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Clinician empathic speech and client change language : is there an association between empathic speech and change talk in motivational interviewing sessions?

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**CLINICIAN EMPATHIC SPEECH AND CLIENT CHANGE LANGUAGE:
IS THERE AN ASSOCIATION BETWEEN EMPATHIC SPEECH AND CHANGE TALK
IN MOTIVATIONAL INTERVIEWING SESSIONS?**

by

DANIEL J. FISCHER

**BACHELOR OF ARTS
MASTER OF EDUCATION**

THESIS

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Requirements for the Degree of

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Psychology**

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**Clinician Empathic Speech and Client Change Language:
Is there an Association between Empathic Speech and Change Talk
in Motivational Interviewing Sessions?**

By

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ABSTRACT

Empathy is the state of knowing or being aware of another person's perspective and the ability to express empathy is acknowledged as an important component within effective psychotherapy. Motivational interviewing (MI) is a specific method of psychotherapy in which clinician expressions of empathy are held to be an active ingredient and a central component of effective practice. Although empathy has long been a part of the theoretical explanation of effective MI, there is little known about the function of empathy as expressed by the clinician and the association between such in-session speech and client change language. This study identified the empathic speech of clinicians and explored the association of such speech with client change language. The study found that frequencies of empathic speech shared a significant positive correlation with client change talk as well as client sustain talk. This correlation between empathic speech and change talk was mediated by several clinician variables, such as MI-consistent behaviors and clinician reflections of client change talk. Similarly, the relationship between empathic speech and client sustain talk was mediated by reflections of client sustain talk.

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Chapter 1

Introduction

Empathy is a broadly defined construct that describes a person's ability to be aware of and understand the perspective of another person. Research into empathy extends back to the origins of the field of psychology. Beginning in the early 20th century with Edward Titchener's discussion of *empathy*, or "feeling into", empathy has been a steady topic of research in psychology (Hilgard, 1987). Empathy research spans many subfields. Developmental and social psychologists have theorized empathy as an altruistic response that functions to create a bond between individuals, increasing the possibility of reciprocal altruism (Buck & Ginsburg, 1997; de Waal, 2008; Hoffman, 1981; Hurlbut, 2002; Nakao & Itakura, 2009). Research in experimental psychology has found that higher levels of empathy are associated with greater generosity and altruism in both controlled laboratory experiments and uncontrolled observational studies (Batson & Ahmad, 2001; Batson & Moran, 1999; Gino & Pierce, 2010; Tanida & Yamagishi, 2004). Neuroscientists have focused on mirror neurons and oxytocin to explain empathy, hypothesizing that empathy has a distinct function and location in the brain. Mirror neurons help explain a phenomenon observed in individuals wherein similar neurons are activated between a person experiencing an emotion first-hand and another observer (Antonelli & Luchetti, 2010; Baird, Scheffer, & Wilson, 2011; Greimel et al., 2010; Iacoboni, 2009; Schulte-Rüther, Markowitsch, Fink, & Piefke, 2007; Varcin, Bailey, & Henry, 2010). The neurotransmitter and hormone oxytocin also has been linked to empathic awareness (Shamay-Tsoory, 2011; Striepens, Kendrick, Maier, & Hurlemann, 2011). Larger quantities of oxytocin in the brain have been associated with more frequent altruistic behaviors, and smaller quantities of the chemical have been linked to antisocial and autistic disorders (Bartz et al., 2010; Declerck,

Boone, & Kiyonari, 2010; Feldman, 2012). Experimental manipulation of oxytocin levels has been associated with increases in empathic accuracy, cooperation, and pro-social behaviors (Bartz et al., 2010; De Dreu, 2011; Striepens et al., 2011). Recent laboratory studies have even found empathy-like behaviors in rodents, demonstrating that laboratory rats will choose to free a trapped rat companion from a cage rather than eat food in the presence of the trapped rat (Panksepp & Lahvis, 2011).

Due in large part to the influence of Carl Rogers and the popularity of client-centered and humanistic psychotherapies, clinical psychology has viewed a clinician's understanding of a client's perspective as an important component of effective psychotherapy. Clinician empathy has often been discussed as a specific skill necessary for rapport building and client change in psychotherapy (Elliott, Bohart, Watson, & Greenberg, 2011a; Miller, 2000; Norcross & Wampold, 2011; Rogers, 1957). Research supports a connection between clinician empathy and positive client outcomes in both psychotherapeutic and medical settings (Bruhn, Schwab, & Tausch, 1980; Eckert, Schwartz, & Tausch, 1977; Fiorentine & Hillhouse, 1999; Hojat et al., 2011; Mercer, Neumann, Wirtz, Fitzpatrick, & Vojt, 2008; Neumann et al., 2007). Higher levels of clinician empathy have been associated with improvements in psychotherapy treatment process, such as better ratings of clinician/client therapeutic alliance, and greater client satisfaction (Gladstein, 1977; Norcross & Wampold, 2011; Pantaloni, Chawarski, Falcioni, Pakes, & Schottenfeld, 2004; Sheppard, 1991; Watson & Geller, 2005). Clinician empathy has predicted client well-being and client outcomes, including improved client diabetes management, improved quality of life in cancer patients, and reductions in client depression (Burns & Nolen-Hoeksema, 1992; Hojat et al., 2011; Mercer et al., 2008; Neumann et al., 2007). Within the movement towards empirically supported treatments (ESTs) in psychotherapy, clinician empathy

has been cited as an important factor in several empirically supported treatments and has been supported as an important component of the therapeutic relationship (Miller & Rose, 2009; Norcross & Wampold, 2011; Pantalon et al., 2004).

Motivational interviewing (MI) is an EST that places a high value on empathy and theorizes that clinician expressions of empathy are central to treatment effectiveness (Miller & Rollnick, 2002). MI is a brief and client-centered treatment focused on resolving client ambivalence towards a targeted behavior change by activating the client's own intrinsic motivation for change (Miller & Rollnick, 2002). More recently MI has been hypothesized to function through two active components: one relational, one technical (Miller & Rose, 2009). These two components suggest specific behaviors by which a clinician can successfully practice MI. The relational component of MI, also referred to as MI Spirit, describes a clinician's way of interacting with clients and is characterized as a collaboration of equals. In such a context, the clinician expresses an accepting and empathic understanding of the client's perspective and works to support the client's own reasons for changing (Miller & Rollnick, 2002). The technical component of MI involves the clinician's purposeful use of various therapeutic skills which, in the context of the relational component, elicit and differentially reinforce client language in favor of a targeted behavior change and lessen the occurrence of client language in favor of maintaining the status quo (Miller & Rollnick, 2002). Client change talk (CT) is the term for client statements in favor of changing a targeted behavior. Conversely, client sustain talk (ST) is the term for client statements in favor of sustaining a targeted behavior.

Research into mechanisms of action for MI has suggested several "active ingredients" of the treatment. Studies have found that particular therapist behaviors identified as MI-consistent (MICO), such as reflections of client speech, asking open-ended questions, and statements that

support or affirm the client's autonomy are associated with certain theoretically important client behaviors, namely client change talk. MICO behaviors have been found to sequentially predict client change talk, and also have associated with increases in the frequency of client change talk and decreases in the frequency of sustain talk (Moyers & Martin, 2006). Change talk also has been found to predict improvements in client outcomes, specifically reductions in quantity and frequency of alcohol use (Bertholet, Faouzi, Gmel, Gaume, & Daeppen, 2010; Daeppen, Bertholet, Gmel, & Gaume, 2007; Moyers, Martin, Houck, Christopher, & Tonigan, 2009). Conversely, client sustain talk has been found to relate to both MI-inconsistent (MIIN) behaviors from the clinician and decreases in client change at follow-up (Campbell, Adamson, & Carter, 2010; Vader, Walters, Prabhu, Houck, & Field, 2010). This body of research suggests a causal chain linking clinician in-session MICO behaviors, client in-session change talk, and improved client outcomes at follow-up (Miller & Rose, 2009; Moyers et al., 2009).

Although clinician expressions of empathy are central to the method of MI (Miller & Rollnick, 2002; Miller & Rose, 2009), empathy has received little attention beyond measurement as a global characteristic across therapy sessions. Research into mechanisms of action in MI has focused primarily on descriptive features of clinician behaviors at the level of clinician utterance, characterizing these behaviors as MICO, MIIN, or neutral. Researchers have yet to explore qualitative features of clinician speech at the same level of analysis. The extent to which the quality of empathy present within clinician speech relates to client behaviors is unknown. A qualitative coding system, applied at the level of clinician utterance, would provide useful information regarding the clinician's use of empathic speech and the extent to which this quality of speech relates to client speech. Analyzing the association between clinician empathic speech and client speech would also provide information about the role of empathic speech within an MI

session, not merely across MI sessions. Given the current theory of how and why MI works, it would be helpful to know the extent to which clinician empathic speech is associated with client change talk.

Previous research supports the association between clinician empathy and client speech, specifically client self-exploration (Truax & Carkhuff, 1967). This research measured both empathy and self-exploration as global measures across therapy session segments. Client self-exploration is defined as a process of coming to know and to verbalize one's beliefs, values, motives, perceptions of others, relationships, fears, and life choices (Truax & Carkhuff, 1967). Client change language (both change talk and sustain talk) can be viewed as a unique aspect of client self-exploration, in that it is a knowing and verbalizing of a client's own beliefs, values, motives, and choices towards a targeted behavior change; either in favor of changing (CT) or in favor of maintaining a current behavior (ST). Although this association between clinician empathy and client self-exploration is well supported, it is a relationship that has been measured at the broad level of global rating. It would be helpful to explore this association at a closer level of specificity, by measuring clinician and client speech at the level of speech utterance.

Capturing the quality of empathic speech at the level of clinician utterance poses a challenge, due in part to the complexity of the empathy construct as well as the contextual nature of an empathic occurrence. Operationally defining an empathic expression can be challenging as clinicians have been found to express empathic awareness through both verbal and physical modes (Maurer & Tindall, 1983; Stel & van Knippenberg, 2008; Stone, 2001; Truax, 1970). Additionally, the accuracy of a clinician's empathic expression is contextual in that it depends on the client previous statement and the meaning within a client's statement. One possible approach to the challenge of quantifying a complex construct comes from analytic methods used in other

areas of communication research. An existing model for the coding of complex constructs within human interaction comes from the research of John Gottman and colleague and their work using the Specific Affect Coding System (SPAFF; Coan & Gottman, 2007; Jones, Carrère, & Gottman, 2005). This coding system is designed to capture several complex communication constructs expressed between couples. The SPAFF uses observational coding of several behavioral markers such as facial expressions, vocal affects, and verbal content to identify latent constructs of affective states. One example of a latent construct identified through various indicators is enthusiasm. Within the SPAFF, enthusiasm is coded through a focus on several indicators, such as anticipatory behaviors, positive surprise, positive excitement, joy, happiness, or expansiveness (Coan & Gottman, 2007). These indicators are expressed through verbal content as well as various physical cues, such as raised eyebrows or widening eyes (Coan & Gottman, 2007). Raters observe video recordings of interpersonal interactions and code for the presence of affective constructs. When a coder observes a behavior or behaviors that indicate a particular affect, the affect is coded as present, and a measure of time-on-task is captured for a given construct. This coding system provides an account of the frequency and duration at which specific affects occur. Research using the SPAFF has explored how individuals relate to each other within a conversation, and how within-conversation behaviors are predictive of distal outcomes. The SPAFF has been an effective tool for analyzing interactions, even when analyzing small samples of a conversation. For example, the SPAFF has predicted divorce rates of married couples based on the presence of affective constructs such as defensiveness, criticism, contempt, and stonewalling (Gottman, 1994; Gottman & Levenson, 1992; Gottman & Levenson, 1999). In one study, the SPAFF was able to correctly predict the likelihood of divorce over a six year

period after analyzing the first three minutes of discussion between couples (Carrère & Gottman, 1999).

For the present study, a similar coding system was developed to code the presence of clinician empathic speech within MI treatment sessions. Empathic speech was defined as language that communicated an awareness or understanding of the client's point of view through speech that expresses a comprehension of the client's thoughts, feelings, and perspective, including statements expressing the emotional content or meaning within the client's own experiences. The coding system, titled the In-Session Coding of Empathic Expressions (ISCEE) was designed to be used with audio recordings of MI therapy sessions. Like the SPAFF, the ISCEE captured the presence of a complex construct by using construct indicators to identify the presence and absence of a construct. Through measuring clinician time-on-task for empathic speech, the coding system provides measurements of empathic speech duration in seconds, and frequency of occurrence. Unlike the SPAFF, the ISCEE focuses only on the verbal content of the clinician in coding the presence or absence of a construct and does not consider facial affect or physical behavior. Ultimately, measures of in-session empathic speech were compared to other in-session behaviors to explore the relationship between this type of clinician speech and client behavior, specifically change talk and sustain talk.

Hypotheses

The aims of this project were threefold: (1) develop a coding system that would measure the duration and frequency of clinician empathic speech; (2) analyze the correlation between clinician empathic speech and client change language; (3) explore the indirect effects of empathic speech on client change language through mediating variables.

The study hypotheses were:

1. A significant correlation would exist between the total duration of empathic speech and client change talk.
2. A significant correlation would exist between the frequency of empathic speech and client change talk.

Chapter 2

Method

Design Overview

This study was a secondary analysis of clinician and client behaviors within motivational interviewing therapy sessions. These sessions were collected as part of Project ELICIT, a randomized controlled trial exploring different strategies for training clinicians in motivational interviewing (NIDA 021227-01). The objective of the current study was to analyze the association between in-session instances of clinician empathic speech and client change talk. To this end, we used existing coding of sessions from Project ELICIT as well as new data obtained through a re-analysis of these same therapy sessions. The process of analyzing therapy sessions, which entailed the labeling and quantifying of specific clinician and client behaviors, was therefore conducted with two coding systems.

Participants

Participants were licensed clinicians working in the field of substance abuse treatment. These clinicians were licensed as counselors, psychologists, physicians, nurses, social workers, or certified substance-abuse professionals and identified with many different theoretical orientations (Table 1, Table 2). All clinicians provided audio recordings of MI sessions as part of

Project ELICIT. The clients in these recordings provided permission to have therapy sessions audio recorded, but were not involved as participants in research. Clients remained anonymous and all demographic information regarding clients, including age, race, and gender, remained unknown for the purposes of this study.

Chapter 3

Measures

Coding Systems

The first coding system, Motivational Interviewing Sequential Coding (MISC; Moyers, Martin, Catley, Harris, & Ahluwalia, 2003), was used in the primary analysis of Project ELICIT. It parsed MI therapy sessions at the level of clinician or client utterance, applied behavioral codes to all parsed utterances in a therapy session, and provided global measures of clinician empathy, acceptance, autonomy support, collaboration, and evocation as well as client self-exploration. This process required two listening passes through the therapy session. In the first pass, therapy sessions were parsed into clinician and client utterances and the global ratings were applied to the entire therapy sessions. In the second pass raters applied behavioral codes to all parsed utterances of therapy sessions. The behavioral codes were exclusive and exhaustive, providing behavioral labels for all events within a therapy session. From the MISC, variables that described clinician and client language were obtained. These variables included client change talk and sustain talk, as well as several clinician MI-consistent behaviors and MI-inconsistent behaviors.

For the current project, a new coding system was developed to quantify clinician empathic speech. This second coding system, the ISCEE, analyzed and coded only clinician

speech, and measured only the presence or absence of clinician empathic speech. The ISCEE measured the duration and frequency of clinician empathic speech as well as clinician total speech, capturing the presence of both. This ISCEE provided variables of the frequency and duration of clinician total speech and clinician empathic speech, as well as ratios of empathic speech over total speech duration and frequency. The coding of sessions was a process involving two independent passes. In the first pass, all instances of clinician speech were identified; in the second pass all instances of clinician empathic speech were identified. For both passes, the process of identifying variables was done in a moment-by-moment manner, with raters coding “on-the-fly”. This system measured both the frequency of occurrence, measured at the level of utterance, and the duration of time, measured in seconds, for both clinician total speech and clinician empathic speech. From these data, duration, frequency, and ratio variables were derived for clinician empathic speech.

Coding Software

Both the MISC and the ISCEE were used in conjunction with the CASAA Application for Coding Therapeutic Interactions (CACTI) platform, a software program designed for the purpose of parsing and coding of digital audio files (Glynn, Halgren, Houck, & Moyers, 2012). The CACTI, an adaptable software program that allowed for the coding of therapy sessions via the computer, enabled raters to listen to digital audio files of therapy sessions and follow respective coding procedures without having to rely on session transcripts.

Chapter 4

Procedures

Work Sample

Clinicians participating in Project ELICIT submitted pre-training recordings of therapy sessions, as well as four follow-up recordings of therapy sessions at post-training, three, six, and 12-months after training. Sessions selected for analysis in this project came from the three-month follow-up time point. This time point was chosen because it had the highest follow-up rate, providing enough sessions to ensure adequate power to detect an effect. All possible sessions from the total sample at the three-month follow-up time point were coded.

Coding Process

A total of 150 three-month follow-up sessions were included for coding. For each session, a 20-minute segment was selected and coded using the ISCEE coding system. The MISC behavioral codes were acquired for this same 20-minute time sample. The selection of 20-minute segments was quasi-random, excluding the first five minutes of a session and selecting the beginning time point randomly from the remainder of the therapy session, allowing for a 20-minute time sample to be chosen. Sessions less than 25-minutes ($n = 2$) did not exclude the first five minutes, but chose a 20-minute sample for coding. This sampling process allowed for random selection as well as increased the likelihood of excluding non-therapeutic interactions such as discussions of scheduling or introductory remarks. For each instance of clinician speech, the process of coding was as follows: raters listened to therapy sessions using the CACTI software interface (Glynn et al., 2012). As raters listened, they would press a button whenever they detected clinician empathic speech and press another button when the clinician empathic speech ended. As raters coded sessions, the CACTI software created a file with the beginning and ending time point for each empathic speech occurrence. When a rater finished coding a 20-minute sample, the software recorded the total number of occurrences of clinician empathic speech, as well as the duration of each occurrence. From these files, the frequency of clinician

empathic speech occurrences as well as the duration of clinician empathic speech in seconds was compiled across the entire sample. This same process was also applied to total clinician speech, a simpler task of parsing total clinician speech, leaving out any instances of silence or client speech. The duration and frequency of total clinician speech was captured to allow for a ratio of empathic speech frequency and duration. All raters were masked to study hypotheses and were trained on sessions not included as part of the study analysis.

Rater Training and Supervision

Four undergraduate students were trained as raters, using the ISCEE to code clinician total speech and clinician empathic speech via the CACTI software. All sessions were randomly assigned to raters. One rater did not complete the project and the sessions assigned to this rater were reassigned to the remaining three. All raters were trained to use the ISCEE and achieved intraclass correlations (ICCs) above 0.7 before being assigned actual study sessions (Shrout & Fleiss, 1979). Raters attended weekly meetings with the project supervisor to limit rater drift. During such meetings, a previously transcribed MI session was coded with the ISCEE using audio recordings as well as session transcripts. Agreements and disagreements were discussed to maintain fidelity across raters and any points of disagreement were re-coded for agreement. During pilot testing of the ISCEE, decision rules were created to resolve issues of disagreement or ambiguity in the coding process.

Reliability

The reliability of data obtained by the ISCEE was determined using ICCs (Shrout & Fleiss, 1979). Type 2 ICCs were used to determine reliability because the effect of raters was considered random and not fixed (Shrout & Fleiss, 1979). Baseline ICCs scores were demonstrated for both pass 1 and pass 2 of the coding system before study sessions were

assigned. Preliminary reliability was assessed using audio recordings of therapy sessions that were not part of the study sample. Once actual coding was assigned, ICCs for a set of 20 audio recordings of therapy sessions (13% of the total sample of 150 sessions) were completed by all raters in order to estimate the reliability of the coded data for the entire sample.

Data Analysis

The analyses for the main hypotheses used Pearson product-moment correlation coefficients between the coded measures of clinician empathic speech and client change talk, as well as Pearson product-moment correlation coefficients between the percent empathic speech and percent client change talk. Exploratory analyses used Pearson product-moment correlation coefficients to explore the association between empathic speech and other MI-relevant variables. Exploratory mediation models used step-wise bootstrapping analyses to determine the indirect effect of empathic speech on change language through mediating variables.

Power

Previous studies show that clinician empathy towards clients has a medium effect size ($\rho = .3$; Elliott et al., 2011). To detect a medium effect size with a Pearson product-moment correlation coefficient, 134 sessions were necessary for coding. All available three-month sessions ($n = 150$) were coded to ensure that the necessary power was achieved in order to detect an effect if one existed.

Chapter 5

Results

Reliability

Interrater reliability of study measures was estimated with ICCs, which fell within the good to excellent range (Table 3). Raters showed excellent reliability on the straightforward task of parsing clinician total speech (TS). For the more complicated task of coding clinician empathic speech (ES), raters were in the excellent range for both frequency of empathic speech (F-ES) and duration of empathic speech (D-ES). ICCs for the percent frequency of empathic speech (F-ES/TS) and percent duration of empathic speech (D-ES/TS) were lower than other variables, but still demonstrated acceptable reliability.

The random selection of 20-minute time samples was shown to be normally distributed, with a slight positive skew (Figure 1). This positive skew reflected the fact that most sessions were 40-minutes or less, reflecting an average median time-point that was less than 20-minutes. A comparison of several behavior count ratios found large correlations between full session and 20-minute time samples (Table 4). These correlations ranged between .67 and .93, suggesting that there is a high degree of consistency across full sessions and the 20-minute time samples that were randomly chosen.

Hypotheses

Our results showed that some but not all measures of empathic speech were significantly correlated with change talk. Hypothesis one, which stated that the duration of empathic speech would be related to client change talk, was not supported, and the null hypothesis could not be rejected (Table 5). Hypothesis two, which stated that the frequency of empathic speech would be related to client change talk, was supported, rejecting the null hypothesis (Table 5). The magnitude of the effect size for this relationship was small to medium. The frequency of empathic speech was significantly correlated with client change talk when empathic speech was measured as a raw frequency count, but not when it was measured as a ratio (Table 5). These

results, suggesting that the frequency but not the duration of empathic speech was related to client change talk, remained consistent when controlling for the effect of total clinician speech (Tables 6 & 7). When analyzed as a partial correlation, controlling for the effect of total speech, the magnitude of the correlation between F-ES and CT was small. Empathic speech was associated with both change talk and sustain talk when measured as a frequency variable. Clinician empathic speech frequency shared a larger correlation with client sustain talk than it shared with client change talk (Table 5).

Exploratory Analysis

Further analyses explored the relation between clinician empathic speech and other in-session clinician behaviors derived from MISC coding. Pearson product-moment correlation coefficients between empathic speech and other clinician behavior variables coded by the MISC showed that empathic speech, measured as a frequency, had a positive correlation with several MI-consistent behaviors, including total reflections, reflections of change talk, and total open questions (Table 8). Empathic speech did not have a positive correlation with MI-inconsistent behaviors, which included confronting, directing, advice-giving, and warning (Table 8). In general, the frequency of empathic speech, rather than the duration of empathic speech, was the measure most closely associated to other MICO clinician behaviors.

Analyses of the association between in-session empathic speech and MISC global measures of clinician functioning were inconsistent and lower than expected. Empathic speech measures were most strongly and consistently associated with the MI Spirit global rating, an average of the Autonomy Support, Evocation, and Collaboration global ratings. Empathic Speech was, however, poorly associated with other global measures of empathy, acceptance, and direction (Table 9). Measures of empathic speech shared the highest correlation with MISC

global measures when empathic speech was measured as a ratio of empathic speech over total speech. When measured as a ratio, empathic speech shared a medium correlation with the MI Spirit global and small but significant correlations with Empathy and Acceptance global measures (Table 9).

Several mediation models were used to explore the indirect effect of empathic speech on both change talk and sustain talk. Mediation models were constructed based on existing theory and research regarding mechanisms of action in MI. Existing research suggests that increases in clinician MICO behaviors are associated with increases in client change talk and reflections of client language will elicit more of the same type of language, either change talk or sustain talk (Gaume, Bertholet, Faouzi, Gmel, & Daeppen, 2010; Moyers et al., 2007), the first mediation model tested the extent to which MICO behavior account for the relationship between empathic speech and change talk. The second and third mediation models explored the extent to which (a) clinician reflections of change talk mediated the relationship between empathic speech frequency and change talk, and (b) clinician reflections of sustain talk mediated the relationship between empathic speech and sustain talk. Each of these proposed mediators was selected because they were significantly correlated with frequencies of empathic speech (Table 8). These mediating variables could provide descriptive characteristics of empathic speech that were related to either change talk or sustain talk. This might describe for clinicians specific behaviors that convey empathy to a client. Additionally, for the practicing clinician, information regarding the descriptive characteristics of empathy might provide insight into specific types of empathic speech which would be associated with change talk or sustain talk. Each mediation model was tested using bootstrapping methods to obtain the indirect effects of empathic speech on client speech through several descriptive clinician speech variables. Bootstrapping methods were

chosen because they provide standard errors (SE) and confidence intervals (CI) as well as significance tests for indirect effects (Efron & Tibshirani, 1994). Bootstrapping methods have been shown to be superior to Baron and Kenny's causal steps models or the Sobel test (Preacher & Hayes, 2004, 2008). These analyses were conducted with SPSS add-ons created by Preacher and Hayes (2004).

The first mediation model of the indirect effects of F-ES on CT through MICO found that MICO was a significant mediating variable, fully mediating the effect of F-ES on CT (Table 10.1, Figure 1). The model including MICO as a mediator accounted for 19.5 % of the variance in the association between F-ES and CT (Table 10.2). A second mediation model found that the Ref-CT was also a significant mediating variable for the association between F-ES and CT (Table 11.1, Figure 2). This model with Ref-CT as a mediator accounted for 61 % of the total variance between F-ES and CT (Table 11.2). A third mediation model exploring the indirect effects of F-ES on ST found that Ref-ST was a mediating variable of the indirect effects of F-ES on ST, partially mediating the effect of F-ES on ST (Table 12.1, Figure 3) This model, including Ref-ST as a mediating variable, accounted for 33.2 % of the variance between F-ES and ST (Table 12.2). Since each mediation model used data from the same 20-minute time segments, they did not reflect a sequential analysis of causation. To test for a better model fit, each model was tested again, swapping positions of the independent and mediating variable. In each instance, the b path was no longer significant and did not result in a better model fit.

Chapter 6

Discussion

This study found a significant, albeit modest, association between empathic speech and change talk. However, the relationship was not significant across all measures of empathic speech and only the frequency of empathic speech (F-ES) shared a significant positive correlation with change talk. When measured in duration of time (seconds) or as a ratio of the total clinician speech (utterances or seconds), empathic speech did not have a significant association with client change talk. An unexpected finding was that the frequency of empathic speech had stronger associations with client sustain talk than change talk (Table 5). Taken together, the findings from this study suggest that the frequency of clinician empathic speech is associated with statements in favor of changing as well as statements in favor of sustaining a behavior. This expression of conflicting statements can be viewed as the expression of ambivalence – the state of feeling two ways about something. Ambivalence is a construct of central importance to the theoretical approach of motivational interviewing, as the stated target of an MI intervention is to resolve ambivalence in the direction of change (Miller & Rollnick, 2002). Results showing that the increases in frequency, and not duration, of empathic speech are associated with increases in both change talk and sustain talk suggest that empathic expressions that are brief and regular may function as an important component of overall effective motivational interviewing, and may help to increase target-oriented discussions from a client regarding ambivalence towards change.

Analyses using mediation models provided further information about clinician behaviors associated with empathic speech. MI-consistent behaviors, as well as clinician reflections of client change talk, were significant mediators of the association between the frequency of empathic speech and client change talk. Additionally, clinician reflections of client sustain talk were significant mediators of the effect of empathic speech on sustain talk. It is likely that these

mediating variables, which have previously been shown to elicit change talk or sustain talk, are topographically distinct behaviors that function as empathic expressions. That is, MI-consistent behaviors, especially clinician reflections of client change language, are perceived as empathic expressions. Further, of the several clinician behaviors that moderate the relationship between empathic speech and client behaviors, it is no surprise that reflections of change talk would moderate the indirect effects of empathic speech on change talk and reflections of sustain talk would moderate the indirect effects of empathic speech on sustain talk. These findings suggest specific behaviors clinicians can use to express an empathic understanding to the client and also increase the likelihood of change language. The issue, then, is not simply how a clinician can express an empathic understanding of a client's perspective, but what aspects of the client's perspective does the clinician most want to emphasize through empathic speech? Previous research shows that clinicians can behave in a MI-consistent manner to increase client change talk and decrease client sustain talk, and that increasing change talk while decreasing sustain talk is associated with improvements in client treatment outcomes. This study adds to existing knowledge by suggesting behaviors that elicit change or sustain language may also function to express empathy towards a client.

Another unexpected finding was that the in-session empathic speech measures shared little positive association with global measures of clinician session-wide behavior (Table 9). Although all four measures of empathic speech correlated with the MI Spirit global, they did not share consistent associations with global measures of direction, acceptance, or empathy. The ratio of empathic speech duration shared a small positive association with the MISC global measures of empathy (Table 9). In multi-trait multi-method analyses it is common to find lower correlations between uni-trait hetero-method analyses, such as the association between empathy

as a global measure and empathy as a speech behavior (Campbell, 1959). However, the association between different empathy measures should be greater than the association between hetero-trait hetero-method correlations, such as MI Spirit global ratings and empathic speech measures. Although it is possible that the empathic speech measure and the Empathy global score are measuring different dimensions of the empathy construct, it would be important to know what these different components are, and achieve greater reliability across different empathy measures. These findings are similar to other research that has found only modest correlations across different measures of empathy (Davis & Kraus, 1997; Elliott et al., 2011). This suggests that empathy is a large and complex construct that is not easily measured. Although empathic speech captures some of the variance in empathic expressions, it is limited by its neglect of other forms of empathic expression. This idea is consistent with other findings that clinician body posture, vocal tone, or facial expressions are ways that clients perceive clinician empathy (Maurer & Tindall, 1983; Stel & van Knippenberg, 2008; Stone, 2001). Additionally, it is possible that empathy is a process not suitable to a linear quantification, but is best quantified through a different method of measurement.

These results suggest directions for those looking to learn, teach, or practice motivational interviewing. The frequent use of brief empathic expressions is associated with several important MI-consistent behaviors and also is associated with on-topic client behavior; both change talk and sustain talk. The findings suggest that clinicians looking to improve their expression of empathic understanding may benefit from increasing the use of brief and frequent reflections of client perspectives. If looking to emphasize an understanding of a client's reasons for changing a behavior, clinicians might use empathic speech that reflects a client's own change talk. This

study did not find that longer empathic expressions are associated with client change talk, or sustain talk.

It also is encouraging to note that the reliability of rater data for the coding of empathic speech was in the good to excellent range. This is an encouraging result for future research into the function of complex constructs within the psychotherapy process. Relatively naïve raters were able to code empathic speech reliably, which lent confidence to our findings. Additionally, this study found that the 20-minute segments of motivational interviewing sessions compared similarly to the full sessions. High correlations between variables from the full sessions and 20-minute segments ranging between 67% and 93%, demonstrated a high degree of association between groups. These methodological findings suggest that such research, although conceptually and theoretically challenging, can be conducted with relatively inexperienced raters and can use convenient session segments, rather than entire therapy sessions, thus decreasing the length of time required to complete such a project.

Existing limitations of this study design narrow the extent to which the results can be interpreted and generalized. One primary limitation was the re-analysis of an existing collection of audio recorded therapy sessions. Clients were anonymous and client information was limited, impeding the ability to look at the moderating effect of client-specific variables, such as gender, age or other demographic matching variables. Another limitation was the correlation analysis used to analyze two uncontrolled variables at a single time point. This study design and analysis method limited the ability to draw any conclusions as to causal properties of empathic speech and change talk. Although the two variables were found to be positively correlated, we cannot say what the directionality of the relation was. It is unclear if empathic speech is affected by change talk, or change talk is affected by empathic speech. Additionally, the analysis of therapy

sessions was limited to the language used by clinicians and clients. Neither the ISCEE coding system nor the MISC coding system measured the vocal tone, facial expression, eye contact, or body posture of clinicians or clients, missing out on many ways in which people interact and express themselves to others. Finally, concrete behavioral outcome data were not available for the clients in these sessions, limiting the extent to which these findings can be generalized beyond the therapy session.

Future research into the role of empathy in the psychotherapy process should move beyond measuring empathy and its correlates and instead explore the form and function of empathy within therapy sessions and extend such in-session findings to client outcomes. If empathy is an active ingredient within effective treatment, how is it manifested within the therapy session and what is its direct impact on a client? This current study suggests that empathic speech is highly correlated with clinician reflective statements. It is important to know, for purposes of training clinicians, how to express empathy to a client and the behaviors that best convey an empathic understanding. It also is important to know, beyond theoretical explanations, how empathy functions to improve psychotherapy and how clients respond to such clinician behaviors. Such issues could be answered through research conducted within a quasi-therapeutic context, where the independent variable of empathic expressions could be manipulated to measure the in-session responses of clients. Additionally, it would be important to know how in-session clinician behaviors and subsequent client behaviors translate into client outcomes at follow-up time points. Finally, if empathy is an important clinician behavior, both in motivational interviewing, and across other psychotherapy methods, how can empathy best be taught to clinicians? Future research should explore methods of teaching clinicians to express an

empathic awareness of the client's perspective. Replication of these findings would support the role of empathic speech as a mechanism of action in MI.

Chapter 7

Summary

Empathy has long been an important construct within psychotherapy. Within motivational interviewing, a clinician's empathic expressions are theorized to be a central part of the relational component of MI. This study analyzed the correlation between clinician and client in-session behaviors to explore whether clinician empathic speech was related to client change talk and sustain talk. The study found that frequencies of empathic speech shared a significant positive correlation with client change talk as well as client sustain talk. This correlation between empathic speech and change talk was small to moderate in size, and exploratory mediation analysis found that the relation between empathic speech and change talk could be fully or partially accounted for by mediating variable such as MI-consistent behaviors and clinician reflections of client change talk. Similarly, the relationship between empathic speech frequency and client sustain talk frequencies was moderate in size and was mediated by reflections of client sustain talk. The present study was unable to explore the causal nature of the relation between clinician empathic speech and client change talk. Future research should explore in greater detail the form of empathic expressions, the function of such statements within the therapeutic context, and the ability to train such empathic behaviors to teach this important therapeutic skill to new clinicians.

Chapter 8

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Chapter 9

Tables

Table 1

Current certification or licensing of study clinicians

Title	Frequency	Percentage
Certified Alcohol and Drug Counselor	49	32.7
Licensed Professional Counselor	27	18
Marriage and Family Counselor	10	6.7
Physician's Assistant	1	.7
Nurse Practitioner	2	1.3
Registered Nurse	2	1.3
Licensed Social Worker	50	33
Psychologist	10	6.7
Physician	10	6.7

**Note frequencies and percentages do not sum to 150 or 100%, respectively, because some clinicians had more than one licensing endorsement.*

Table 2

Primary theoretical orientation of clinicians

Orientation	Frequency	Percentage
Psychoanalytic	1	0.7
Psychodynamic	8	5.3
Twelve-Step	9	6.0
Rational Recovery	1	0.7
Cognitive Behavioral	92	61.3
Humanistic	17	11.3
Psychopharmacological	6	4.0
Family Systems	2	1.3
Other	9	6.0

**Frequencies and percentages do not sum to 150 or 100%, respective, because some clinicians did not indicated specific orientation.*

Table 3

Reliability of total clinician speech and empathic clinician speech measures.

Measure	Mean	SD	ICC
D-TS	395.94	163.20	.989
F-TS	44.03	18.72	.925
D-ES	182.37	97.18	.742
F-ES	22.61	11.52	.729

D-ES/TS	.4913	.2238	.703
F-ES/TS	.5495	.2263	.617

F-TS = *Frequency of Total Clinician Speech*, D-TS = *Duration of Total Clinician Speech*, F-ES = *Frequency of Clinician Empathic Speech*, D-ES = *Duration of Clinician Empathic Speech*, F-ES/TS = *Ratio of Frequency of Clinician Empathic Speech to Total Speech*, D-ES/TS = *Ratio of Duration of Clinician Empathic Speech to Total Speech*.

Table 4

Correlations of behavioral count ratios for full sessions and randomly selected 20-minute samples

Measure		Mean	SD	Correlation
Change Talk Ratio	Full	.765	.201	.673***
	20-Min	.736	.267	
Open Questions Ratio	Full	.367	.159	.845***
	20-Min	.361	.212	
Complex Reflections Ratio	Full	.512	.211	.898***
	20-Min	.532	.244	
Reflection to Question Ratio	Full	1.264	1.174	.892***
	20-Min	1.511	2.060	
Total Reflections Ratio	Full	.485	.169	.935***
	20-Min	.498	.181	
MICO Behaviors Ratio	Full	.968	.055	.894***
	20-Min	.964	.068	

$Change\ Talk\ Ratio = \frac{Change\ Talk}{Change\ Talk + Sustain\ Talk}$, $Open\ Questions\ Ratio = \frac{Open\ Questions}{Open\ Questions + Closed\ Questions}$,

$Complex\ Reflections\ Ratio = \frac{Complex\ Reflections}{Complex\ Reflections + Simple\ Reflections}$, $Reflection\ to\ Question\ Ratio = \frac{Total\ Reflections}{Total\ Questions}$,

$Total\ Reflection\ Ratio = \frac{Total\ Reflections}{Total\ Clinician\ Behaviors}$, $MICO\ Behaviors\ Ratio = \frac{MICO\ Behaviors}{Total\ Clinician\ Behaviors}$

Note. *** = $p < .001$

Table 5

Pearson product-moment correlation coefficients of clinician empathic speech and client change talk, percent change talk, and sustain talk

Measure	CT	% CT	ST
D-ES	.118	-.068	.174*
F-ES	.233**	-.036	.354***
D-ES/TS	.139	.067	.012
F-ES/TS	.127	.031	.009

F-ES = *Frequency of Clinician Empathic Speech*, D-ES = *Duration of Clinician Empathic Speech*, F-ES/TS = *Ratio of Frequency of Clinician Empathic Speech to Total Speech*, D-ES/TS = *Ratio of Duration of Clinician Empathic Speech to Total Speech*.

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Table 6

Pearson partial correlation coefficients of clinician empathic speech duration (seconds) and client change talk, controlling for the total clinician speech duration

Controlled Var.	Measure	CT	% CT	ST
D-TS	D-ES	.128	-.012	.130
	D-ES/TS	.147	.017	.065

D-TS = Duration of Total Clinician Speech, D-ES = Duration of Clinician Empathic Speech, D-ES/TS = Ratio of Duration of Clinician Empathic Speech to Total Speech.

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Table 7

Pearson partial correlation coefficients of clinician empathic speech frequency (parses) and client change talk, controlling for the total clinician speech frequency

Controlled Var.	Measure	CT	% CT	ST
F-TS	F-ES	.186*	-.002	.209*
	F-ES/TS	.198*	.008	.160

F-TS = Frequency of Total Clinician Speech, F-ES = Frequency of Clinician Empathic Speech, F-ES/TS = Ratio of Frequency of Clinician Empathic Speech to Total Speech,

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Table 8

Pearson product-moment correlation coefficients of empathic speech with other theoretically relevant behavior counts and ratios

	F-ES	D-ES	F-ES/TS	D-ES/TS
MICO	.631***	.288***	.002	.073
MIIN	-.066	-.166*	-.315***	-.310***
T-SR	.475***	.134	.002	.038
T-CR	.459***	.292***	.196*	.175*
T-Ref	.606***	.261**	.098	.161*
Ref-CT	.432***	.205*	.196*	.175*
Ref-ST	.328**	.179*	.034	.010
T-OQ	.302***	.210**	-.059	-.015
Support	.167*	-.017	-.160*	-.159
R/Q Ratio	.182*	.080	.312***	-.262
OQ Ratio	.099	.252**	.335***	-.015
Ref Ratio	.187*	.156	.351***	.413***
CR Ratio	-.114	.054	.080	.101
MICO Ratio	.199*	.228**	.301***	.327***

MICO = Motivational Interviewing Consistent Behaviors, MIIN = Motivational Interviewing Inconsistent Behaviors, T-SR = Total Simple Reflections, T-CR = Total Complex Reflections,

T-Ref = Total Reflections, *Ref-CT* = Reflections of Change Talk, *Ref-ST* = Reflections of Sustain Talk, *T-OQ* = Total Open Questions, *Support* = Supportive Statements,

$$OQ \text{ Ratio} = \frac{\text{Open Questions}}{\text{Open Questions} + \text{Closed Questions}}, \quad CR \text{ Ratio} = \frac{\text{Complex Reflections}}{\text{Complex Reflections} + \text{Simple Reflections}}, \quad R/Q \text{ Ratio} = \frac{\text{Total Reflections}}{\text{Total Questions}},$$

$$Ref \text{ Ratio} = \frac{\text{Total Reflections}}{\text{Total Clinician Behaviors}}, \quad MICO \text{ Ratio} = \frac{MICO \text{ Behaviors}}{\text{Total Clinician Behaviors}}$$

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Table 9

Pearson product-moment correlation coefficients of empathic speech with global characteristics of clinician

	F-ES	D-ES	F-ES/TS	D-ES/TS
Empathy	.073	.112	.115	.162*
Acceptance	.045	.084	.211**	.134
Direction	.181*	.126	.091	.009
MI Spirit	.201*	.232**	.315***	.284***

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Empathy = MITI empathy global measure, *Acceptance* = MITI acceptance global measure, *Direction* = MITI direction global measure, *MI Spirit* = MITI global measure of MI Spirit (Average of collaboration, autonomy support, and evocation global measures).

Table 10.1

Step-wise mediation analysis of the indirect effect of empathic speech frequency (F-ES) on change talk (CT) through the mediator of motivational interviewing consistent behaviors (MICO).

Model 1	Coefficient	Standard Error	t-value
F-ES on MICO (a path)	.796	.081	9.895***
MICO on CT (b path)	.415	.082	5.0769***
Total effect of F-ES on CT (c path)	.252	.086	2.917**
Direct effect of F-ES on CT (c' path)	-.078	.103	-.758

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Table 10.2

Bootstrap mediation analysis of the indirect effect of empathic speech frequency (F-ES) on change talk (CT) through the mediator of motivational interviewing consistent behaviors (MICO).

Mediator	Data	Boot	SE	CIL	CIU	R ²	Adj. R ²	F
MICO	.330	.331	.083	.190	.520	.195	.185	12.898***

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Table 11.1

Step-wise mediation analysis of indirect effects of empathic speech frequency (F-ES) on change talk (CT) through the mediator of reflections of change talk (REF-CT).

Model 2	Coefficient	Standard Error	t-value
F-ES on REF-CT (a path)	.217	.037	5.832***
REF-CT on CT (b path)	1.787	.123	14.536***
Total effect of F-ES on CT (c path)	.252	.086	2.917**
Direct effect of F-ES on CT (c' path)	-.135	.062	-2.191*

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Table 11.2

Bootstrap mediation analysis of indirect effects of empathic speech frequency (F-ES) on change talk (CT) through the mediator of reflections of change talk (REF-CT).

Mediator	Data	Boot	SE	CIL	CIU	R ²	Adj. R ²	F
Ref-CT	.387	.385	.083	.242	.572	.612	.607	115.955***

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Table 12.1

Step-wise mediation analysis of indirect effects of empathic speech frequency (F-ES) on sustain talk (ST) through the mediator of reflections of sustain talk (Ref-ST).

Model 3	Coefficient	Standard Error	t-value
F-ES on Ref-ST (a path)	.085	.020	4.225***
Ref-ST on ST (b path)	.984	.146	6.740***
Total effect of F-ES on ST (c path)	.189	.041	4.610***
Direct effect of F-ES on ST (c' path)	.105	.038	2.751**

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Table 12.2

Bootstrap mediation analysis of indirect effects of empathic speech frequency (F-ES) on sustain talk (ST) through the mediator of reflections of sustain talk (Ref-ST).

Mediator	Data	Boot	SE	CIL	CIU	R ²	Adj. R ²	F
Ref-ST	.084	.086	.036	.037	.189	.332	.323	36.510***

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Chapter 10

Figures

Figure 1

Distribution of median time-point for 20-minute segments

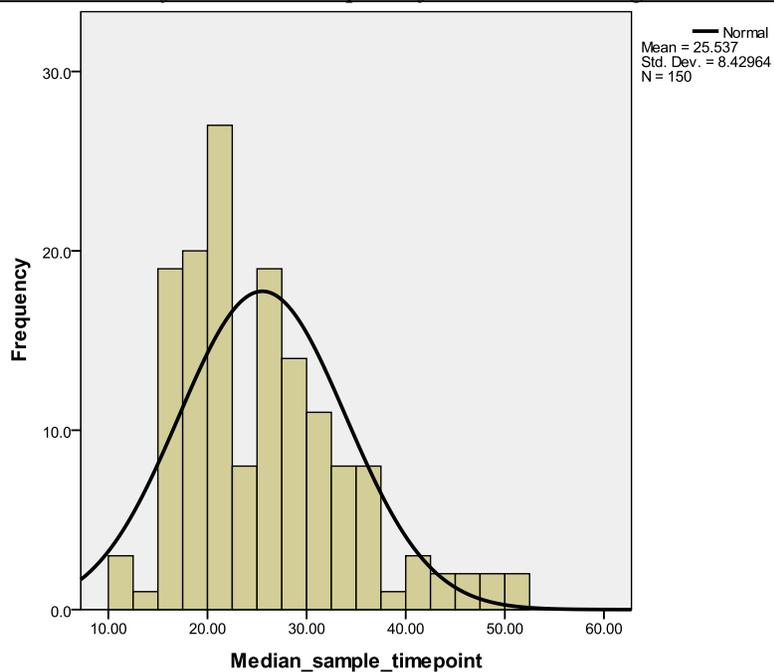
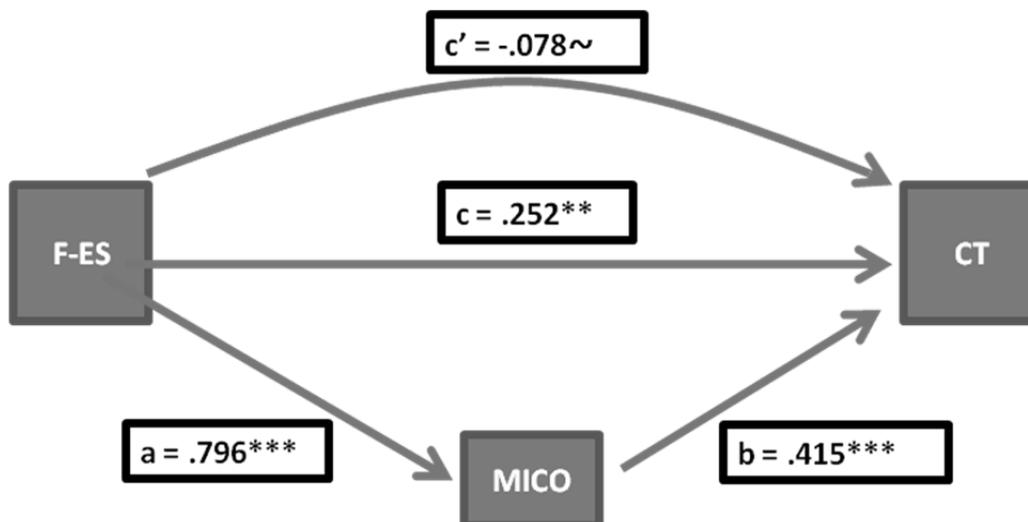


Figure 2

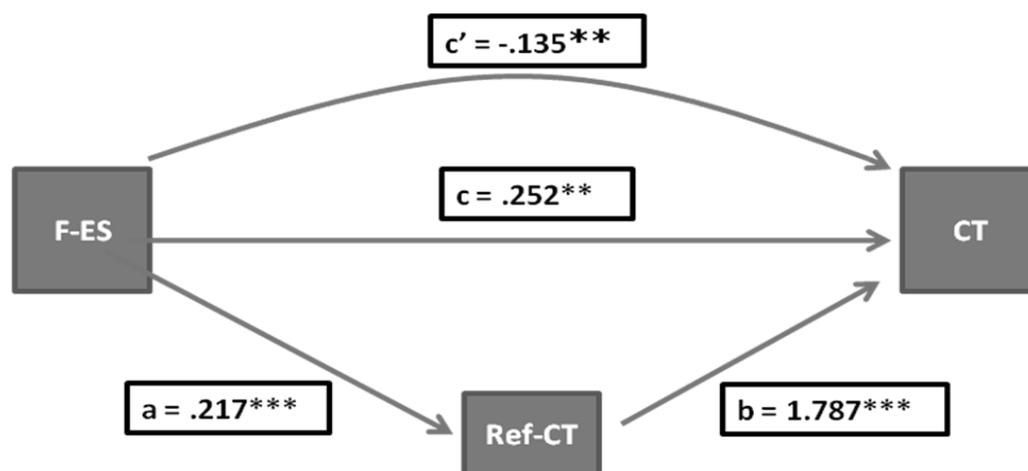
Model of indirect effects of empathic speech frequency (F-ES) on change talk (CT) through the mediating variable of motivational interviewing consistent behaviors (MICO).



Note. $^{**}p = .01$, $^{***}p < .01$, $^{\sim}p > .01$

Figure 3

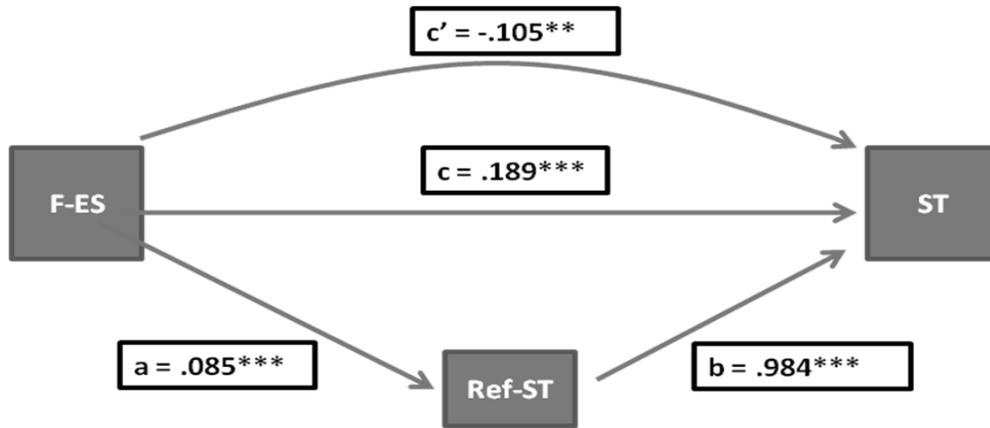
Model of indirect effects of empathic speech frequency (F-ES) on change talk (CT) through the mediator of reflections of change talk (REF-CT).



Note. $^{*}p = .01$, $^{**}p < .01$, $^{\sim}p > .01$

Figure 4

Model of indirect effects of empathic speech frequency (F-ES) on sustain talk (ST) through the mediator of reflections of sustain talk (REF-ST).



Note. $*p < .05$, $**p < .01$, $***p < .001$

Appendix:

Literature Review

Origins of empathy as a research topic in psychology

The construct of empathy describes a person's ability to be aware of and express an understanding of another person's perspective, including thoughts, emotions, and point of view. Similar to other constructs that describe complex human interactions, empathy has been studied a great deal in psychology and other social sciences. Within the field of psychology, empathy research dates back to the work of Edward Titchener. He drew the concept from the German philosopher Theodor Lipps and his discussion of *empathy*, or "feeling into" (Hilgard, 1987). The term *empathy* was originally used to explain aesthetic appreciation as a process by which an individual identified something of themselves within an inanimate object (Stueber, 2008). Titchener used the term to describe how one individual experienced themselves in another person, or experienced a connection with the other-mindedness of another individual (Stueber, 2008). From these beginnings, empathy grew as a topic of research in social sciences, particularly in psychology.

Social and developmental theories of empathy

At its core, empathy involves an interaction between two people. Social psychologists and evolutionary psychologists have theorized that empathy involves recognizing the other mindedness of another person and that this recognition played an important role in the foundation of interpersonal bonding, social group cohesion, and kinship structures (Buck & Ginsburg, 1997). Social psychologists have theorized that empathy was an altruistic response, which predisposed a person towards helping actions that served to strengthen a bond between individuals (Hoffman, 1981; Hurlbut, 2002). Such altruistic actions, even brief empathic

responses, would increase one's likelihood of gaining future assistance from the person who received the altruistic act. This idea of reciprocal altruism was a way of explaining empathy as a mechanism of human interaction and social cohesion (de Waal, 2008). Other social psychologists questioned the altruistic nature of empathy, arguing that people used empathy to build a supportive social network, which was self-serving, and therefore not altruistic, but mutually beneficial for both individuals (Cialdini, Brown, Lewis, Luce, & Neuberg, 1997; Cialdini et al., 1987).

Developmental psychology has studied the role of empathy in human development, suggesting that empathy was an important factor in normal human development and when absent was a symptom of abnormality. Studies found that mother-child bonding was associated with later emotional regulation and empathic awareness in children (Altınbaş, Gülöksüz, Özçetinkaya, & Oral, 2010; Atzil, Hendler, & Feldman, 2011). Additional research found that empathic deficits in individuals were associated with autism spectrum disorders as well as schizophrenia (Baird, et al., 2011; Buccino & Amore, 2008; Gallese, Eagle, & Migone, 2007; Varcin, et al., 2010). It has been theorized that a lack of empathic awareness central to several interpersonal-disorders, not just autism spectrum disorders and schizophrenia, but also antisocial personality disorder, and schizoid personality disorder as well (Smith, 2006).

Neurological basis of empathy

Neuropsychology has proposed several neurological markers of empathy. Mirror neurons have been identified as one of these markers and describe phenomena in the brain in which an observing person will show brain activation in the same area as the person that they are observing. From the perspective of mechanistic brain functions, the actor and the observer are having similar neurological experiences (Baird, et al., 2011). This phenomenon has received

wide support and has been used as a theoretical explanation for human development of sophisticated social capabilities and moralities (Molnar-Szakacs, 2011). Mirror neurons have been hypothesized to play an important role in successful face-to-face communication, even psychotherapy (Gallese, et al., 2007; Schulte-Rüther, et al., 2007). The dysfunction of mirror neurons has also been linked to disorders such as schizophrenia and autism (Greimel, et al., 2010; Varcin, et al., 2010).

The chemical neurotransmitter oxytocin was another neural mechanism involved in the expression of empathy. Research supported the role of oxytocin in the neural mechanisms of several pro-social behaviors (Shamay-Tsoory, 2011; Striepens, et al., 2011). Research has suggested that the presence of oxytocin acted to shift an individual's perspective from self-regarding to other-regarding (Jorge Abram Barraza, 2011). Several studies found that the experimental manipulation of oxytocin levels in individuals led to increases in cooperation and pro-social behaviors (De Dreu, 2011; Declerck, et al., 2010). Research focused more specifically on the association between oxytocin and empathy has found that increases in oxytocin levels are related to increases in empathic awareness and accuracy, but the direction of this relationship has yet to be determined (Jorge A. Barraza & Zak, 2009; Bartz, et al., 2010).

Empathy as a topic in experimental psychology

Experimental psychologists have used controlled environments as ways of exploring the role of empathy in human interactions. One paradigm that has been used to manipulate and study empathy is the prisoner's dilemma game. This classic game pits two individuals against each other. In the scenario of the game, two individuals are told that they have been arrested for a crime, but that the authorities do not have enough evidence to convict. If, either individual will testify against the other, then the testifying individual will go free, and the other individual will

receive a one year sentence. If neither individual testifies, then each individual receives a one month sentence. If both individuals testify, then both individuals receive a three month sentence. Neither individual is allowed to know what the other individual chose to do, but must decide on his or her own. The challenge is for each individual to maximize reward and limit punishment without knowing what the other individual has told the authorities. The logical solution is to act out of self interest and testify against the other accused individual, limiting the maximum punishment to three months, while maintaining the possibility of receiving no punishment. This paradigm has been used in experimental settings to explore the effect of induced empathy on individual decision making. Studies found that in situations where subjects were induced to consider the perspective of the other prisoner, the subjects were less likely to testify against the other prisoner, even when they knew that the prisoner had already testified against them (Batson & Ahmad, 2001; Batson & Moran, 1999). One study using the prisoners dilemma game to study empathy found that the administration of oxytocin to individuals before engaging in the prisoners dilemma game resulted in increased cooperation, but only when social information about the other prisoner was available (Declerck, et al., 2010). These studies suggest that when an individual is able to identify with the perspective of another individual, they are much more likely to engage in pro-social or helping behavior and that empathy can be induced, or primed in individuals. These findings extend into observational research as well. A novel study looking at vehicle emissions inspectors found that the inspectors were much more likely to offer lenience to car owners who failed emissions tests if the car owner drove a standard car rather than a luxury car, suggesting that vehicle emissions inspectors identify with and are therefore more likely to help individuals with less luxurious cars (Gino & Pierce, 2010).

Client-centered therapy and the influence of Carl Rogers

Within clinical psychology, empathy has been understood more narrowly as a means by which the clinician expresses an understanding of the client's perspective. This clinical understanding of empathy has been greatly influenced by Carl Rogers and the client-centered perspective of humanistic psychology. In the 1957 Rogers stated his theory of necessary and sufficient conditions for therapeutic personality change (Rogers, 1957). In this article Rogers identified genuineness, positive regard, and empathy as central conditions necessary for successful psychotherapy (Rogers, 1957). Genuineness was defined as a clinician's ability to freely and deeply expressing himself, with his actual experience accurately represented (Rogers, 1957). Positive regard, or warmth, was defined as receiving each aspect of the client as an important characteristic, without drawing conclusions regarding the client's character (Rogers, 1957). Rogers defined empathy as a clinician's ability to perceive the internal frame of reference for another – complete with emotional components and meanings – as if it were one's own, while remaining aware that the experience was another's (Rogers, 1957). Within this perspective, a clinician's empathic response communicated an understanding of the client's point of view, encouraging the client towards further exploration of his or her thoughts and feelings in an accepting and nurturing environment. Rogers theorized that under such ideal circumstance, a client would alter his own self-concept, move further towards self actualization, and subsequently change behavior to match the new self-concept (Rogers, 1975). Although Rogers held that genuineness, warmth, and empathy were all necessary for positive client change, Rogers believed that empathy was the means by which a clinician expressed an understanding and acceptance of the client and that such a realization of another person's acceptance was what allowed a client to move towards self-acceptance and self-actualization (Rogers, 1975).

Charles Truax and Robert Carkhuff, students of Carl Rogers, provided the first empirical support for Rogers' theory. Truax and Carkhuff published several studies throughout the 1960's and 1970's supporting the presence of clinician warmth, genuineness, and empathy and finding associations between these variables and important in-session client behaviors as well as positive client treatment outcomes (Truax, 1966, 1968, 1970; Truax & Carkhuff, 1967; Truax, Carkhuff, & Kodman, 1965; Truax et al., 1966a; Truax et al., 1966b; Truax, Wargo, & Silber, 1966; Truax, Wargo, & Volksdorf, 1970). These studies followed similar methodologies in which audio recordings of group or individual therapy sessions were recorded and then analyzed by trained raters. Clinician levels of accurate empathy, warmth, and genuineness were rated along with client levels of self exploration. Several of these studies found that higher levels of accurate empathy, warmth, and genuineness were associated with higher levels of client self exploration (Truax, 1968; Truax & Carkhuff, 1965, 1967). Outcome variables for these studies varied. In some studies, client outcomes were measured by changes in Minnesota Multiphasic Personality Inventory (MMPI) subscale scores (Truax, 1966; Truax, et al., 1965). These studies found that greater scores for clinician accurate empathy, genuineness, and warmth correlated significantly with improvements in MMPI subscale scores, supporting the idea that high clinician levels of accurate empathy, warmth, and genuineness correlated with improved client outcomes (Truax, 1966; Truax, et al., 1965). A study of delinquent youth used the number of days incarcerated during follow-up as an outcome variable (Charles B. Truax, et al., 1966). This study found that youths who were seen by clinicians who received higher empathy ratings had fewer days incarcerated or institutionalized during the follow-up period (Charles B. Truax, et al., 1966). A third study used a similar research design but measured outcome variables with a composite of clinician, client, and rater scales of client improvement (C. B. Truax, D. G. Wargo, J. D. Frank,

S. D. Imber, C. C. Battle, et al., 1966a). This study also found further support for the relationship between clinician empathy, genuineness, and warmth, and positive outcomes (C. B. Truax, D. G. Wargo, J. D. Frank, S. D. Imber, C. C. Battle, et al., 1966a). Although these studies provided early evidence for the link between Roger's necessary and sufficient conditions and client improvement in therapy, the methodology used had limitations. One limitation was that much of the rating of interactions between clinicians and clients was done at the level of global ratings applied across lengthy session excerpts. This reduces the focus of analysis from discrete clinician or client behaviors to broad time periods of several minutes, encompassing several interactions between clinician and client, and asking raters to score the average presence of empathy, genuineness, warmth, or self exploration. Another limitation was that these in session ratings of clinicians and clients were often not connected to an objective outcome measure. With the exception of days incarcerated or institutionalized, many of the outcome measures were quite subjective (composite ratings from clinician, client, and rater) or else did not generalize very easily to client behaviors (changes in MMPI profile scores).

Empathy as a component of the therapeutic relationship

One area of study in psychotherapy process research has focused on the role of the therapeutic relationship between clinician and client as an active and important component of client change in psychotherapy. Although there is disagreement regarding the extent to which the therapeutic relationship matters, few psychologists deny the importance of the therapeutic relationship. A recent task force published findings on the empirically supported components of the therapeutic relationship (Norcross & Wampold, 2011). Clinician empathy, along with therapeutic alliance, and receiving client feedback, was one aspects of the therapeutic relationship to receive the strongest support (Norcross & Wampold, 2011). In theory, higher

levels of clinician empathy allow a clinician to stay attuned to the moment-by-moment experiencing of the client (Elliott, Bohart, Watson, & Greenberg, 2011b). The role of empathy in creating a positive therapeutic relationship has been supported by several studies. Research has found that clinician empathy was associated with client perceptions of the clinician as expert and trustworthy; additionally, research found that clinician empathy was also associated with client ratings of therapeutic alliance (Boardman, 2006; Redfern, Dancey, & Dryden, 1993). Client perceptions of clinician acceptance and empathy were factors associated with client and clinician agreement on client improvement, suggesting that more empathic clinicians are able to form more congruent therapeutic relationships with clients (Lorr, 1965). One study found that clinician emotional responses to clients were associated with client perceptions of clinician empathy, with more emotionally expressive clinicians being viewed as having greater empathic understanding of clients (Wolff & Hayes, 2009). Another study found that client ratings of clinician empathy were related to relationship conditions such as working alliance and that these findings generalized across treatment modality and were significant predictors of improvements in client outcomes (Watson & Geller, 2005).

Empathy as a predictor of psychotherapy process and outcomes

Within clinical research, empathy has gained support as an important factor in psychotherapy process as well as outcomes (Bohart, Elliott, Greenberg, & Watson, 2002). It is theorized that the presence of clinician empathy expressed toward the client allow clients to find meaning in the therapeutic exchange, as well as gain support and validation from the clinician (Bohart, 2004). These ideas have been supported by research that found higher levels of therapist empathy to be associated with higher levels of client self-exploration (Merrill & Andersen, 1993; Sachse & Elliott, 2002). Matching clients to clinicians based on qualities such as clinician

empathy was shown to be more effective, and lead to greater improvements in substance use treatment, than matching clients based on race, gender, or age (Fiorentine & Hillhouse, 1999).

Clinician empathy has been found to relate with improvements in client outcomes. Several studies across psychotherapeutic as well as medical settings have found that higher levels of empathy are associated with greater improvements in client outcomes. In psychotherapeutic settings, higher measures of clinician empathy have been related to decreases in client alcohol or cocaine use, improvements in client depression, and client wellbeing (Bruhn, et al., 1980; Burns & Nolen-Hoeksema, 1992; William R. Miller, 2000; Pantaloni, et al., 2004; Ritter et al., 2002). In medical settings, clinician empathy has been associated with improvements in patient diabetes, cancer care, depression, and client wellbeing (Hojat, et al., 2011; Mercer, et al., 2008; Neumann, et al., 2007; Price, Mercer, & MacPherson, 2006).

Approaches to measuring empathy

Empathy has variously been conceptualized as both an individual trait as well as a phenomenological state shared between individuals (Barkham, 1988; Bohart, et al., 2002; Elliott, et al., 2011b). Depending on how researchers have defined empathy, they have used different methods to measure the construct. These methods have included individual self report, paper and pencil measures, rater observations, and biological or physiological indicators. A review of paper and pencil measures of empathy was mixed, finding that several supposed measures of empathy as an individual trait also measure other distinct constructs such as emotional arousal or social functioning (Chlopan, McCain, Carbonell, & Hagen, 1985). Some paper and pencil measure of empathy, such as the Interpersonal Reactivity Index (IRI), the Empathy Scale (EM), or the Questionnaire Measure of Emotional Empathy (QMEE) have been used in research, but have raised questions regarding the validity and utility of the measure because these measures are

minimally associated with each other and have mixed results regarding their predictive utility (Chlopan, et al., 1985).

One repeated finding regarding empathy in clinical settings was that ratings of in-session behavior by either the client or a trained rater were the most reliable and valid measures of empathy and had a greater predictive utility than clinician self-report or paper and pencil measurement (Elliott, et al., 2011a; Gladstein, 1977; Kurtz & Grummon, 1972; Lambert, DeJulio, & Stein, 1978; William R. Miller, Benefield, & Tonigan, 1993). This finding suggested that the “receiver” or “observer” of empathy was better able to judge its accuracy, than the person who was attempting “give” or express empathy. This finding also suggested that empathy was a state that occurs within a context, and not a characteristic that could be measured independently in an individual. Empathy was often measured as a single item global characteristic, scored on a Likert-type scale, and averaged across a period of time. On one hand, these measures proved to be reliable and have predictive utility (Kurtz & Grummon, 1972). On the other hand, they raised psychometric concerns regarding the restricted range of a Likert-type scale as well as the lack of variability on a single item measure (Chinsky & Rappaport, 1970; Chlopan, et al., 1985). Several studies attempted to use behavioral or biological measures as a way of exploring novel approaches to measuring empathy. Some of these multi-method, multi-trait indicators of empathic awareness included skin conduction, congruence of posture, facial mimicry, vocal affect, verbal response style, or brain function and were all related to rater measures of empathic awareness (Marci, Ham, Moran, & Orr, 2007; Maurer & Tindall, 1983; Shamay-Tsoory, 2011; Stel & van Knippenberg, 2008; Stone, 2001; Tanaka, 2006, 2007; Varcin, et al., 2010).

One novel approach to the measurement of interpersonal interaction, which could be applied to the measurement of empathy, came from the research of John Gottman and colleagues. Gottman and colleagues developed several coding systems for the measurement of contextual interpersonal constructs. The most notable and widely used coding system was the Specific Affect Coding System (SPAFF)(Coan & Gottman, 2007; Jones, et al., 2005). This coding system was designed to capture several complex communication constructs expressed between couples. The SPAFF uses observational coding of several behavioral markers such as facial expressions, vocal affects, and verbal content in order to identify latent constructs of affective states. One example of a latent construct identified through various indicators would be the affect of enthusiasm. Within the SPAFF, enthusiasm would be coded through a focus on several indicators, such as anticipatory behaviors, positive surprise, positive excitement, joy, happiness, or expansiveness (Coan & Gottman, 2007). These indicators would be expressed through verbal content, as well as various physical cues, such as raised eyebrows or furrowed brow (Coan & Gottman, 2007). Within the SPAFF, raters observe video recordings of interpersonal interactions and code for the presence of affective constructs. When a coder observes a behavior or behaviors which indicate a particular affect, the affect is coded as present, and a measure of time on task is captured for a given construct. This coding system provides an account of the frequency and duration at which specific affects occur. Research using the SPAFF has explored how individuals relate to each other within a conversation, and how within-conversation behaviors can predict distal outcomes. The SPAFF has been an effective tool for analyzing interactions, even when analyzing small samples of a conversation. For example, the SPAFF has been able to predict divorce rates of married couples based on the presence of affective constructs such as defensiveness, criticism, contempt, and stonewalling (John Mordechai Gottman, 1994; John M.

Gottman & Levenson, 1992; John Mordechai Gottman & Levenson, 1999). In one study, the SPAFF was able to correctly predict the likelihood of divorce over a six year period after analyzing the first three minutes of discussion between couples (Carrère & Gottman, 1999).

Theoretical foundation for motivational interviewing

Motivational interviewing is a psychotherapy method that specifically identifies the presence of clinician empathy for the client as an important component in effective treatment (W. R. Miller & Rose, 2009). MI is defined as a client-centered and directive method for resolving client ambivalence and evoking intrinsic motivation to change (William R. Miller & Rollnick, 2002). Ambivalence is understood as a normal stage in the process of change, and MI seeks to resolve ambivalence in the direction of commitment to change. For clients who perceive little or no need for change, the initial goal of MI is usually to develop discrepancy (ambivalence) that is then resolved toward change. MI is a complex and unfolding process; a way of being with, and behaving towards, a client who is contemplating change. The underlying spirit is collaborative, evocative, and respectful of client autonomy (William R. Miller & Rollnick, 2002). This collaborative aspect involves an equal partnership of client and clinician, de-emphasizing power differentials. The clinician avoids an expert or authoritarian role, instead regarding clients as experts on themselves. Information and advice are provided when requested, but the primary emphasis is towards evoking the client's own intrinsic motivation for change and perspectives on how to achieve it. The client's autonomy and ability to choose his or her own life course is emphasized.

MI is heavily rooted in a client-centered style of counseling, as formulated by Carl Rogers and his associates. Therapeutic empathy, acceptance, and positive regard are communicated through clinician behaviors such as reflective listening, supportive or accepting

statements, and a clinician's non-judgment of the client. Of these clinician behaviors, the ability to express an accurate understanding of the client's own perspective is especially important to successful MI practice. Without accurate empathy, typically expressed through reflective statements, MI proficiency cannot be achieved.

Motivational interviewing can be conceptualized as the combination of two active components. These are the relational component, which guide the clinician's general way of being, and the technical component, which guide specific intentional behaviors in an MI session (W. R. Miller & Rose, 2009). It is these two components, used skillfully and in conjunction, that make MI a unique strategy for working with clients who are ambivalent towards change.

The relational component describes the manner in which the clinician interacts with the client. It is conveyed through a clinician's empathic, genuine, and nonjudgmental manner. Within this client-centered context the clinician works as an equal collaborator, supporting the client's autonomy in decision-making. Skills that are central to this relational component are the clinician's ability to draw out the client's perspective through the use of evocative questions and the ability to express an accurate empathic understanding of the client's perspective through reflective listening. The goal of this process is to create an interpersonal environment where the client feels accepted and free to explore his or her perspective (W. R. Miller & Rose, 2009).

The technical component of MI consists of skills which allow the clinician to identify, elicit, and reinforce the client's use of language expressed in favor of changing a targeted behavior – change talk – and decrease the client's use of language expressed in favor of maintaining the status quo – sustain talk. The importance of client change talk is a concept that has gained importance in the study and practice of MI. Research supports a link between MI-consistent clinician behaviors, increased client change talk within therapy sessions, and

improved client outcomes (Theresa B. Moyers, Tim Martin, Jon M. Houck, Paulette J. Christopher, & J. Scott Tonigan, 2009). Through reflective listening the clinician expresses an accurate empathic understanding of the client and encourages the client towards further self-exploration. The clinician uses evocative questions as a way of drawing out the client's perspective. A clinician may also use language that is affirming and supportive of the client's process in order to express acceptance and empathic understanding. These technical skills are used to differentially reinforce client change talk as it naturally occurs in the context of therapy.

Empirical support for client language as a mechanism of action in MI

Over the past decade, research has grown to support the role of client language as a mechanism of action in motivational interviewing (W. R. Miller & Rose, 2009). As stated above, client change talk can be understood as client language in favor of changing a targeted behavior and client sustain talk can be understood as client language in favor of maintaining a targeted behavior. Research has shown that increases in client change talk are related to improvements in client alcohol and substance use outcomes. Research found that an increase in the strength of client change talk were related to improvements in drug use outcomes (Amrhein, Miller, Yahne, Palmer, & Fulcher, 2003). Further, the increase in the strength of client change talk was related to therapist training in MI (Amrhein, Miller, Yahne, Knupsky, & Hochstein, 2004). A number of other studies have found that the frequency of client change talk was predictive of decreases in client drinking outcomes (Bertholet, et al., 2010; Daeppen, et al., 2007; T. B. Moyers, et al., 2009). Conversely, other research has found that increases in client sustain talk was related to increases in client drinking outcomes (Campbell, et al., 2010; Vader, et al., 2010). Frequencies of client change talk and sustain talk have been associated with clinician in-session behaviors. Clinicians who use more MI-consistent (MICO) in-session behaviors were not only associated

with clients who used more in-session change talk, but therapist MICO behaviors sequentially predicted client change talk (Gaume, et al., 2010; T. B. Moyers & Martin, 2006b; T. B. Moyers et al., 2007b). The converse of this was also true, where clinicians who used more MI-inconsistent behaviors were not only associated with clients who used more instances of sustain talk, but clinician MIIN behavior sequentially predicted client sustain talk (Gaume, et al., 2010; T. B. Moyers & Martin, 2006b; T. B. Moyers, et al., 2007b). Similar studies also found that increases in sustain talk were associated with later increases in client alcohol use at follow-up time points (Campbell, et al., 2010; Gaume, Gmel, Faouzi, & Daepfen, 2009; Vader, et al., 2010). One study found that, in a quasi-experimental setting, the frequency of client change talk could be manipulated by the clinician, decreasing or increasing the frequency of change talk based on the clinician's use of eliciting techniques (Glynn & Moyers, 2010). Taken together, these studies suggest a causal chain in which a clinician can purposefully use specific behaviors that will increase the likelihood of client change talk occurrences, which will in turn increase the likelihood of improved client outcomes.

Appendix

Coding Manual

In-Session Coding of Empathic Expressions (ISCEE)

Overview

Clinician empathy – the extent to which a clinician understands or seeks to understand the perspective of the client – has long been identified as an important factor in successful psychotherapy. Research supports the idea that clinician empathy as expressed within therapy session is one of many important factors in psychotherapy outcomes. Unfortunately, it is difficult to quantify the expression of clinician empathy in a therapy session. This coding system is focused on clinician speech and provides a method to identify the presence of clinician empathic speech within a therapy session. The ISCEE provides measures of the total duration of time a clinician provides empathic speech (in seconds), the total frequency of empathic speech occurrences (in parsed utterances), and a ratio measure of empathic speech duration and frequency over total speech. This coding system does not provide any measurement as to the quality of the clinician’s empathic speech, but rather focuses on the presence or absence of the construct

Designed to be used with entire therapy sessions or representative samples of therapy sessions, this coding system requires two listening turns through an audio recording of a therapy session. Each listening turn involves a different task. In the first pass, the coder listens to the audio file of a therapy session and identifies the presence of total clinician speech. This provides a measure of total clinician speech, both duration and frequency. In the second pass, the rater listens to an audio file of a therapy session and identifies the presence or absence of clinician

empathic speech. This provides a measure of total clinician empathic speech. Information from the second pass provides the total amount of clinician empathic speech, both duration and frequency. Information from the first and second passes together provides a ratio of the proportion of the clinician's speech which was empathic ($\% \text{ Empathic Speech} = \text{Empathic Clinician Speech} / \text{Total Clinician Speech}$). This system is designed to be used in conjunction with the parsing function of the CACTI software. Each pass using the CACTI software will create a unique .parse file. These .parse files can be combined using an excel document to total the duration of time, measured in seconds, and frequency of occurrences, measured in parses.

Empathy

Empathy is generally understood as a person's ability to be aware of and express an understanding of the emotional content, meaning, or perspective of another person. In the therapy context, a clinician's empathic awareness of a client is seen as the clinician's accurate understanding and expression of the client's thoughts, emotions, and struggles. The clinician senses the client's private world as if it were the clinician's own, without interjecting the clinician's own perspective. This is a process of *being with* or *grasping the meaning* of the client's moment-by-moment experience.

Empathic speech

The clinician communicates an empathic awareness and understanding of the client's point of view through words that express a comprehension of the client's thoughts, feelings, and perspective. This may include statements expressing the emotional content or meaning within the client's own experiences. These statements may communicate a surface understanding of the client's perspective or a deeper understanding of the meaning or emotion experienced within the client's point of view. Such statements are focused on expressing an understanding of the client's

point of view, and not on providing information, giving advice, or offering an alternative point of view. The clinician may also ask the client questions which acknowledge the client's perspective and specifically seek to deepen the client's exploration of her own experience. These are questions that do not simply gather more information from the clinician, but show an awareness of the client's experience and encourage the client towards further investigation of the client's own self awareness. These questions are not rhetorical, but express both current understanding and seek a deeper experience. In each of these situations, the clinician's empathic speech clarifies and amplifies the client's own experiencing and meaning, without imposing the clinician's own perspective.

Characteristics and examples of empathic speech

Within the therapy session, the clinician will communicate an empathic understanding to the client through the following modes of speech:

1. Statements that expresses a basic surface understanding of the client's experience/perspective
2. Statements that expresses a deeper or complex understanding of the client's experience/perspective
3. Statements that search or probe for a deeper understanding of the client's experience/perspective
4. Questioning that shows an awareness of the client's perspective AND seeks to clarify or amplify the client's experience.

It is important to understand that there is seldom a single appropriate empathic response to a client statement. Below are several examples that illustrate this point. In each case, the client provides a statement and the clinician responds in several ways that would be empathic. Here are a few examples of a clinician's empathic response to a client:

Client:

“I think my drinking is becoming a problem. It is getting in the way of my job, I fight more with my spouse when I’ve been drinking, and now I have this DUI. But I still really like drinking. I don’t know how else to unwind at the end of the day. To quit drinking now would be like losing an old friend.”

Clinician:

“You see some real reasons to keep drinking.” (#1)

“Despite the problems, something about drinking makes it all worthwhile.” (#2)

“You know it’s time to quit, but it’s a question of how.” (#3)

“Tell me how drinking is like an old friend?” (#4)

“On one hand, you enjoy drinking; on the other hand, you see how it is a problem.” (#2)

“How else is drinking becoming a problem?” (#4)

“What else do you like about drinking?” (#4)

“This is a difficult decision. The problems are clear, but there is also a fear of change.”
 (#3)

Client:

“How have I been? Oh, not so good. It’s been a lousy week.”

Clinician:

“It’s been a lousy week.” (#1)

“This past week hasn’t been good, certainly not what you hoped it to be.” (#2)

“That must feel exhausting to be at the end of such a difficult week.” (#3)

“What made this week so bad? Tell me more about that.” (#4)

“How was this week worse than others?” (#4)

Differentiating between empathic clinician speech and non-empathic clinician speech

A good deal of clinician within-session speech is non-empathic. This is normal and is not in itself a sign of a poor therapeutic relationship or an unskilled clinician. A clinician may seek new information from the client, may change the topic of discussion, or may provide other important information to the client. These are all examples of helpful therapeutic interactions that

are not empathic. Non-empathic clinician speech will share or gather information, inform or educate the client, or express the clinician's perspective. These forms of clinician speech differ from empathic speech in that the clinician is not seeking to understand, express, or develop the client's perspective:

Acceptance: expressions in which the clinician communicates unconditional positive regard and non-judgment towards the client.

Client:

"But I still really like drinking. I don't know how else to unwind at the end of the day."

Clinician:

"I think you have the right to make your own choices. If you want to drink, I'll respect your decision."

"Yes, it is your decision to drink if you want to."

Warmth: expressions in which the clinician communicates kindness towards the client.

Client:

"How have I been? Oh, not so good. It's been a lousy week."

Clinician:

"Well it is good to see you. I really am glad that you decided to come to our appointment today."

Client advocacy: an expression in which the clinician acts in the best interest of and seeks to help the client.

Client:

"How have I been? Oh, not so good. It's been a lousy week."

Clinician:

“Still having trouble at work? Have you given any more thought to a change in jobs? I can put you in contact with an Occupational Specialist.”

Information gathering: expressions in which the clinician seeks to gather more information from the client for the sake of knowing more about the client.

Client:

“But I still really like drinking. I don’t know how else to unwind at the end of the day.”

Clinician:

“Oh? How much are you drinking these days? What do you normally like to drink?”

“Did you have a relapse this past week?”

Information giving: expressions in which the clinician provides the client with information that the clinician believes the client should know.

Client:

“Drinking is getting in the way of my job, I fight more with my spouse when I’ve been drinking, and now I have this DUI.”

Clinician:

“Many of the clients I see for alcohol use also have legal problems or marital issues. They are common problems for people who drink.”

Clinician disclosure: the extent to which the clinician reveals personal information about herself to the client.

Client:

“But I still really like drinking. I don’t know how else to unwind at the end of the day.”

Clinician:

“You know, as a recovering alcoholic myself, I know how difficult that situation can be.”

Confrontations: expressions which show an understanding of the client’s perspective, but are given from the perspective of another and seek to contradict the client’s perspective.

Client:

“To quit drinking now would be like losing an old friend.”

Clinician:

“You may think that drinking is like an old friend whom you don’t want to lose, but in reality drinking is your worst enemy – always has been and always will be!”

“I know you think that the drink is a friend to you, but let me challenge that idea a bit, would a friend get you fired from your job? Or try to break up your marriage?”

Ambiguous comments: Comments that have an unclear meaning and cannot be understood.

Client:

“How have I been? Oh, not so good. It’s been a crummy week.”

Clinician:

“Mmm. I see what you mean.”

“Oh, okay, that makes sense.”

“Tell me more about that.”

“Hey, you are preaching to the choir!”

A few notes on the focus of this manual

Research shows that there are several ways in addition to speech that a clinician expresses empathy towards a client, such as facial expressions, posture, tone of voice, and back channel communications. While these modes of expression may be important variables in the communication of an empathic understanding, they are not included in this system. This system focuses on clinician speech as it occurs in audio-recorded therapy sessions, and therefore, all non-verbal communication remains unexplored. Back channel communications are a method by

which a listener verbally communicates understanding and interest back to a speaker. Back channel communications which are either non-lexical (“uh huh”, “Mmm”, “Hmm”, “Oh”), or phrasal (“Oh really?”, “I see”, “Right”) will not be part of the analysis in this system. Such non-lexical or phrasal back channels lack substance for interpretation and are ambiguous as to their meaning. While such utterances may be an important way for the clinician to communicate an empathic understanding of the client, the meaning of such utterances is not reliably knowable. Since non-lexical and phrasal back channels are so brief and lacking in clear substantive meaning, they will be excluded from analysis.

A few words about back channels

In the study of linguistics, back channels are a type of listener responses that can be both verbal and non-verbal and function to signal understanding and attention towards the speaker. The term *back channel* implies that there are two channels of communication operating simultaneously during a conversation. The predominant channel is that of the speaker who directs primary speech flow. The secondary channel of communication (or backchannel) is that of the listener which functions to provide *continuers* or *assessments*, defining a listener's comprehension or interest. Back channel responses fall into three categories: non-lexical, phrasal, and substantive.

1. A non-lexical backchannel is a vocalized sound that has little or no referential meaning but still verbalizes the listener's attention. In English, sounds like "uh-huh" and "hmm" serve this role.
2. Phrasal backchannels most commonly assess or acknowledge a speakers communication with simple words or phrases (for example, "Really?" or "Wow!" in English)

3. Substantive backchannels consist of more substantial turn taking by the listener and usually manifest as asking for clarification or repetitions.

Guidelines for identifying clinician language

In both the first pass and the second pass of the coding system raters will be parsing clinician speech; that is, separating clinician speech from client speech or silence. In the first pass, raters will identify clinician total speech. In the second pass the raters will identify the clinician empathic speech only. Several decision rules will help to clarify the parsing process and allow for reliable parsing.

Decision rules

These rules will help to clarify many of the areas of confusion that are not related to the targeted speech in either pass one or pass two. These decision rules will provide for more reliable decision making when parsing.

1. Begin a parse when the *clinician* begins to speak.
2. End the parse when the *client* begins to speak, or after a silence of more than 5 seconds.
3. Do not parse simple clinician back channels such as non-lexical or phrasal back channels.
4. Do parse substantive clinician back channels.
5. Do not parse clinician speech if client and clinician are speaking at the same time.

Pass one: identifying clinician total speech

In pass one, the task of the rater is to identify total clinician speech. The rater should be aware of and familiar with the decision rules, which guide this process. If a rater is identifying speech within a segment of a session, and not the entire session, then the rater should begin listening at the beginning of allotted time and end at the allotted time. If the rater wishes to listen to a minute or two of the therapy session before the allotted time, in order to grasp the context of

the conversation, this is permissible. The rater, however, should not code clinician language outside of the allotted time period. This may mean that the rater begins her first parse or ends her last parse with an incomplete clinician statement if a clinician statement begins or ends outside of the specified time. It is important that the rater does not parse clinician speech outside of the appointed beginning or ending time point.

Pass two: coding clinician empathic speech

In pass two, the task of the rater is to identify all empathic clinician speech. This is a more challenging task than pass one. Raters should be aware of the parsing decision rules, as well as the definition of clinician empathic speech. It may be helpful to review the examples of empathic speech and non-empathic speech provided in the manual.

Decision rules for coding clinician empathic speech

These rules will help to clarify areas of ambiguity when coding for the presence or absence of empathic speech.

1. When in doubt, don't code it.
2. Do not code clinician speech that reflects only the content of what a client said and not the meaning or emotional valence behind the statement.
3. If the intent of a clinician's question is to elicit more data for the clinician, but not more understanding from the client, it is not an empathic question.