^3)(^4)</td>
<td>16.07 (15.06)(^1)(^2)(^3)</td>
<td>40.09*** (\eta = .29)</td>
<td>7.47 (6.95)</td>
</tr>
<tr>
<td>Questions</td>
<td>25.86 (11.33)</td>
<td>24.76 (11.81)</td>
<td>26.14 (13.99)</td>
<td>25.00 (12.61)</td>
<td>.47 (\eta = .01)</td>
<td>25.35 (7.53)</td>
</tr>
<tr>
<td>Unhelpful</td>
<td>3.36 (6.15)(^3)(^4)</td>
<td>4.44 (8.10)(^4)</td>
<td>6.37 (9.24)(^1)</td>
<td>9.38 (10.09)(^1)(^2)</td>
<td>12.52*** (\eta = .11)</td>
<td>6.11 (5.65)</td>
</tr>
<tr>
<td>Directives</td>
<td>0.72 (2.16)(^3)(^4)</td>
<td>0.81 (2.62)(^3)(^4)</td>
<td>1.84 (4.94)(^1)(^2)(^4)</td>
<td>3.29 (4.98)(^1)(^2)(^3)</td>
<td>10.78*** (\eta = .10)</td>
<td>1.82 (2.45)</td>
</tr>
<tr>
<td>Self-Disclosure</td>
<td>2.46 (4.93)(^3)(^4)</td>
<td>3.28 (6.35)(^4)</td>
<td>3.91 (6.71)(^1)</td>
<td>5.70 (8.10)(^1)(^2)</td>
<td>5.65** (\eta = .05)</td>
<td>3.90 (4.32)</td>
</tr>
<tr>
<td>Confrontations</td>
<td>0.18 (1.05)(^3)</td>
<td>0.35 (1.50)</td>
<td>0.61 (1.86)(^1)</td>
<td>0.40 (1.59)</td>
<td>1.47 (\eta = .02)</td>
<td>0.39 (0.83)</td>
</tr>
</tbody>
</table>

\(^1\)Mean difference is significant \(p < .05\) from Quartile 1.
\(^2\)Mean difference is significant \(p < .05\) from Quartile 2.
\(^3\)Mean difference is significant \(p < .05\) from Quartile 3.
\(^4\)Mean difference is significant \(p < .05\) from Quartile 4.

*p < .05

**p < .01

***p < .001
Figure 1. Total percentage of crisis counsellor helping styles used over time (n=100).
Figure 2. Association between crisis counsellor support and chatter risk over time.
Figure 3. Association between crisis counsellor support and chatter affect over time.
Figure 4. Association between crisis counsellor interpretations and chatter affect over time.
Figure 5. Association between crisis counsellor confrontations and chatter affect over time.
Figure 6. Association between crisis counsellor self-disclosure and chatter affect over time.
References


doi:10.1080/03069889708253805


Mishara, B. L., Chagnon, F., Daigle, M., Balan, B., Raymond, S., Marcoux, I.... Berman, A. (2007b). Which helper behaviors and intervention styles are related to better short-term


Education.


Appendix A

CrisisCentreChat.ca Pre-Survey Information for Chatters

Name/Nick* _____________________________
Age* _____________________________
City* _____________________________
Gender _____________________________

*required field
Appendix B

Psychodynamic Interaction Coding (PIC) System

*Crisis Counsellor Behaviours Grouped by Helping Styles*

<table>
<thead>
<tr>
<th>Crisis counsellor behaviour</th>
<th>Definition</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active listening</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clarification</td>
<td>Client message restated by therapist</td>
<td><em>Sounds like you’re having a tough night.</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>I sense that you’d like to protect her from pain, and instead of having her wear the burden, you’ve taken it on yourself.</em></td>
</tr>
<tr>
<td>Interpretation</td>
<td>Client behaviour explained/organized</td>
<td><em>I sense that you’d like to protect her from pain, and instead of having her wear the burden, you’ve taken it on yourself.</em></td>
</tr>
<tr>
<td>Support</td>
<td>Message to reassure</td>
<td><em>I can only imagine the pain you’re going through.</em></td>
</tr>
<tr>
<td>Collaborative problem-solving</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information</td>
<td>Information given</td>
<td><em>A crisis can be many different things, what may be a crisis for one person may not be a crisis for another.</em></td>
</tr>
<tr>
<td>Questions</td>
<td>Information gathered</td>
<td><em>Have you been thinking about suicide?</em></td>
</tr>
<tr>
<td>Unhelpful</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Directive</td>
<td>Message to direct/advise</td>
<td><em>Try talking to your doctor about your meds and contact us again if it doesn’t work out.</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>I hear how living right now feels so draining and you want to kill yourself, yet by logging onto to chat I see that a small part of you may want to figure out how to cope.</em></td>
</tr>
<tr>
<td>Confrontation</td>
<td>Message brought to awareness</td>
<td><em>I also listen to music when I’m stressed.</em></td>
</tr>
<tr>
<td>Self-Disclosure</td>
<td>Information disclosed by therapist</td>
<td></td>
</tr>
</tbody>
</table>
### Emotional intensity/affect at the START of the chat

1 – Level mood & emotions. Calm.
2 – Emotions substantially under control. Little emotional upset occurring.
3 – Affect mostly appropriate. Some negative mood. Some emotional upset/intensity of feeling.
4 – Extended times of negative mood. Liability of affect may be present. Effort required to control emotions.
5 – Strong intensity of feeling. Severe negative affect experienced. Extremely difficult to control emotions, if can at all.

### Emotional intensity/affect at the END of the chat

1 – Level mood & emotions. Calm.
2 – Emotions substantially under control. Little emotional upset occurring.
3 – Affect mostly appropriate. Some negative mood. Some emotional upset/intensity of feeling.
4 – Extended times of negative mood. Liability of affect may be present. Effort required to control emotions.
5 – Strong intensity of feeling. Severe negative affect experienced. Extremely difficult to control emotions, if can at all.
Appendix D

Highest Risk and Post-Chat Risk Assessment Form

Chat #: 

1. What is the **highest** level of risk presented in this chat?
   0 – Low risk  1 – Non-imminent risk  2 – Imminent risk

*Check off all applicable indicators of risk and their corresponding risk level.*

<table>
<thead>
<tr>
<th></th>
<th>0 – Low risk</th>
<th>1 – Non-imminent risk</th>
<th>2 – Imminent risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ideation</td>
<td>☐ Passing thoughts of suicide</td>
<td>☐ Regular thoughts of suicide</td>
<td>☐ Constant thoughts of suicide</td>
</tr>
<tr>
<td>Plan</td>
<td>☐ Vague/no plan, no specific time</td>
<td>☐ Plan with some details</td>
<td>☐ Very specific, knows when, where, and how</td>
</tr>
<tr>
<td>Access to Means</td>
<td>☐ No access to means</td>
<td>☐ Has means close by</td>
<td>☐ Has immediate access to means</td>
</tr>
<tr>
<td>Anxiety</td>
<td>☐ Stable mood – calm, may feel some discomfort</td>
<td>☐ Feels discomfort, anxiety present but tolerable</td>
<td>☐ Escalated mood – high anxiety and pain, feels overwhelmed</td>
</tr>
<tr>
<td>Social Supports</td>
<td>☐ Has supports in place</td>
<td>☐ Some supports, limited/inconsistent</td>
<td>☐ Has no supports; isolated and very alone</td>
</tr>
<tr>
<td>Connectedness</td>
<td>☐ Connected to some aspect of their life</td>
<td>☐ Difficulty in connecting to some aspect of their life</td>
<td>☐ Not able to connect to anything in their life</td>
</tr>
<tr>
<td>Trapped</td>
<td>☐ Sees several options to escape pain</td>
<td>☐ Sees few options to escape pain</td>
<td>☐ Sees no options to escape pain</td>
</tr>
<tr>
<td>Helplessness</td>
<td>☐ Feels in control of their situation</td>
<td>☐ Feels some control of situation</td>
<td>☐ Feels no control, feels stuck</td>
</tr>
<tr>
<td>Hopelessness</td>
<td>☐ Feels some hope</td>
<td>☐ Feels very little hope</td>
<td>☐ Has no hope</td>
</tr>
<tr>
<td>Future Plans</td>
<td>☐ Can name future plans</td>
<td>☐ Struggles to name future plans</td>
<td>☐ Can’t name future plans, doesn’t see a future</td>
</tr>
<tr>
<td>Purpose/Reason to Live</td>
<td>☐ Sees reasons for living</td>
<td>☐ May see a reason for living</td>
<td>☐ Sees no reason to live</td>
</tr>
<tr>
<td>Resourcefulness</td>
<td>☐ Able to explore coping with crisis counsellor</td>
<td>☐ Hesitant to explore coping with crisis counsellor</td>
<td>☐ Cannot identify any ways to cope with crisis counsellor</td>
</tr>
</tbody>
</table>
2. What is the level of risk at the end of this chat?
0 – Low risk 1 – Non-imminent risk 2 – Imminent risk

Check off all applicable indicators of risk and their corresponding risk level.

<table>
<thead>
<tr>
<th></th>
<th>0 – Low risk</th>
<th>1 – Non-imminent risk</th>
<th>2 – Imminent risk</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ideation</strong></td>
<td>☐ Passing thoughts of suicide</td>
<td>☐ Regular thoughts of suicide</td>
<td>☐ Constant thoughts of suicide</td>
</tr>
<tr>
<td><strong>Plan</strong></td>
<td>☐ Vague/no plan, no specific time</td>
<td>☐ Plan with some details</td>
<td>☐ Very specific, knows when, where, and how</td>
</tr>
<tr>
<td><strong>Access to Means</strong></td>
<td>☐ No access to means</td>
<td>☐ Has means close by</td>
<td>☐ Has immediate access to means</td>
</tr>
<tr>
<td><strong>Anxiety</strong></td>
<td>☐ Stable mood – calm, may feel some discomfort</td>
<td>☐ Feels discomfort, anxiety present but tolerable</td>
<td>☐ Escalated mood – high anxiety and pain, feels overwhelmed</td>
</tr>
<tr>
<td><strong>Social Supports</strong></td>
<td>☐ Has supports in place</td>
<td>☐ Some supports, limited/inconsistent</td>
<td>☐ Has no supports; isolated and very alone</td>
</tr>
<tr>
<td><strong>Connectedness</strong></td>
<td>☐ Connected to some aspect of their life</td>
<td>☐ Difficulty in connecting to some aspects of their life</td>
<td>☐ Not able to connect to anything in their life</td>
</tr>
<tr>
<td><strong>Trapped</strong></td>
<td>☐ Sees several options to escape pain</td>
<td>☐ Sees few options to escape pain</td>
<td>☐ Sees no options to escape pain</td>
</tr>
<tr>
<td><strong>Helplessness</strong></td>
<td>☐ Feels in control of their situation</td>
<td>☐ Feels some control of situation</td>
<td>☐ Feels no control</td>
</tr>
<tr>
<td><strong>Hopelessness</strong></td>
<td>☐ Feels some hope</td>
<td>☐ Feels very little hope</td>
<td>☐ Has no hope</td>
</tr>
<tr>
<td><strong>Future Plans</strong></td>
<td>☐ Can name future plans</td>
<td>☐ Struggles to name future plans</td>
<td>☐ Can’t name future plans, doesn’t see a future</td>
</tr>
<tr>
<td><strong>Purpose/Reason to Live</strong></td>
<td>☐ Sees reasons for living</td>
<td>☐ May see a reason for living</td>
<td>☐ Sees no reason to live</td>
</tr>
<tr>
<td><strong>Resourcefulness</strong></td>
<td>☐ Able to explore coping with crisis counsellor</td>
<td>☐ Hesitant to explore coping with crisis counsellor</td>
<td>☐ Cannot identify any ways to cope with crisis counsellor</td>
</tr>
</tbody>
</table>
### Appendix E

Assessing Suicidality Online (ASO) Coding Sheet for Suicide Ideation Items

<table>
<thead>
<tr>
<th>QUARTILE ITEMS</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Desire to Die</strong></td>
<td>1.1.1</td>
<td>Does the chatter discuss whether they want to die or not?</td>
</tr>
<tr>
<td></td>
<td>1.2.1</td>
<td>Rate the level of chatter’s desire to die.</td>
</tr>
<tr>
<td><strong>2. Desire to Kill Oneself</strong></td>
<td>2.1.1</td>
<td>Does the chatter discuss whether they want to kill themselves or not?</td>
</tr>
<tr>
<td></td>
<td>2.2.1</td>
<td>Rate the level of chatter’s desire to kill themselves.</td>
</tr>
<tr>
<td><strong>3. Desire to Live</strong></td>
<td>3.1.1</td>
<td>Does the chatter discuss whether they want to live or not?</td>
</tr>
<tr>
<td></td>
<td>3.2.1</td>
<td>Rate the level of chatter’s desire to live.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SINGLE MEASURE ITEMS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Chatter indicates current suicidal ideation.</td>
</tr>
<tr>
<td>6</td>
<td>Chatter indicates they have thought of how they would attempt suicide (i.e., plan).</td>
</tr>
<tr>
<td>7</td>
<td>Chatter indicates a point of time in mind for their suicide attempt.</td>
</tr>
<tr>
<td>8</td>
<td>Chatter indicates having past incidences of suicidal ideation.</td>
</tr>
<tr>
<td>9</td>
<td>Chatter indicates having past incidences of suicidal attempts.</td>
</tr>
<tr>
<td>10</td>
<td>Chatter is attempting suicide during chat.</td>
</tr>
</tbody>
</table>
Appendix F

Assessing Suicidality Online (ASO) Suicide Ideation Items and Rubrics

1. Desire to Die

- The extent to which the chatter wants to be dead or to not exist anymore, or wishes to fall asleep and not wake up.
- Chatter does not need to have a suicide plan, but can still have desire to die
- **Note**: This item can be considered a more passive ideation state than item 3, Wanting to Kill Oneself.

1.1: Does the chatter discuss whether they want to die or not?

<table>
<thead>
<tr>
<th>Response</th>
<th>N/A – Not applicable</th>
<th>0 – No desire to die</th>
<th>1 – Low desire to die</th>
<th>2 – Moderate to strong desire to die</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definition</td>
<td>1.1 was answered as “0 – No”</td>
<td>Chatter does not want to die</td>
<td>Chatter doesn’t explicitly say they want to die, but does allude to not being alive</td>
<td>Chatter is considering suicide as a way out of life</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chatter doesn’t want to die, but may still have intermittent thoughts</td>
<td>Chatter shows tentative or conflicting thoughts of wanting to die</td>
<td>Chatter makes a definitive statement about wanting to die</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“I don’t want to die”</td>
<td>“Being dead might be a better option for me right now”</td>
<td>Chatter’s desire to die is strong in intensity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“I don’t actually want to die right now, but the thoughts have come up”</td>
<td>“Sometimes I wish I were dead”</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>“Death would be my escape from everything”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>“I want all of this to end today”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>“I am ready to die”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>“I really don’t want to be alive anymore”</td>
</tr>
</tbody>
</table>

1.2: Rate the level of chatter’s desire to die:

- Chatter does not discuss whether they want to die or not.
- Chatter discusses whether they want to die or not, either by disclosing themselves or by responding to a crisis counsellor’s reflection.
2. Desire to Kill Oneself

- The extent to which the chatter expresses a desire and/or plan to kill themselves.
- Chatter may have thought of ideas of how they could kill themselves and may want to follow through with these ideas.
- **Note:** This item can be seen as a more active ideation state than item 2, Desire to Die.

2.1: Does the chatter discuss whether they want to kill themselves or not?

<table>
<thead>
<tr>
<th>Response</th>
<th>N/A – Not applicable</th>
<th>0 – No desire to kill oneself</th>
<th>1 – Low desire to kill oneself</th>
<th>2 – Moderate to strong desire to kill oneself</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definition</td>
<td>2.1 was answered as “0 – No”</td>
<td>Chatter doesn’t want to kill themselves</td>
<td>Chatter has some thoughts about wanting to end their life, but say they have no specific method or plan</td>
<td>Chatter clearly communicates a desire to kill themselves</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chatter has no plan to kill themselves</td>
<td>Chatter has thought of how they would kill themselves and is undecided about taking action</td>
<td>Strong intensity of statements expressed by chatter</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chatter has plan, but states NO desire to act on it currently</td>
<td>Chatter has thoughts about killing themselves, but little desire to actually act on these thoughts</td>
<td>Chatter shows persistent thoughts about wanting to die</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chatter is not ready to die yet</td>
<td>“I haven’t come up with how I’d kill myself yet”</td>
<td>“I actually want to go through with my suicide today”</td>
</tr>
<tr>
<td>Examples</td>
<td>Chatter did not discuss their desire to kill themselves, therefore variable cannot be measured</td>
<td>“I’ve thought about how it would be to not wake up, but not how I’d kill myself”</td>
<td>“I have a plan, but I’m unsure if I should go through with it”</td>
<td>“I have the pills with me and want to take them”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“I’ve thought of how I’d do it but wouldn’t do anything right now”</td>
<td>“I don’t want to die, but I can’t live like this anymore”</td>
<td>“I think about jumping off the bridge every day and today is no different”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“I don’t actually want to kill myself”</td>
<td>“It’s not something I want to do right now, but I do know how I’d do it”</td>
<td></td>
</tr>
</tbody>
</table>
3. Desire to Live

- The extent to which chatter expresses intent or want to keep living.
- Chatter values life and sees the point of living, wants to “keep going,” to “not give up.”

Note: Chatter can be conflicted between the desire to live vs. desire to die (i.e., scoring on desire to live does not necessarily mean chatter has no desire to die).

3.1: Does the chatter discuss whether they want to live or not?

0 – No
  - Chatter does not discuss whether they want to live or not

1 – Yes
  - Chatter discusses whether they want to live or not, either by disclosing themselves or by responding to a crisis counsellor’s reflection

3.2: Rate the level of chatter’s desire to live:

<table>
<thead>
<tr>
<th>Response</th>
<th>N/A – Not applicable</th>
<th>0 – No desire to live</th>
<th>1 – Low desire to live</th>
<th>2 – Moderate to strong desire to live</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definition</td>
<td>Chatter expresses not wanting to live Chatter expresses lack of motivation to keep on living</td>
<td>Chatter is hesitant about wanting to live Chatter wonders about not being alive anymore, but hasn’t resigned themselves to dying</td>
<td>Chatter identifies as wanting to live Chatter may experience conflict between wanting to live and die, but still clearly says they have the will to live</td>
<td></td>
</tr>
<tr>
<td>Examples</td>
<td>Chatter did not discuss their desire to live, therefore variable cannot be measured</td>
<td>“I don’t feel like existing anymore” “I don’t have the energy to keep going” “I don’t want to be alive anymore” “I want to give up on life” “I feel forced to stay alive right now”</td>
<td>“I don’t know how much I want to be alive anymore”</td>
<td>“I want to keep living” “Even though I have thoughts of killing myself, I really want to stay alive”</td>
</tr>
</tbody>
</table>
Appendix G

Mean Crisis Counsellor Behaviours by Helping Styles Across Chats

Figure G1. Mean active listening crisis counsellor behaviours used over time (n=100).

Figure G2. Mean collaborative problem-solving crisis counsellor behaviours used over time (n=100).
Figure G3. Mean unhelpful crisis counsellor behaviours used over time \((n=100)\).
Appendix H

Mean Crisis Counsellor Behaviours by Helping Styles Across Chats

Table H1

Mean crisis counsellor helping styles and chatter affect over time.

<table>
<thead>
<tr>
<th>Counsellor Helping Styles &amp; Behaviours</th>
<th>Improved (n= 61)</th>
<th>Not Improved (n= 39)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean % (SD)</td>
<td>Mean % (SD)</td>
</tr>
<tr>
<td><strong>Active Listening</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unhelpful</td>
<td>27.30 (10.40)</td>
<td>26.87 (12.19)</td>
</tr>
<tr>
<td>Collaborative</td>
<td>23.18 (12.33)</td>
<td>21.95 (11.77)</td>
</tr>
<tr>
<td>Problem-solving</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information</td>
<td>2.40 (4.69)</td>
<td>2.76 (7.95)</td>
</tr>
<tr>
<td>Questions</td>
<td>2.40 (4.69)</td>
<td>2.76 (7.95)</td>
</tr>
<tr>
<td>Unhelpful</td>
<td>2.40 (4.69)</td>
<td>2.76 (7.95)</td>
</tr>
<tr>
<td>Directives</td>
<td>2.40 (4.69)</td>
<td>2.76 (7.95)</td>
</tr>
<tr>
<td>Self-Disclosure</td>
<td>2.40 (4.69)</td>
<td>2.76 (7.95)</td>
</tr>
<tr>
<td>Confrontations</td>
<td>2.40 (4.69)</td>
<td>2.76 (7.95)</td>
</tr>
</tbody>
</table>

Table H2

Mean crisis counsellor helping styles and chatter suicide risk over time.

<table>
<thead>
<tr>
<th>Counsellor Helping Styles &amp; Behaviours</th>
<th>Improved (n=52)</th>
<th>Not Improved (n=48)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean % (SD)</td>
<td>Mean % (SD)</td>
</tr>
<tr>
<td><strong>Active Listening</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unhelpful</td>
<td>27.30 (10.40)</td>
<td>26.87 (12.19)</td>
</tr>
<tr>
<td>Collaborative</td>
<td>23.18 (12.33)</td>
<td>21.95 (11.77)</td>
</tr>
<tr>
<td>Problem-solving</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information</td>
<td>2.40 (4.69)</td>
<td>2.76 (7.95)</td>
</tr>
<tr>
<td>Questions</td>
<td>2.40 (4.69)</td>
<td>2.76 (7.95)</td>
</tr>
<tr>
<td>Unhelpful</td>
<td>2.40 (4.69)</td>
<td>2.76 (7.95)</td>
</tr>
<tr>
<td>Directives</td>
<td>2.40 (4.69)</td>
<td>2.76 (7.95)</td>
</tr>
<tr>
<td>Self-Disclosure</td>
<td>2.40 (4.69)</td>
<td>2.76 (7.95)</td>
</tr>
<tr>
<td>Confrontations</td>
<td>2.40 (4.69)</td>
<td>2.76 (7.95)</td>
</tr>
</tbody>
</table>
Table H3

Mean crisis counsellor helping styles and chatter suicidal ideation over time.

<table>
<thead>
<tr>
<th>Counsellor Helping Styles &amp; Behaviours</th>
<th>Improved (n=40)</th>
<th>Not Improved (n=47)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Listening</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quartile 1 Mean % (SD)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quartile 2 Mean % (SD)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quartile 3 Mean % (SD)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quartile 4 Mean % (SD)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Mean % (SD)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clarifications</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interpreting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collaborative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Problem-solving Information</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Questions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unhelpful</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Directives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Disclosure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Confrontations</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Active Listening: 70.01 (13.52) 65.00 (15.71) 59.43 (18.52) 48.37 (18.76) 59.64 (12.02) 67.68 (11.77) 67.58 (17.84) 61.65 (24.39) 48.53 (18.60) 60.89 (12.84)
Clarifications: 46.77 (14.97) 42.34 (16.98) 38.31 (20.30) 24.91 (17.36) 37.06 (13.03) 42.32 (17.82) 45.06 (20.32) 41.65 (26.61) 24.55 (17.12) 37.59 (14.94)
Interpretations: 1.42 (3.91) 1.10 (2.92) 1.29 (3.04) 0.78 (2.47) 1.10 (1.84) 1.02 (3.74) 3.43 (6.72) 2.29 (4.28) 1.20 (2.46) 1.96 (2.35)
Collaborative: 26.71 (12.07) 33.15 (13.14) 34.29 (16.84) 42.35 (15.99) 34.45 (9.63) 28.51 (11.31) 26.92 (14.67) 41.31 (17.44) 41.31 (17.44)
Problem-solving Information: 0.80 (2.49) 5.01 (10.76) 6.83 (14.58) 12.75 (13.99) 8.03 (7.16) 1.61 (3.28) 4.10 (6.95) 5.99 (12.45) 15.73 (16.37) 7.12 (6.64)
Unhelpful: 3.29 (4.61) 3.85 (6.85) 6.28 (9.05) 9.28 (8.46) 5.91 (4.71) 3.81 (7.74) 5.50 (9.64) 6.81 (9.96) 10.16 (11.79) 6.82 (6.65)
Directives: 0.50 (1.62) 0.36 (1.33) 1.23 (3.59) 3.37 (4.14) 1.52 (1.72) 0.99 (2.67) 1.18 (3.45) 2.52 (6.10) 3.74 (6.01) 2.29 (3.04)
Self-Disclosure: 2.59 (4.033) 3.04 (5.53) 4.53 (6.66) 5.31 (7.67) 3.96 (3.77) 2.60 (5.98) 3.94 (7.35) 3.58 (7.27) 6.18 (8.60) 4.14 (4.93)
Confrontations: 0.19 (1.22) 0.44 (1.58) 0.52 (1.88) 0.60 (1.86) 0.43 (1.01) 0.22 (1.05) 0.38 (1.64) 0.71 (1.87) 0.24 (1.40) 0.40 (0.72)
Appendix I

Profile Analysis Data for Crisis Counsellor Helping Styles and Chatter Affect

I.1. Crisis Counsellor Active Listening Style and Affect Controlling for Starting Affect

Sphericity. Mauchly’s test indicated that the assumption of sphericity had been violated, \( \chi^2(5) = .882, p = .034 \). Therefore, we reported the Greenhouse-Geisser correction for flatness and parallelism results.

Total Effects

Flatness. Crisis counsellor active listening style approached statistical deviation from flatness, \( F(2.797, 100) = 2.161, p = .097, \eta^2 = .022 \). There was a marginally significant change in crisis counsellors’ use of active listening style over time.

Between Group Effects

Parallelism. Crisis counsellor active listening helping style did not deviate significantly from parallelism, \( F(2.797, 100) = 1.577, p = .20, \eta^2 = .016 \). There was no significant difference between improved and not improved chatters in terms of their crisis counsellor’s use of active listening style over time.

Overall effects. No significant differences were found between improved and not improved chatters in their crisis counsellors’ overall use of active listening helping style, \( F(1, 100) = 1.371, p = .24, \eta^2 = .014 \).
1.2. Crisis Counsellor Clarifications and Affect Controlling for Starting Affect

Sphericity. Mauchly’s test indicated that the assumption of sphericity had been violated, $\chi^2(5) = .866, p = .017$. We therefore reported the Greenhouse-Geisser correction for flatness and parallelism results.

Total Effects

Flatness. Crisis counsellor clarifications deviated significantly from flatness, $F(2.725, 100) = 5.083, p = .003, \eta^2 = .050$. Crisis counsellors’ use of clarifications decreased over time. Time accounted for 5% of the variance in crisis counsellors’ use of clarifications. The quadratic term was also significant, $F(1, 100) = 7.987, p = .006, \eta^2 = .076$, indicating that crisis counsellors’ use of clarifications did not change from Quartiles 1 to 3 and decreased from Quartiles 3 to 4. Time accounted for 7.6% of the variance in crisis counsellors’ use of clarifications when considering the quadratic term.

Between Group Effects

Parallelism. Crisis counsellor clarifications did not deviate significantly from parallelism, $F(2.725, 100) = .099, p = .95, \eta^2 = .001$. There was no significant difference between improved and not improved chatters in their crisis counsellors’ use of clarifications over time.

Overall effects. No significant differences were found between improved and not improved chatters in their crisis counsellors’ overall use of clarifications, $F(1, 100) = .919, p = .34, \eta^2 = .009$. 

![Graph showing the percentage of crisis counsellor clarifications over time for different improvement statuses]
I.3. Crisis Counsellor Support and Affect Controlling for Starting Affect

**Sphericity.** Mauchly’s test indicated that the assumption of sphericity had not been violated, $\chi^2(5) = .893, p = .055$.

**Total Effects**

**Flatness.** Crisis counsellor support did not deviate significantly from flatness, $F(3, 100) = 2.035, p = .11, \eta^2 = .060$. There was no significant change in crisis counsellors’ use of support over time. However, the quadratic term was significant, $F(1, 100) = 5.624, p = .020, \eta^2 = .055$. Crisis counsellors’ use of support decreased from Quartiles 1 to 3 and increased from Quartiles 3 to 4. Time accounted for 5.5% of the variance in crisis counsellors’ use of support when considering the quadratic term.

**Between Group Effects**

**Parallelism.** Crisis counsellor support approached statistical deviation from parallelism, $F(3, 100) = 2.414, p = .07, \eta^2 = .071$. Crisis counsellors used more support over time for improved chatters; crisis counsellors used less support over time for not improved chatters. Also, the quadratic term was significant, $F(1, 100) = 4.574, p = .035, \eta^2 = .045$. From Quartiles 1 to 2, there was a lesser decrease in crisis counsellors’ use of support in the not improved affect group, compared to the decrease in the affect improved group. From Quartiles 2 to 3, there was practically no change in crisis counsellors’ use of support in both groups. From Quartiles 3 to 4, there was practically no change in the not improved affect group, and an increase in crisis counsellors’ use of support in the improved affect group. The interaction between time and improvement status accounted for 4.5% of the variance in crisis counsellors’ use of support.

**Overall effects.** No significant differences were found between improved and not improved chatters in their overall crisis counsellors’ use of support, $F(1, 100) = .131, p = .72, \eta^2 = .001$. 

![Crisis Counsellor Support Graph](image)
I.4. Crisis Counsellor Interpretations and Affect Controlling for Starting Affect

**Sphericity.** Mauchly’s test indicated that the assumption of sphericity had been violated, $\chi^2(5) = .758, p = .000$. Therefore we reported the Greenhouse-Geisser correction for flatness and parallelism results.

**Total Effects**

**Flatness.** Crisis counsellor interpretations did not deviate significantly from flatness, $F(2.565, 100) = .332, p = .77, \eta^2 = .003$. There was no significant change in crisis counsellors’ use of interpretations over time.

**Between Group Effects**

**Parallelism.** Crisis counsellor interpretations did not deviate significantly from parallelism, $F(2.565, 100) = 1.146, p = .33, \eta^2 = .012$. There was no significant difference between improved and not improved chatters in terms of their crisis counsellors’ use of interpretations over time. However, the cubic term was significant, $F(1, 100) = 4.150, p = .044, \eta^2 = .041$. From Quartiles 1 to 2, there was a greater *increase* in crisis counsellors’ use of interpretations in the not improved affect group compared to the affect improved group. From Quartiles 2 to 3, there was a *decrease* in the not improved affect group compared to the slight increase in the improved affect group. From Quartiles 3 to 4, there was no change in the not improved affect group and a *decrease* in the improved affect group. The interaction between time and improvement status accounted for 4.1% of the variance in crisis counsellors’ use of interpretations when considering the cubic term.

**Overall effects.** No significant differences were found between improved and not improved chatters in their crisis counsellors’ overall use of interpretations, $F(1, 100) = .435, p = .51, \eta^2 = .004$. 

![Graph](attachment:image.png)
1.5. Crisis Counsellor Problem-Solving Style and Affect Controlling for Starting Affect

**Sphericity.** Mauchly’s test indicated that the assumption of sphericity had been violated, \( \chi^2(5) = .869, p = .020 \). Therefore we reported the Greenhouse-Geisser correction for flatness and parallelism results.

**Total Effects**

**Flatness.** Crisis counsellor problem-solving style deviated significantly from flatness, \( F(2.784, 100) = 3.079, p = .031, \eta^2 = .031 \). Crisis counsellors’ use of problem-solving style increased over time. Time accounted for 3.1% of the variance in crisis counsellors’ use of problem-solving style. The cubic term was also significant, \( F(1, 100) = 6.514, p = .012, \eta^2 = .063 \), indicating that crisis counsellors’ use of problem-solving style increased at different rates throughout the chat. Time accounted for 6.3% of the variance in crisis counsellors’ use of problem-solving style when considering the cubic term.

**Between Group Effects**

**Parallelism.** Crisis counsellor problem-solving style did not deviate significantly from parallelism, \( F(2.784, 100) = 1.124, p = .34, \eta^2 = .011 \). There was no significant difference between improved and not improved chatters in terms of their crisis counsellors’ use of problem-solving style over time.

**Overall effects.** No significant differences were found between improved and not improved chatters in their crisis counsellors’ overall use of problem-solving style, \( F(1, 100) = .031, p = .86, \eta^2 = .000 \).
I.6. Crisis Counsellor Information and Affect Controlling for Starting Affect

**Sphericity.** Mauchly’s test indicated that the assumption of sphericity had been violated, $\chi^2(5) = .462, p = .000$. Therefore we reported the Greenhouse-Geisser correction for flatness and parallelism results.

**Total Effects**

**Flatness.** Crisis counsellor information giving deviated significantly from flatness, $F(2.080, 100) = 5.715, p = .003$, $\eta^2 = .056$. Crisis counsellors’ use of information giving increased over time. Time accounted for 5.6% of the variance in crisis counsellors’ use of information giving. The quadratic term was also significant, $F(1, 100) = 4.950, p = .028$, $\eta^2 = .049$; indicating that information giving increased the most from Quartile 3 to Quartile 4. Time accounted for 4.9% of the variance in crisis counsellors’ use of information giving when considering the quadratic term.

**Between Group Effects**

**Parallelism.** Crisis counsellor information giving did not deviate significantly from parallelism, $F(2.080, 100) = .269, p = .77$, $\eta^2 = .003$. There was no significant difference between improved and not improved chatters in terms of their crisis counsellors’ use of information giving over time.

**Overall effects.** No significant differences were found between improved and not improved chatters in their crisis counsellors’ overall use of information giving, $F(1, 100) = .509, p = .48$, $\eta^2 = .005$. 

![Graph showing the effect of time on crisis counsellor information giving for improved and not improved affect groups.](chart.png)
I.7. Crisis Counsellor Questions and Affect Controlling for Starting Affect

Sphericity. Mauchly’s test indicated that the assumption of sphericity had not been violated, $\chi^2(5) = .916, p = 133.$

Total Effects

Flatness. Crisis counsellor questions did not deviate significantly from flatness, $F(3, 100) = 1.673, p = .18, \eta^2 = .050.$ There was no significant change in crisis counsellors’ use of questions over time.

Between Group Effects

Parallelism. Crisis counsellor questions did not deviate significantly from parallelism, $F(3, 100) = 1.720, p = .17, \eta^2 = .052.$ There was no significant difference between improved and not improved chatters in terms of their crisis counsellors’ use of questions over time.

Overall effects. No significant differences were found between improved and not improved chatters in their crisis counsellors’ overall use of questions, $F(1, 100) = .143, p = .71, \eta^2 = .001.$
I.8. Crisis Counsellor Unhelpful Helping Style and Affect Controlling for Starting Affect

Sphericity. Mauchly’s test indicated that the assumption of sphericity had been violated, $\chi^2(5) = .529, p = .000$. Therefore we reported the Greenhouse-Geisser correction for flatness and parallelism results.

Total Effects

Flatness. Crisis counsellor unhelpful helping style did not deviate significantly from flatness, $F(2.251, 100) = 1.226$, $p = .30, \eta^2 = .012$. There was no significant change in crisis counsellors’ use of unhelpful helping style over time.

Between Group Effects

Parallelism. Crisis counsellor unhelpful helping style deviated significantly from parallelism, $F(2.251, 100) = 2.965, p = .047, \eta^2 = .030$. For chatters whose affect improved, their crisis counsellors’ use of an unhelpful helping style increased over time. The difference between improved and not improved chatters accounted for 3% of the variance in their crisis counsellors’ use of an unhelpful helping style over time. The cubic term was also significant, $F(1, 100) = 8.667, p = .004, \eta^2 = .082$. From Quartile 1 to Quartile 2, crisis counsellors’ use of an unhelpful style increased in both improved and not improved chatters. From Quartile 2 to Quartile 3, crisis counsellors’ use of an unhelpful style increased for chatters whose affect improved and slightly decreased for chatters whose affect did not improve. From Quartile 3 to Quartile 4, crisis counsellors’ use of an unhelpful style did not change for improved chatters and increased for not improved chatters. The difference between improved and not improved chatters accounted for 8.2% of the variance in chatters’ affect over time when considering the cubic term.

Overall effects. Crisis counsellors of chatters whose affect improved used significantly less of an unhelpful helping style, $F(1, 100) = 5.641, p = .020, \eta^2 = .055$. The difference between improved and not improved chatters accounted for 5.5% of the variance in their crisis counsellors’ overall use of an unhelpful helping style.
I.9. Crisis Counsellor Directives and Affect Controlling for Starting Affect

**Sphericity.** Mauchly’s test indicated that the assumption of sphericity had been violated, $\chi^2(5) = .520, p = .000$. Therefore we reported the Greenhouse-Geisser correction for flatness and parallelism results.

**Total Effects**

**Flatness.** Crisis counsellor directives did not deviate significantly from flatness, $F(2.363, 100) = .939, p = .41, \eta^2 = .010$. There was no significant change in crisis counsellors’ use of directives over time.

**Between Group Effects**

**Parallelism.** Crisis counsellor directives did not deviate significantly from parallelism, $F(2.363, 100) = 1.813, p = .16, \eta^2 = .018$. There was no significant difference between improved and not improved chatters in terms of their crisis counsellors’ use of directives over time.

**Overall effects.** No significant differences were found between improved and not improved chatters in their crisis counsellors’ overall use of directives, $F(1, 100) = .011, p = .92, \eta^2 = .000$. 

![Graph showing crisis counsellor directives over time](image-url)
I.10. Crisis Counsellor Confrontations and Affect Controlling for Starting Affect

Sphericity. Mauchly’s test indicated that the assumption of sphericity had been violated, \( \chi^2(5) = .785, p = .000 \). Therefore we reported the Greenhouse-Geisser correction for flatness and parallelism results.

Total Effects

Flatness. Crisis counsellor confrontations did not deviate significantly from flatness, \( F(2.636, 100) = .658, p = .56, \eta^2 = .007 \). There was no significant change in crisis counsellors’ use of confrontations over time.

Between Group Effects

Parallelism. Crisis counsellor confrontations did not deviate significantly from parallelism, \( F(3, 100) = 1.707, p = .17, \eta^2 = .017 \). There was no significant difference between improved and not improved chatters in terms of their crisis counsellors’ use of confrontations over time. However, the quadratic term was significant, \( F(1, 100) = 5.488, p = .021, \eta^2 = .054 \). From Quartiles 1 to 2, there was a decrease in crisis counsellors’ use of confrontations in the not improved affect group, and an increase in the improved affect group. From Quartiles 2 to 3, there was an increase in crisis counsellors’ use of confrontations in both groups. From Quartiles 3 to 4, there was an increase in crisis counsellors’ use of confrontations in the not improved affect group, and a decrease in the improved affect group. The interaction between time and improvement status accounted for 5.4% of the variance in crisis counsellors’ use of confrontations when considering the quadratic term.

Overall effects. Crisis counsellors of chatters who improved used significantly less confrontations, \( F(1, 100) = 4.877, p = .030, \eta^2 = .048 \). The difference between improved chatters and not improved chatters accounted for 4.8% of the variance in their crisis counsellors’ overall use of confrontations.
I.11. Crisis Counsellor Self-Disclosure and Affect Controlling for Starting Affect

**Sphericity.** Mauchly’s test indicated that the assumption of sphericity had been violated, $\chi^2(5) = .549, p = .000$. Therefore we reported the Greenhouse-Geisser correction for flatness and parallelism results.

**Total Effects**

**Flatness.** Crisis counsellor self-disclosure did not deviate significantly from flatness, $F(2.167, 100) = .942, p = .40$, $\eta^2 = .010$. There was no significant change in crisis counsellors’ use of self-disclosure over time.

**Between Group Effects**

**Parallelism.** Crisis counsellor self-disclosure did not deviate significantly from parallelism, $F(2.167, 100) = 1.933, p = .14$, $\eta^2 = .020$. There was no significant difference between improved and not improved chatters in terms of their crisis counsellors’ use of self-disclosure over time. However, the cubic term was significant, $F(1, 100) = 6.938, p = .010$, $\eta^2 = .067$. From Quartiles 1 to 2, there was an increase in crisis counsellors’ use of self-disclosure in the not improved affect group, and practically no change in the improved affect group. From Quartiles 2 to 3, there was a decrease in crisis counsellors’ use of self-disclosure in the not improved affect group and an increase in the improved affect group. From Quartiles 3 to 4, there was an increase in crisis counsellors’ use of self-disclosure in the not improved affect group and practically no change in the improved affect group. The interaction between time and improvement status accounted for 6.7% of the variance in crisis counsellors’ use of self-disclosure when considering the cubic term.

**Overall effects.** Crisis counsellors of chatters whose affect improved used significantly less self-disclosure, $F(1, 100) = 7.190, p = .009$, $\eta^2 = .069$. The difference between improved and not improved chatters accounted for 6.9% of the variance in their crisis counsellors’ overall use of self-disclosure.
Appendix J

Profile Analysis Data for Crisis Counsellor Helping Styles and Chatter Risk

J.1. Crisis Counsellor Active Listening Style and Risk Controlling for Highest Risk

Sphericity. Mauchly’s test indicated that the assumption of sphericity had been violated, $\chi^2(5) = .868, p = .019$. Therefore we reported the Greenhouse-Geisser correction for flatness and parallelism results.

Total Effects

Flatness. Crisis counsellor active listening style deviated significantly from flatness, $F(2.776, 100) = 3.116, p = .030, \eta^2 = .031$. Crisis counsellors’ use of active listening style decreased over time. Time accounted for 3.1% of the variance in crisis counsellors’ use of active listening style.

Between Group Effects

Parallelism. Crisis counsellor active listening style did not deviate significantly from parallelism, $F(2.776, 100) = .056, p = .98, \eta^2 = 0.001$. There was no significant difference between improved and not improved chatters in terms of their crisis counsellor’s use of active listening style over time.

Overall effects. Crisis counsellors of chatters who improved used significantly more of an active listening style, $F(1, 100) = 8.197, p = .005, \eta^2 = .078$. The difference between improved and not improved chatters accounted for 7.8% of the variance in their crisis counsellors’ overall use of active listening helping style.
J.2. Crisis Counsellor Clarifications and Risk Controlling for Highest Risk

**Sphericity.** Mauchly’s test indicated that the assumption of sphericity had been violated, $\chi^2(5) = .842, p = .006$. Therefore we reported the Greenhouse-Geisser correction for flatness and parallelism results.

**Total Effects**

**Flatness.** Crisis counsellor clarifications deviated significantly from flatness, $F(2.674, 100) = 7.544, p = .000, \eta^2 = .072$. Crisis counsellors’ use of clarifications decreased over time. Time accounted for 7.2% of the variance in crisis counsellors’ use of clarifications. The quadratic term was also significant, $F(1, 100) = 7.218, p = .008, \eta^2 = .069$.

Crisis counsellors’ use of clarifications appeared to decrease at a faster rate from Quartiles 3 to Quartile 4 when compared to the rest of the quartiles. Time accounted for 6.9% of the variance in crisis counsellors’ use of clarifications when considering the quadratic term.

**Between Group Effects**

**Parallelism.** Crisis counsellor clarifications did not deviate significantly from parallelism, $F(2.674, 100) = 1.969, p = .13, \eta^2 = .020$. There was no significant difference between improved and not improved chatters in terms of their crisis counsellors’ use of clarifications over time.

**Overall effects.** Crisis counsellors of chatters whose risk improved used significantly more clarifications, $F(1, 100) = 5.219, p = .025, \eta^2 = .051$. The difference between improved and not improved chatters accounted for 5.1% of the variance in their crisis counsellors’ overall use of clarifications.

![Graph showing the trend of crisis counsellor clarifications over quartiles and improvement status](image-url)
J.3. Crisis Counsellor Support and Risk Controlling for Highest Risk

Sphericity. Mauchly’s test indicated that the assumption of sphericity had not been violated, $\chi^2(5) = .907, p = .098$.

Total Effects

Flatness. Crisis counsellor support deviated significantly from flatness, $F(3, 100) = 3.302, p = .024, \eta^2 = .094$. Crisis counsellors’ use of support increased over time. Time accounted for 9.4% of the variance in crisis counsellors’ use of support. The quadratic term was also significant, $F(1, 100) = 7.117, p = .009, \eta^2 = .068$. Crisis counsellors’ use of support decreased from Quartiles 1 to 3 and increased from Quartiles 3 to 4. Time accounted for 6.8% of the variance in crisis counsellors’ use of support when considering the quadratic term.

Between Group Effects

Parallelism. Crisis counsellor support deviated significantly from parallelism, $F(3, 100) = 3.238, p = .026, \eta^2 = .093$. For chatters whose risk improved, crisis counsellors’ use of support increased over time. The interaction between time and change status accounted for 9.3% of the variance in crisis counsellors’ use of support over time.

Overall effects. No significant differences were found between improved and not improved chatters in their crisis counsellors’ overall use of support, $F(1, 100) = .303, p = .58, \eta^2 = .003$. 

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![Graph showing the change in crisis counsellor support over time for improved and not improved risk chatters.](image-url)
J.4. Crisis Counsellor Interpretations and Risk Controlling for Highest Risk

**Sphericity.** Mauchly’s test indicated that the assumption of sphericity had been violated, $\chi^2(5) = .767, p = .000$. Therefore we reported the Greenhouse-Geisser correction for flatness and parallelism results.

**Total Effects**

**Flatness.** Crisis counsellor interpretations did not deviate significantly from flatness, $F(2.571, 100) = 1.963, p = .13, \eta^2 = .020$. There was no significant change in crisis counsellors’ use of interpretations over time.

**Between Group Effects**

**Parallelism.** Crisis counsellor interpretations did not deviate significantly from parallelism, $F(2.571, 100) = .134, p = .92, \eta^2 = .001$. There was no significant difference between improved and not improved chatters in terms of their crisis counsellors’ use of interpretations over time.

**Overall effects.** No significant differences were found between improved and not improved chatters in their crisis counsellors’ overall use of interpretations, $F(1, 100) = .004, p = .95, \eta^2 = .000$. 

![Graph showing the percentage of crisis counselor interpretations over time for improved and not improved risk groups.](image-url)
J.5. Crisis Counsellor Problem-Solving Style and Risk Controlling for Highest Risk

**Sphericity.** Mauchly’s test indicated that the assumption of sphericity had been violated, $\chi^2(5) = .868, p = .019$. Therefore we reported the Greenhouse-Geisser correction for flatness and parallelism results.

**Total Effects**

**Flatness.** Crisis counsellor problem-solving style deviated significantly from flatness, $F(2.781, 100) = 2.727, p = .049, \eta^2 = .027$. Crisis counsellors’ use of problem-solving style increased over time. Time accounted for 2.7% of the variance in crisis counsellors’ use of problem-solving style.

**Between Group Effects**

**Parallelism.** Crisis counsellor problem-solving style did not deviate significantly from parallelism, $F(2.781, 100) = .016, p = .99, \eta^2 = .000$. There was no significant difference between improved and not improved chatters in terms of their crisis counsellors’ use of problem-solving style over time.

**Overall effects.** Crisis counsellors of chatters who improved used significantly less of a problem-solving style, $F(1, 100) = 5.228, p = .024, \eta^2 = .051$. The difference between improved and not improved chatters accounted for 5.1% of the variance in their crisis counsellors’ overall use of problem-solving style.

![Graph showing quartiles of crisis counsellor problem-solving style](image-url)
J.6. Crisis Counsellor Information and Risk Controlling for Highest Risk

**Sphericity.** Mauchly’s test indicated that the assumption of sphericity had been violated, $\chi^2(5) = .474, p = .000$. Therefore we reported the Greenhouse-Geisser correction for flatness and parallelism results.

**Total Effects**

**Flatness.** Crisis counsellor information giving deviated significantly from flatness, $F(2.107, 100) = 10.545, p = .000, \eta^2 = .098$. Crisis counsellor information giving increased over time. Time accounted for 9.8% of the variance in crisis counsellors’ use of information giving. The quadratic term was also significant, $F(1, 100) = 5.023, p = .027, \eta^2 = .049$. Crisis counsellors’ use of information giving increased all throughout the chat, but the highest rate of increase was seen from Quartile 3 to Quartile 4. Time accounted for 4.9% of the variance in crisis counsellors’ use of information giving when considering the quadratic term.

**Between Group Effects**

**Parallelism.** Crisis counsellor information giving did not deviate significantly from parallelism, $F(2.107, 100) = 2.058, p = .13, \eta^2 = .021$. There was no significant difference between improved and not improved chatters in terms of their crisis counsellors’ use of information giving over time.

**Overall effects.** No significant differences were found between improved and not improved chatters in their crisis counsellors’ overall use of information giving, $F(1, 100) = .547, p = .46, \eta^2 = .006$. 

![Graph showing the relationship between quartile and improved risk](image)
J.7. Crisis Counsellor Questions and Risk Controlling for Highest Risk

**Sphericity.** Mauchly’s test indicated that the assumption of sphericity had not been violated, $\chi^2(5) = .926, p = .198.$

**Total Effects**

**Flatness.** Crisis counsellor questions did not deviate significantly from flatness, $F(3, 100) = .953, p = .42, \eta^2 = .029.$ There was no significant change in crisis counsellors’ use of questions over time.

**Between Group Effects**

**Parallelism.** Crisis counsellor questions did not deviate significantly from parallelism, $F(3, 100) = .1.289, p = .28,$ $\eta^2 = .039.$ There was no significant difference between improved and not improved chatters in terms of their crisis counsellors’ use of questions over time.

**Overall effects.** Crisis counsellors of chatters whose risk improved used significantly less questions, $F(1, 100) = 5.782, p = .018, \eta^2 = .056.$ The difference between improved and not improved chatters accounted for 5.6% of the variance in their crisis counsellors’ overall use of questions.
J.8. Crisis Counsellor Unhelpful Helping Style and Risk Controlling for Highest Risk

Sphericity. Mauchly’s test indicated that the assumption of sphericity had been violated, $\chi^2(5) = .523, p = .000$. Therefore we reported the Greenhouse-Geisser correction for flatness and parallelism results.

Total Effects

Flatness. Crisis counsellor unhelpful helping style did not deviate significantly from flatness, $F(2.254, 100) = .236, p = .82, \eta^2 = .002$. There was no significant change in crisis counsellors’ use of unhelpful helping style over time.

Between Group Effects

Parallelism. Crisis counsellor unhelpful helping style did not deviate significantly from parallelism, $F(2.254, 100) = .251, p = .81, \eta^2 = .003$. There was no significant difference between improved and not improved chatters in terms of their crisis counsellor’s use of unhelpful helping style over time.

Overall effects. Crisis counsellors of chatters whose risk improved used significantly less of a unhelpful helping style, $F(1, 100) = 4.780, p = .031, \eta^2 = .047$. The difference between improved chatters and not improved chatters accounted for 4.7% of the variance in their crisis counsellors’ overall use of unhelpful helping style.
J.9. Crisis Counsellor Directives and Risk Controlling for Highest Risk

**Sphericity.** Mauchly’s test indicated that the assumption of sphericity had been violated, $\chi^2(5) = .518, p = .000$. Therefore we reported the Greenhouse-Geisser correction for flatness and parallelism results.

**Total Effects**

**Flatness.** Crisis counsellor directives did not deviate significantly from flatness, $F(2.369, 100) = .886, p = .43, \eta^2 = .009$. There was no significant change in crisis counsellors’ use of directives over time.

**Between Group Effects**

**Parallelism.** Crisis counsellor directives did not deviate significantly from parallelism, $F(2.369, 100) = .152, p = .89, \eta^2 = .002$. There was no significant difference between improved and not improved chatters in terms of their crisis counsellors’ use of directives over time.

**Overall effects.** No significant differences were found between improved and not improved chatters in their crisis counsellors’ overall use of directives, $F(1, 100) = 1.217, p = .27, \eta^2 = .012$. 

![Graph showing Crisis Counsellor Directives (%) over Time for Improved and Not Improved Risk]
**J.10. Crisis Counsellor Confrontations and Risk Controlling for Highest Risk**

**Sphericity.** Mauchly’s test indicated that the assumption of sphericity had been violated, $\chi^2(5) = .789, p = .000$.

Therefore we reported the Greenhouse-Geisser correction for flatness and parallelism results.

**Total Effects**

**Flatness.** Crisis counsellor confrontations did not deviate significantly from flatness, $F(2.641, 100) = .418, p = .72, \eta^2 = .004$. There was no significant change in crisis counsellors’ use of confrontations over time.

**Between Group Effects**

**Parallelism.** Crisis counsellor confrontations did not deviate significantly from parallelism, $F(2.641, 100) = .783, p = .49, \eta^2 = .008$. There was no significant difference between improved and not improved chatters in terms of their crisis counsellors’ use of confrontations over time.

**Overall effects.** Crisis counsellors of chatters who improved used significantly less confrontations, $F(1, 100) = 4.668, p = .033, \eta^2 = .046$. The difference between improved and not improved chatters accounted for 4.6% of the variance in their crisis counsellors’ overall use of confrontations.

![Graph showing the relationship between crisis counsellor confrontations and time, with quartiles and improvement status colored differently.](image-url)
J.11. Crisis Counsellor Self-Disclosure and Risk Controlling for Highest Risk

Sphericity. Mauchly’s test indicated that the assumption of sphericity had been violated, $\chi^2(5) = .542, p = .000$. Therefore we reported the Greenhouse-Geisser correction for flatness and parallelism results.

Total Effects

Flatness. Crisis counsellor self-disclosure did not deviate significantly from flatness, $F(2.165, 100) = .179, p = .85, \eta^2 = .002$. There was no significant change in crisis counsellors’ use of self-disclosure over time.

Between Group Effects

Parallelism. Crisis counsellor self-disclosure did not deviate significantly from parallelism, $F(2.165, 100) = .451, p = .65, \eta^2 = .005$. There was no significant difference between improved and not improved chatters in terms of their crisis counsellors’ use of self-disclosure over time.

Overall effects. There was a marginally significant difference found between improved and not improved chatters in their crisis counsellors’ overall use of self-disclosure, $F(1, 100) = 3.174, p = .078, \eta^2 = .032$. Crisis counsellors appeared to use less self-disclosure overall in the improved risk group compared to the not improved risk group.
Appendix K

Profile Analysis Data for Crisis Counsellor Helping Styles and Chatter Suicidal Ideation (SI)

K.1. Crisis Counsellor Active Listening Style and SI Controlling for Highest SI

Sphericity. Mauchly’s test indicated that the assumption of sphericity had been violated, \( \chi^2(5) = .826, p = .008 \). Therefore we reported the Greenhouse-Geisser correction for flatness and parallelism results.

Total Effects

Flatness. Crisis counsellor active listening helping style did not deviate significantly from flatness, \( F(2.710, 87) = 1.570, p = .20, \eta^2 = .018 \). There was no significant change in crisis counsellors’ use of active listening style over time.

Between Group Effects

Parallelism. Active listening helping style did not deviate significantly from parallelism, \( F(3, 87) = .647, p = .57, \eta^2 = .008 \). There was no significant difference between improved and not improved chatters in terms of their crisis counsellor’s use of active listening style over time.

Overall effects. No significant differences were found between improved and not improved chatters in their crisis counsellors’ overall use of active listening helping style, \( F(1, 87) = .012, p = .91, \eta^2 = .000 \).
K.2. Crisis Counsellor Clarifications and SI Controlling for Highest SI

**Sphericity.** Mauchly’s test indicated that the assumption of sphericity had been violated, \( \chi^2(5) = .829, p = .008 \). Therefore we reported the Greenhouse-Geisser correction for flatness and parallelism results.

**Total Effects**

**Flatness.** Crisis counsellor clarifications deviated significantly from flatness, \( F(2.650, 87) = 3.615, p = .018, \eta^2 = .041 \). Crisis counsellors’ use of clarifications decreased over time. Time accounted for 4.1% of the variance in crisis counsellors’ use of clarifications. The quadratic term was also significant, \( F(1, 87) = 4.044, p = .048, \eta^2 = .046 \), indicating that crisis counsellors’ use of clarifications decreased the most from Quartiles 3 to 4. Time accounted for 4.6% of the variance in crisis counsellors’ use of clarifications when considering the quadratic term.

**Between Group Effects**

**Parallelism.** Crisis counsellor clarifications did not deviate significantly from parallelism, \( F(2.650, 87) = .873, p = .45, \eta^2 = .010 \). There was no significant difference between improved and not improved chatters in terms of their crisis counsellors’ use of clarifications over time.

**Overall effects.** No significant differences were found between improved and not improved chatters in their crisis counsellors’ overall use of clarifications, \( F(1, 87) = .111, p = .74, \eta^2 = .001 \).
K.3. Crisis Counsellor Support and SI Controlling for Highest SI

**Sphericity.** Mauchly’s test indicated that the assumption of sphericity had not been violated, $\chi^2(5) = .875, p = .051$.

**Total Effects**

**Flatness.** Crisis counsellor support did not deviate significantly from flatness, $F(3, 87) = 1.792, p = .16, \eta^2 = .062$.

There was no significant change in crisis counsellors’ use of support over time.

**Between Group Effects**

**Parallelism.** Crisis counsellor support did not deviate significantly from parallelism, $F(3, 87) = .658, p = .58, \eta^2 = .023$. There was no significant difference between improved and not improved chatters in terms of their crisis counsellors’ use of support over time.

**Overall effects.** No significant differences were found between improved and not improved chatters in their crisis counsellors’ overall use of support, $F(1, 87) = .160, p = .69, \eta^2 = .002$.
K.4. Crisis Counsellor Interpretations and SI Controlling for Highest SI

Sphericity. Mauchly’s test indicated that the assumption of sphericity had been violated, $\chi^2(5) = .772, p = .001$.

Therefore we reported the Greenhouse-Geisser correction for flatness and parallelism results.

Total Effects

Flatness. Crisis counsellor interpretations did not deviate significantly from flatness, $F(2.569, 87) = 2.063, p = .11, \eta^2 = .024$. There was no significant change in crisis counsellors’ use of interpretations over time. However, the quadratic term was significant, $F(1, 87) = 4.959, p = .029, \eta^2 = .056$. After Quartile 2, crisis counsellors’ use of interpretations appeared to decrease. Time accounted for 5.6% of the variance in crisis counsellors’ use of interpretations when considering the quadratic term.

Between Group Effects

Parallelism. Crisis counsellor interpretations did not deviate significantly from parallelism, $F(2.569, 87) = 1.407, p=.25, \eta^2 = .016$. There was no significant difference between improved and not improved chatters in terms of their crisis counsellors’ use of interpretations over time.

Overall effects. No significant differences were found between improved and not improved chatters in their crisis counsellors’ overall use of interpretations, $F(1, 87) = 1.547, p = .22, \eta^2 = .018$. 

![Graph showing crisis counsellor interpretations over time and improvement status]
K.5. Crisis Counsellor Problem-Solving Style and SI Controlling for Highest SI

Sphericity. Mauchly’s test indicated that the assumption of sphericity had been violated, $\chi^2(5) = .822, p = .006$.

Therefore we reported the Greenhouse-Geisser correction for flatness and parallelism results.

Total Effects

Flatness. Crisis counsellor problem-solving style did not deviate significantly from flatness, $F(2.719, 87) = .916, p = .43, \eta^2 = .011$. There was no significant change in crisis counsellors’ use of problem-solving style over time.

Between Group Effects

Parallelism. Crisis counsellor problem-solving style did not deviate significantly from parallelism, $F(2.719, 87) = 1.046, p = .37, \eta^2 = .012$. There was no significant difference between improved and not improved chatters in terms of their crisis counsellors’ use of problem-solving style over time.

Overall effects. No significant differences were found between improved and not improved chatters in their crisis counsellors’ overall use of problem-solving style, $F(1, 87) = .611, p = .44, \eta^2 = .007$.

<table>
<thead>
<tr>
<th>Time</th>
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<td>Quartile 2</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Quartile 4</td>
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</tbody>
</table>

Graph showing the crisis counsellor problem-solving style (%) over time.
K.6. Crisis Counsellor Information and SI Controlling for Highest SI

Sphericity. Mauchly’s test indicated that the assumption of sphericity had been violated, $\chi^2(5) = .437, p = .000$. Therefore we reported the Greenhouse-Geisser correction for flatness and parallelism results.

Total Effects

Flatness. Crisis counsellor information giving deviated significantly from flatness, $F(2.067, 87) = 4.311, p = .014, \eta^2 = .049$. Crisis counsellors’ use of information giving increased over time. Time accounted for 4.9% of the variance in crisis counsellors’ use of information giving.

Between Group Effects

Parallelism. Crisis counsellor information giving did not deviate significantly from parallelism, $F(2.067, 87) = .344, p = .72, \eta^2 = .004$. There was no significant difference between improved and not improved chatters in terms of their crisis counsellors’ use of information giving over time.

Overall effects. No significant differences were found between improved and not improved chatters in their crisis counsellors’ overall use of information giving, $F(1, 87) = .339, p = .56, \eta^2 = .004$. 

![Graph showing the trend of Crisis Counsellor Information over time for improved and not improved chatters.](image-url)
K.7. Crisis Counsellor Questions and SI Controlling for Highest SI

**Sphericity.** Mauchly’s test indicated that the assumption of sphericity had not been violated, $\chi^2(5) = .901, p = .124$.

**Total Effects**

**Flatness.** Crisis counsellor questions did not deviate significantly from flatness, $F(3, 87) = .917, p = .44, \eta^2 = .032$.

There was no significant change in crisis counsellors’ use of questions over time.

**Between Group Effects**

**Parallelism.** Crisis counsellor questions did not deviate significantly from parallelism, $F(3, 87) = 1.462, p = .23, \eta^2 = .051$. There was no significant difference between improved and not improved chatters in terms of their crisis counsellors’ use of questions over time.

**Overall effects.** No significant differences were found between improved and not improved chatters in their crisis counsellors’ overall use of questions, $F(1, 87) = .260, p = .61, \eta^2 = .003$. 

![Graph showing the percentage of crisis counsellor questions over time for improved and not improved chatters.](image-url)
K.8. Crisis Counsellor Unhelpful Helping Style and SI Controlling for Highest SI

Sphericity. Mauchly’s test indicated that the assumption of sphericity had been violated, $\chi^2(5) = .481, p = .000$. Therefore we reported the Greenhouse-Geisser correction for flatness and parallelism results.

Total Effects

Flatness. Crisis counsellor unhelpful helping style did not deviate significantly from flatness, $F(2.195, 87) = .793, p = .46, \eta^2 = .009$. There was no significant change in crisis counsellors’ use of unhelpful helping style over time.

Between Group Effects

Parallelism. Crisis counsellor unhelpful helping style did not deviate significantly from parallelism, $F(2.195, 87) = .065, p = .95, \eta^2 = .001$. There was no significant difference between improved and not improved chatters in terms of their crisis counsellor’s use of unhelpful helping style over time.

Overall effects. No significant differences were found between improved and not improved chatters in their crisis counsellors’ overall use of unhelpful helping style, $F(1, 87) = 1.318, p = .25, \eta^2 = .015$. 

![Graph showing Crisis Counsellor Unhelpful Helping Style (%) over time for different improvement statuses.](attachment:image.png)
K.9. Crisis Counsellor Directives and SI Controlling for Highest SI

**Sphericity.** Mauchly’s test indicated that the assumption of sphericity had been violated, $\chi^2(5) = .499, p = .000$. Therefore we reported the Greenhouse-Geisser correction for flatness and parallelism results.

**Total Effects**

**Flatness.** Crisis counsellor directives did not deviate significantly from flatness, $F(2.344, 87) = .338, p = .75, \eta^2 = .004$. There was no significant change in crisis counsellors’ use of directives over time.

**Between Group Effects**

**Parallelism.** Crisis counsellor directives did not deviate significantly from parallelism, $F(2.344, 87) = .217, p = .84, \eta^2 = .003$. There was no significant difference between improved and not improved chatters in terms of their crisis counsellors’ use of directives over time.

**Overall effects.** No significant differences were found between improved and not improved chatters in their crisis counsellors’ overall use of directives, $F(1, 87) = 2.729, p = .10, \eta^2 = .031$. 

![Graph showing quartile and improvement status of crisis counsellor directives](image-url)
K.10. Crisis Counsellor Confrontations and SI Controlling for Highest SI

Sphericity. Mauchly’s test indicated that the assumption of sphericity had been violated, $\chi^2(5) = .832, p = .009$.

Therefore we reported the Greenhouse-Geisser correction for flatness and parallelism results.

Total Effects

Flatness. Crisis counsellor confrontations did not deviate significantly from flatness, $F(2.710, 87) = 1.081, p = .35, \eta^2 = .013$. There was no significant change in crisis counsellors’ use of confrontations over time.

Between Group Effects

Parallelism. Crisis counsellor confrontations did not deviate significantly from parallelism, $F(2.710, 87) = .478, p = .68, \eta^2 = .006$. There was no significant difference between improved and not improved chatters in terms of their crisis counsellors’ use of confrontations over time.

Overall effects. No significant differences were found between improved and not improved chatters in their crisis counsellors’ overall use of confrontations, $F(1, 87) = .075, p = .79, \eta^2 = .001$. 

![Graph showing the percentage of crisis counsellor confrontations over time for no improved SI and improved SI.](image)
K.11. Crisis Counsellor Self-Disclosure and SI Controlling for Highest SI

**Sphericity.** Mauchly’s test indicated that the assumption of sphericity had been violated, $\chi^2(5) = .490, p = .000$.

Therefore we reported the Greenhouse-Geisser correction for flatness and parallelism results.

**Total Effects**

**Flatness.** Crisis counsellor self-disclosure did not deviate significantly from flatness, $F(2.106, 87) = 1.101, p = .34$, $\eta^2 = .013$. There was no significant change in crisis counsellors’ use of self-disclosure over time.

**Between Group Effects**

**Parallelism.** Crisis counsellor self-disclosure did not deviate significantly from parallelism, $F(2.106, 87) = .207, p = .82$, $\eta^2 = .002$. There was no significant difference between improved and not improved chatters in terms of their crisis counsellors’ use of self-disclosure over time.

**Overall effects.** No significant differences were found between improved and not improved chatters in their crisis counsellors’ overall use of self-disclosure, $F(1, 87) = .430, p = .51$, $\eta^2 = .005$. 

![Graph showing self-disclosure over time and quartiles]

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<tr>
<th>Quartile</th>
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<th>Improved SI</th>
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