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The Interpersonal Context of Client Motivational Language in Cognitive Behavioural Therapy

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Abstract

Previous research has found that client motivational language (especially arguments against change or counter-change talk; CCT) in early therapy sessions is a reliable predictor of therapy process and outcomes across a broad range of treatments including cognitive behavioural therapy (CBT). Existing studies have considered the general occurrence of CCT but the present study differentiated two types of CCT in early CBT sessions for 37 clients with generalized anxiety disorder: (1) statements that are uttered to express ambivalence regarding change versus (2) statements that are intended to oppose the therapist or therapy. Two process coding systems were utilized to accomplish this differentiation. Findings indicated that a higher number of CCT statements that occurred in the presence of resistance (opposition to the therapist or therapy) were a substantive and consistent predictor of lower homework compliance and poorer outcomes, up to one year post-treatment. Moreover, when both types of CCT were considered together, *only* opposition CCT was related to outcomes, and ambivalent CCT was not significantly predictive of proximal and distal outcomes. These findings suggest that the interpersonal context in which CCT statements occur may be critically important to their predictive capacity. More broadly, the findings of this study have implications for the future study of client motivational language and underscore the clinical importance of detecting opposition CCT.

Keywords

counter-change talk; resistance; ambivalence; cognitive behavioural therapy; treatment processes and outcomes

Introduction

Ambivalence about change is widely considered to be a key client factor in psychotherapy (Engle & Arkowitz, 2006). This may be particularly important for action-oriented treatments such as cognitive behavioural therapy (CBT), in which the client is required to actively participate with homework activities in order to achieve positive treatment outcomes (e.g., Antony, Roth Ledley, & Heimberg, 2005; Westra, 2012). While self-report measures of ambivalence are weakly and inconsistently related to outcomes, recent observational

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methods of identifying client motivational statements in therapy sessions seem to hold promise in both improving predictive validity and by-passing problems inherent in self-report (Westra, 2012). That is, clients may not report themselves as reluctant to change, but ambivalence about change may nonetheless arise in the therapeutic context. Motivational language in-session may include expressions in support of or against changing particular target behaviours. For instance, in a generalized anxiety treatment context, a client may articulate reasons their worry is helpful (and fears of being more relaxed), and also reasons for changing their worry, such as the enormous problems worry can create.

One observational measure, commonly used in the addictions domain, to assess client language regarding change within treatment is the Motivational Interviewing Skill Code 1.1 (MISC 1.1; Hagen Glynn & Moyers, 2009). Here, client utterances relevant to changing a target behaviour are coded as either change-talk (CT), which are articulations in favour of changing, or counter-change talk (CCT), which reflect arguments against change or in favour of the status quo (also referred to as sustain talk; Miller & Rollnick, 2013). Client verbalizations of either CT or CCT may include emotions or beliefs about change, desires or needs regarding change, or steps toward or away from change, among other subcategories (Hagen Glynn & Moyers, 2009).

There is a growing body of research using the MISC in the context of substance abuse treatment. CT and CCT have typically been examined as global constructs (i.e., as statements in favour of, or opposed to change) or as subcategories (i.e., desire, ability, reasons, need, commitment, and taking steps toward or away from change) and measured by the occurrence of such statements in-session. Research in the context of motivational enhancement treatments has found that higher levels of CT and lower levels of CCT during initial treatment sessions are predictive of reduced alcohol use following treatment (e.g., Amrhein, Miller, Yahne, Palmer, & Fulcher, 2003; Campbell, Adamson, & Carter, 2010; Magill, Apodaca, Barnett, & Monti, 2010; Moyers, Martin, Houck, Christopher, & Tonigan, 2009; Vader, Walters, Prabhu, Houck, & Field, 2010). That is, clients' motivational language in initial treatment sessions has been found to be a stable predictor of treatment outcomes.

Client language as a predictor of outcome has also been found to extend to other treatment approaches, not just treatments specific to enhancing motivation. Moyers and colleagues (2007) found that client language regarding change in initial therapy sessions significantly predicted drinking outcomes, in the expected direction, up to 15 months after treatment in all three treatments under investigation (motivational enhancement therapy, CBT, and twelve-step facilitation). Recent research that has adapted the MISC 1.1 to the area of CBT for generalized anxiety disorder (GAD), has consistently found strong and consistent evidence of the predictive capacity of client motivational statements in initial therapy sessions. For example, Lombardi, Button, and Westra (2014) found that a greater number of arguments against change (CCT) in the first session of CBT significantly predicted poorer treatment outcomes. In addition, Button, Westra, and Hara (2014) reported that initial higher levels of CCT were strongly related to both lower levels of subsequent homework compliance (therapist and client-rated) and higher levels of post-treatment worry across two separate clinical trials of CBT for GAD. Moreover, Hunter, Button, and Westra (2014) found

significantly higher levels of initial CCT among CBT clients who subsequently experienced alliance ruptures with their therapist in treatment. Taken together, these studies provide consistent support for the predictive capacity of early client language regarding change, especially arguments against change (CCT), in predicting both proximal and distal outcomes in a CBT context.

Two Types of Counter-Change Talk

As described by Miller and Rollnick (2013), a client may argue against change in a therapy session for two reasons. The first is that the client is merely expressing that part of them that is conflicted or ambivalent about change and favours the status quo. In GAD for example, this might involve CCT statements such as, “Worrying keeps me in control and motivated,” “I would worry if I didn’t worry,” or “If I didn’t worry about others they might not see my as caring.” Interpersonally, this then would be merely a *disclosure* that presents one component of a client’s ambivalence about change. This disclosure of ambivalence is considered a normal aspect of the change process. That is, there is nothing inherently pathological or oppositional about this form of CCT (Miller & Rollnick, 2013).

However, another reason for articulating CCT may potentially be more disruptive since it may reflect disharmony in the therapeutic relationship or resistance. That is, a client may articulate CCT statements in order to disagree with or otherwise *oppose* the therapist’s direction. For example, the therapist makes a suggestion and the client argues that this would not be worthwhile to attempt, putting forth the reasons for this position (i.e., CCT). Whereas disclosure is about the target behaviour, opposition CCT is about the working alliance between the client and therapist (Miller & Rollnick, 2013). In action-oriented, directive treatments such as CBT, such disharmony or resistance may be the by-product of therapists pushing for change in the context of client ambivalence about change (Westra, 2012). Although resistance may arise for different reasons, in general, therapists who more strongly argue for change or push the client in a direction they are not yet ready for can expect resistance to occur as a result (Miller & Rollnick, 2013). In an interpersonal context, statements made in order to resist the therapist may be considered opposition CCT (rather than merely disclosures of ambivalence).

While typically lumped together as CCT in previous studies of client motivational language, there are good theoretical and empirical reasons to consider these two types of CCT separately in relation to outcomes. In particular, CCT uttered in order to disagree or oppose may have a unique and more toxic relationship to outcomes in therapy than CCT that merely communicates ambivalence about change. From the perspective of Motivational Interviewing (MI) theory, ambivalence is considered normal and not necessarily problematic (unless poorly managed), while resistance (or lack of collaboration) is considered highly problematic and crucial to minimize for positive therapy outcomes (Miller & Rollnick, 2002; 2013). Within a CBT context, client resistance to recommended treatment procedures is a common and formidable problem limiting the benefit of these treatments (e.g., Antony et al., 2005; Leahy, 2001). Empirically, there is mounting and consistent evidence that higher levels of resistance in therapy are strongly associated with poor treatment outcomes and early termination of therapy (for a review see Beutler, Harwood, Michelson, Song, &

Holman, 2011). For example, Aviram and Westra (2011) found that higher levels of resistance, as early as the first session of therapy, strongly predicted poorer outcomes even up to one year post-treatment in CBT for GAD. Furthermore, higher levels of resistance have been shown to predict lower subsequent engagement in therapy sessions (Jungbluth & Shirk, 2009) and less homework completion (Aviram & Westra, 2011). In addition, clients also recognize disharmony in the therapeutic relationship or disagreement as problematic. For instance, in a qualitative study, disagreements with the therapist were identified by clients as one of the most important events in therapy (Viklund, Holmqvist, & Nelson, 2010). Given the strong evidence that suggests that the relative absence of resistance is a predictor of effective treatment (e.g., Beutler et al., 2011), these key moments of opposition in therapy should be further examined, and differentiated from language that merely reflects ambivalence about change.

Aims of the Present Study

As we have seen, two different types of CCT can be identified and potentially very different motives underlie their expression. Stated differently, this means that *the exact same statements* arguing against change can have very different interpersonal intentions and meanings; one is theoretically inert (disclosure of ambivalence), while the other is considered highly toxic to collaboration and consequently outcome (opposition to the therapy or the therapist). For example, “If I don’t worry I will become lazy” stated by the client in the context of discussing why change can be hard may be interpreted as mere disclosure. However, this same statement articulated right after the therapist suggests a behavioural experiment represents opposition to the therapist’s direction. Additionally, previous studies on client motivational language have not considered the interpersonal context in which CCT occurs (either disclosure or opposition), but rather have lumped these together as CCT. Theoretically and empirically, it seems critical to make a distinction between CCT that merely discloses one part of the client’s ambivalence and CCT that represents disharmony, lack of collaboration, or opposition to the therapy or therapist. Thus, the present study aims to disentangle CCT that represents mere disclosure of ambivalence about change (ambivalent CCT) from CCT that represents client opposition to the therapist or therapy (opposition CCT). Such research is particularly important given consistent evidence that CCT is a potent predictor of proximal and distal outcomes in a variety of therapies and populations (see Magill et al., 2014 for a review). The possibility exists however that the potency of client motivational statements in predicting outcomes may lie in its overlap with resistance (opposition). Thus, it becomes important to disentangle client ambivalent statements from oppositional ones.

The present study aims to differentiate and examine “ambivalent CCT” and “opposition CCT” in relation to proximal (homework compliance) and distal (post-treatment and one-year post-treatment worry) outcomes in a CBT for GAD context. Two process coding systems were utilized on the first or second session videotape in order to differentiate between these two types of CCT: the Motivational Interviewing Skill Code (MISC) 1.1 (Hagen Glynn & Moyers, 2009) and the Adapted Client Resistance Coding System (Westra, Aviram, Kertes, Ahmed, & Connors, 2009). It was hypothesized that higher levels of both types of CCT would be associated with less homework compliance and poorer treatment

outcomes. However, consistent with theory (Miller & Rollnick, 2013) it was expected that opposition CCT would be more strongly related to homework compliance and treatment outcomes than ambivalent CCT. That is, statements against change that were uttered in the context of interpersonal disharmony were expected to be more disruptive to therapy outcomes than clients' arguments against change that were mere disclosures of ambivalence.

Method

Participants

All data were obtained from a randomized controlled trial of CBT for GAD (Westra, Arkowitz, & Dozois, 2009). Participants were recruited through community advertisements in the greater Toronto area. All participants had a principle diagnosis of GAD and were assessed using the Anxiety Disorders Interview Schedule for DSM-IV (ADIS-IV; Brown, DiNardo, & Barlow, 1994). Individuals with substance dependence, evidence of a neurological problem, major cognitive impairment, learning disability, or history of a psychotic or bipolar mood disorder were excluded from the study. Clients were not receiving any concurrent psychotherapy or taking benzodiazepines, and if they were concurrently using an antidepressant (n = 4), they were required to be on a stable dose (i.e., for the past two months) at study entry and to remain on that dose throughout the study. All participants in the current study completed the treatment.

CBT Treatment and Therapists Training

Treatment followed the manual developed by Borkovec and colleagues (Borkovec & Costello, 1993; Borkovec & Mathews, 1988; Borkovec, Newman, Pincus, & Lytle, 2002) which consists of training in self-monitoring, applied relaxation, cognitive therapy, behavioural approach tasks, and exposure to worry and worry cues. The core features of GAD were focused on in treatment, including chronic hyperarousal, uncontrollable worry, and inhibited emotional reprocessing secondary to worry. Therapy sessions consisted of six weekly 2-hour sessions, followed by two 1-hour sessions, for a total of 14 hours of CBT. There were four CBT therapists (two female, two male) including one Ph.D. psychologist, two senior, and one junior clinical psychology graduate students, and all received weekly supervision and a minimum of 30 hours of training.

Measures

Homework Compliance Scale (HCS; Primakoff, Epstein, & Covi, 1989)— Homework compliance was rated separately by therapists and clients throughout treatment using the single-item HCS. Scores range from 0 (homework was not assigned) to 6 (I did more of the assigned work than was requested), where higher scores reflect higher levels of homework compliance. Higher scores on the HCS have been correlated with greater positive outcomes in CBT (Bryant, Simons, & Thase, 1999; Taft, Murphy, King, Musser, & DeDeyn, 2003). The HCS has high interrater reliability, and HCS scores were found to be significantly related to session attendance (Woody & Adessky, 2002).

Penn State Worry Questionnaire (PSWQ; Meyer, Miller, Metzger, & Borkovec, 1990)—The PSWQ is a 16-item scale assessing trait worry by using a 5-point Likert scale.

Scores range from 16 to 80, where higher scores reflect greater worry severity. This instrument has been reported to have high internal consistency and temporal stability, along with good convergent and discriminant validity (Brown, Antony, & Barlow, 1992; Meyer, Miller, Metzger, & Borkovec, 1990). The PSWQ also distinguishes individuals with GAD from individuals with other anxiety disorders and from healthy controls (Brown, Antony, & Barlow, 1992). The internal consistency for the PSWQ in the present study ranged from .88 at baseline to .96 at post-treatment and one-year follow-up.

Adapted Client Resistance Code (Westra et al., 2009)—Resistance was coded using an adapted version of the Client Resistance Code (CRC; Chamberlain, Patterson, Reid, Kavanagh, & Forgatch, 1984). Resistance is defined as any behaviour that opposes, blocks, diverts or impedes the direction of the therapist. Resistance measures the interpersonal process between the client and therapist and reflects the degree of client engagement in treatment. Resistance can be expressed directly (i.e., verbal statements such as “I just hate writing things down”) or indirectly (i.e., in process, such as disagreeing, ignoring, or interrupting the therapist). Resistant responses include challenging, disagreeing, expressing hopelessness, blaming, defending others or self, pushing client’s own agenda, sidetracking (off topic), not responding, not answering, and disqualifying. In the present study, client interruptions or talking over the therapist were also included as a reflection of resistant behaviour (in instances where the intent was to oppose or block the therapist). In contrast, nonresistant or neutral comments were categorized as cooperative (Chamberlain et al., 1984). The CRC has been shown to possess good to excellent reliability as well as construct and predictive validity (Chamberlain et al., 1984; Patterson & Forgatch, 1985; Tracey & Ray, 1984). It also possesses strong face and content validity (Bischoff & Tracey, 1995).

Motivational Interviewing Skill Code (MISC) Version 1.1 (Hagen Glynn & Moyers, 2009)—The MISC Version 1.1 (Hagen Glynn & Moyers, 2009) was used to quantify client motivational language or statements about change. A target behaviour was identified since client verbalizations were categorized as movement toward or away from this target behaviour. CT is language in which a client is endorsing or expressing agreement with change, arguing for change, or moving towards change. CCT is language that reflects arguments against change, objection to change, or movement away from change. In the area of substance abuse, the MISC has been found to have good reliability and strong predictive validity (e.g., Campbell et al., 2010; Magill et al., 2010; Moyers et al., 2009; Vader et al., 2010). Additionally, the MISC has recently been applied to the area of GAD, with findings demonstrating client motivational statements in initial CBT sessions were significant predictors of treatment outcome (Button, 2013; Lombardi et al., 2014).

Procedure

The data for the present study was obtained from a larger randomized controlled trial investigating the efficacy of incorporating a MI pre-treatment, compared to no pre-treatment (4-week waiting period), prior to CBT for GAD (Westra, Arkowitz, & Dozois, 2009). For this study, only early sessions for participants in the CBT-alone group were examined to avoid any confounding effects of having received MI on CCT[1]. The PSWQ was administered before, after, and one-year after treatment. Homework compliance measures

were completed at sessions 2, 4, 6, and 8. Average homework compliance scores were used for the present study (separately for client and therapist-rated). For resistance and in-session client language coding, session 1 videotape was coded (n = 29) and when session 1 was not taped due to technical problems, session 2 was coded (n = 8)[2]. Informed consent was obtained during the initial study intake for all participants. A local institutional ethics review board approved all measures and methods utilized in the study.

Resistance Coding—In the current study, the definitions of resistance in the CRC were used but the coding process was adapted to enhance reliability and validity. The various subcategories of resistance in the CRC were collapsed to form a single category to capture the presence versus the absence of resistance. Moreover, using a global definition of resistance aids in achieving reliability among coders in identifying complex processes such as resistance.

Videotapes of the sessions were coded in 30-second time bins. The specific length of the time bins was chosen given that it is long enough to capture the construct of interest (i.e., resistance), while still being short enough to ensure valid coding. Each time bin was rated for the occurrence of resistance on the following rating scale: 0 = no resistance/co-operation; 1 = minimal, qualified resistance; 2 = clear, unqualified resistance; 3 = hostility/ confrontation. All session videotapes that were used in the present study were coded in their entirety. This system and these procedures has been used successfully in multiple previous studies (e.g., Aviram & Westra, 2011; Westra, 2011).

Coders for resistance consisted of four graduate students in clinical psychology (three doctoral, one Master's level) who were trained using approximately 40 practice CBT sessions over a period of one-year by reviewing, coding, and discussing samples of videotape in bi-weekly meetings until adequate interrater reliability was achieved at 85%. Coders were kept blind to clients' outcome status throughout the coding process. All tapes were coded by one of the four coders and to reduce the possibility of coder drift, reliability was examined continuously throughout the coding process and calculated by double-coding 20% of all tapes. Using a two way mixed model at the item level, ICCs ranged from .73 to . 87, indicating good to excellent agreement. Weighted kappa coefficients were calculated for each pair of raters and ranged from .71 to .86, with a mean of .79, indicating good to excellent agreement (Fleiss, 1981).

MISC coding—Given the context of treatment for generalized anxiety, identification of a single target behaviour was not feasible since behaviours for anxiety involve multiple, inter-related targets. Instead, a broad range of target behaviours, some behavioural (overpreparation, overprotectiveness, etc.) and some cognitive (worry, perfectionism, self-criticism, etc.), were identified and coded in relation to client motivational language. Client statements were coded as reflecting either CT or CCT, and if advocacy for or against change was not clearly apparent from the statement, it was not coded. Verbalizations eligible for

[1]In particular, since Aviram & Westra (2011) demonstrated that receiving MI is associated with substantially less resistance in CBT, there would not be enough variability in opposition CCT to examine the relationships under study in the present report.
[2]There were no differences in the direction of the findings between session 1 and session 2 videotapes.

coding included statements that expressed an ability, commitment, desire, need, reason, or step toward (or away from) change (Hagen Glynn & Moyers, 2009). All session videotapes were coded in their entirety.

Coders for the MISC consisted of three upper level undergraduate students in psychology and one Master's level clinical psychology graduate student who were trained to criterion over a period of four months. Coders participated in two 3-hour training workshops involving reviewing, discussing, and independently coding publicly available CBT sessions to determine coding proficiency. Only coders who achieved 85% observed agreement against the test materials moved on to code the therapy sessions in the present study. During this process, coders continued to discuss issues and review tapes weekly. Coders were kept blind to clients' outcome status throughout the process. Twenty-five percent of all materials were double coded to determine reliability and prevent coder drift. Kappa coefficients were calculated for each pair of coders and ranged from .63 to .71, with a mean of .66, indicating fair to good agreement (Fleiss, 1981).

Differentiation of CCT—Although coding for client motivational language and resistance was conducted separately, the two coding systems were afterwards analyzed together, forming the main data set of the present study. Two types of CCT were differentiated in this process: ambivalent CCT and opposition CCT. Opposition CCT was calculated by examining any form of resistance (i.e., scores of 1 or higher on the CRC) that overlapped with CCT for each 30-second time bin. First note that there was a maximum total number of bins of approximately 240 (i.e., the number of 30-second time bins in a therapy session which could last up to 2-hours in the present study). The frequency of Opposition CCT was the total number on time bins which contained both resistance and at least one CCT statement. The resistance in the bin may not have perfectly overlapped with CCT since these two instances may have occurred during different points within the 30-second time bin. However since 30 seconds is so brief, it can be assumed codes would revolve around the same target behaviour even if the codes were seconds apart. The frequency of Ambivalent CCT was the total number of bins in which CCT occurred but no resistance occurred within that time bin. More specifically, any CCT that occurred without resistance appearing in the same 30-second time bin was considered a measure of ambivalent CCT. Differentiation of the two types of CCT was conducted by a single upper level undergraduate psychology student proficient in the MISC coding system and trained in the adapted CRC coding system. Scores on the two types of CCT were found to be significantly skewed and thus corrected using a square root transformation to normalize the variables.

Results

Sample Characteristics

Client demographics, as well as means and standard deviations for all variables in this study are presented in Tables 1 and 2. Participants ranged in age from 18 to 66-years-old. The sample was ethnically diverse, predominantly female, generally well-educated, had chronic worry, and 63% had at least one other clinically significant diagnosis besides GAD.

Intercorrelations of Measures

Table 3 presents the correlations between measures. The two types of CCT (ambivalent CCT and opposition CCT) were significantly positively correlated. Furthermore, higher levels of opposition CCT were negatively and significantly associated with reduced therapist and client-rated homework compliance. In contrast, ambivalent CCT was not significantly correlated with homework compliance. Additionally, higher post-treatment PSWQ scores were significantly related to greater opposition CCT, whereas ambivalent CCT was marginally associated with post-treatment worry. While neither type of CCT was significantly related to baseline PSWQ scores, higher levels of both opposition CCT and ambivalent CCT were associated with higher one-year follow-up PSWQ scores.

Predicting Homework Compliance

Linear regressions were conducted using the two types of CCT to predict therapist and client-rated homework compliance (see Table 3). Baseline PSWQ scores were entered first in block one to account for the impact of symptom severity on outcomes. In block 2, opposition CCT and ambivalent CCT were entered. In the final model, higher levels of opposition CCT were significantly predictive of lower therapist-rated homework compliance, and lower client-rated homework compliance; and accounted for 30% and 32% of the variance in therapist and client-rated homework compliance, respectively. In contrast, ambivalent CCT was not significantly associated with homework compliance when opposition CCT was in the model.

Predicting Worry Reduction

Linear regressions were also used to predict post-CBT treatment worry levels (see Table 3). Here, baseline PSWQ scores were entered in block 1. Opposition CCT and ambivalent CCT were entered in block 2. In the final model, higher levels of opposition CCT were related to greater post-treatment worry, whereas ambivalent CCT was not significantly associated with post-treatment worry. Moreover, opposition CCT on its own accounted for 32% of the variance in post-treatment PSWQ scores.

The two types of CCT were also used to predict PSWQ scores at one-year post-CBT. The same block entry method as above was utilized. Again, in the final model, higher levels of opposition CCT were significantly associated with higher one-year follow-up PSWQ scores, accounting for 17% of the variance in one-year PSWQ scores. In contrast, with opposition CCT in the model, ambivalent CCT was found to be not significantly predictive of long-term outcome[3].

Discussion

The results of this study suggest that it may be critically important to consider the interpersonal context of early client motivational statements in CBT. Client arguments against change or CCT (in sessions one or two of therapy) were separated into those that

[3]Note that the relationships under investigation in the present study were consistent across each of the four CBT therapists i.e., opposition CCT was consistently related to outcomes, while ambivalent CCT was not.

occurred in order to disclose ambivalence about change from those that occurred in the context of opposition to the therapy/therapist. Findings indicated that when both types of CCT were considered together, higher levels of CCT in order to oppose or resist the direction of the therapy/therapist were consistently predictive of both proximal (homework compliance) and distal (post-treatment and one-year post-treatment) outcomes in CBT for GAD. Opposition CCT accounted for 30–32% of the variance in homework compliance, 32% of the variance in post-treatment worry outcomes, and 17% of worry levels even at one-year post-treatment. Moreover, when both types of CCT were considered together, *only* CCT uttered in order to oppose the direction of therapy was predictive of outcomes. In contrast, CCT merely expressing ambivalence about change (i.e., not in the context of resistance) was surprisingly, found to be unrelated to outcomes in this study. While ambivalent CCT was correlated with post-treatment and one-year follow-up levels of worry, when opposition CCT was accounted for, these relationships were no longer significant.

The findings of this study suggest that not all client arguments against change (i.e., CCT or sustain talk) are detrimental to treatment outcomes. This is consistent with MI theory, which recently differentiated CCT that constitutes ambivalence, a normal part of the process of change, from CCT that reflects disharmony or lack of collaboration in the therapeutic relationship (Miller & Rollnick, 2013). The findings of the present study strongly support this distinction given the substantive associations with outcome of opposition CCT and the relative absence of relationships with outcomes of ambivalent CCT. In general, this suggests that not all types of CCT statements are equally important and that those statements uttered in a resistant interpersonal context intended to oppose the therapist or therapy are powerfully related to outcomes, while statements merely disclosing one's mixed feelings about change are not.

Such findings also strongly suggest that future studies assessing client motivational language must consider the interpersonal context in which arguments against change are verbalized. Without doing so, investigators would (incorrectly) conclude that ambivalence itself (higher number of arguments against change) is associated with poorer outcomes. However, the present study suggests that it may not be ambivalence about change that is necessarily problematic, but primarily when counter-change arguments are offered in order to oppose the therapist/therapy. That is, it is not the mere frequency of such statements that matters but rather the interpersonal context or meaning of these articulations. Examining CCT altogether without consideration of the interpersonal context may lead to misinterpretation of findings since it seems to be the underlying interpersonal disharmony that CCT represents that is harmful to outcomes, as opposed to the language itself.

Interestingly, ambivalent CCT and opposition CCT were positively correlated. That is, clients with greater ambivalence regarding treatment or change also have a higher chance of expressing disagreement with the therapist. However, a therapist's reaction to client ambivalence may have a powerful influence on the likelihood that the client will exhibit (or continue to exhibit) opposition in therapy. For example, in MI, resistance is considered a product of the client's ambivalence about change and how a therapist responds to that ambivalence (Moyers et al., 2002). Thus, sustained client resistance in MI is considered a clinician skill error. Often, such resistance arises from the therapist's directive (rather than

supportive or exploratory) management of ambivalence. For example, the therapist may indicate a preferred or healthier way of viewing a stressful situation and the client disagrees (e.g., “I wish I could see it that way but I don’t”), or the therapist suggests a homework assignment and the client objects (e.g., “That sounds too hard”). Such client disengagement (expressed as opposition CCT) signals a lack of collaboration, which the therapist then needs to take corrective action to resolve in order to re-engage the client. For example, Aspland, Llewelyn, Hardy, Barkham, and Stiles (2008) found that such alliance strains often arise in CBT in the context of therapist demand (e.g., convincing or persuading) and are corrected only when the therapist realigns to understand the client’s viewpoint. The findings of the present study underscore the importance of such corrective actions in order to minimize sustained and toxic client arguments against change that arise in the presence of resistance. Moreover, due to the strong association between ambivalent CCT and opposition CCT in this study, it is also important that ambivalence (reservations about therapy and change) be dealt with in a way that does not lead to opposition CCT.

Clinical Implications

Given the strong capacity of opposition CCT to predict outcomes, the presence of early CCT statements uttered in order to oppose the therapist/therapy should serve as a critical *process marker* in therapy. Notably, the *content* of opposition CCT and the more inert ambivalent CCT will often be identical. That is, the very same words can be uttered by an anxious client (e.g., “If I didn’t worry about others they might not think I care” or “I can’t start a conversation because I might embarrass myself”) but have very different interpersonal meanings (either disclosure: “I am just telling you something” or opposition: “Stop insisting that I should think or behave differently”). Thus, clinicians need to be constantly sensitive to the larger interpersonal context in which such statements occur and in particular, need to become sensitive to cues of opposition, tension, and disharmony (e.g., arguing, disagreement often reflected in tone, posture, etc.) that render such statements toxic to outcomes. Stated differently, often what clinicians need to be sensitive to is the context, rather than the content, of such statements. It is also useful to consider that opposition CCT (versus CCT that represents mere disclosure) is *much* more likely to occur in the context of therapist demand (e.g., making a suggestion, offering advice), than at other times (e.g., expressing empathy, following a story; Miller & Rollnick, 2002; Westra, 2012). Therefore therapists need to be especially alert to client opposition when giving advice, making suggestions, or other forms of demand that involve asking clients for agreement or assent.

Moreover, the highly infrequent nature of CCT statements (approximately 2.5% of all client utterances) suggests that not all moments may be equally important in the therapy process. Thus, the identification of key moments (even if relatively rare) of opposition or tension in the therapy alliance seem to be particularly important. Finally, since such process markers are strong predictors of subsequent engagement (e.g., later homework compliance), CBT therapists do not have to wait until the client fails to complete homework to realize that there is a problem with the collaboration. Once identified, the manner in which therapists respond to resistance plays a major role in perpetuating or diminishing it. In particular, therapist directiveness has been found to reliably increase resistance (Beutler et al., 2011; Beutler, Moleiro, & Talebi, 2002) whereas supportive approaches decrease resistance (e.g., Patterson

& Forgatch, 1985). That is, therapist responsivity and flexibility in response to shifting signals of client engagement on a moment-to-moment basis is required (Stiles, Honos-Webb, & Surko, 1998).

Strengths and Limitations

To our knowledge, no previous study has examined in-session language by simultaneously utilizing two process coding systems, and this is a major strength of this study. There are several notable limitations within this study. The sample size was small and included only individuals with GAD in a CBT context. Future studies should replicate this study using a larger sample, with different populations beyond GAD, and treatment approaches other than CBT. In addition, the present study utilized observational coding of resistance in 30-second time bins, and then examined whether CCT occurred within that bin. Within the 30 seconds, it is possible that resistance and CCT occurred at different time points within the time bin. However, such close occurrences within a short length of time would predominately revolve around the same target behavior[4]. Moreover, although undergraduate coders were used for the MISC coding out of necessity given the labour intensive nature of coding, the use of more experienced graduate student coders in future studies may improve the reliability of the MISC coding.

Conclusion

To our knowledge, this is the first study to distinguish between these two types of CCT (opposition and ambivalence) as different measures of client motivational language. Findings suggest that this distinction (i.e., separating ambivalence from opposition; Miller & Rollnick, 2013) may be crucial. And more broadly, the interpersonal context in which client motivational statements occur seems critically important to their predictive capacity. Generally, the findings are also in line with a growing body of research finding that disharmony and lack of collaboration in the therapeutic relationship is a critical process marker for therapists to identify and navigate effectively (e.g., Aviram & Westra, 2011; Hara et al., in press; Westra, 2011). Such findings have implications for the future study of ambivalence and suggest that taking into account the interpersonal context of client motivational statements is key to teasing out their relationship to therapy process and outcomes.

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Abbreviations

CCT	counter-change talk
CBT	cognitive behavioural therapy

[4]Thirty-five time bins were randomly selected across transcripts to check the categorization. Ninety-nine percent of the CCT statements that were categorized as resistance were found to be accurately categorized.

CT	change-talk
GAD	generalized anxiety disorder
(MISC)	Motivational Interviewing Skill Code
PSWQ	Penn State Worry Questionnaire

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Table 1

Sample Characteristics (N = 37)

Measure	Number	Mean (SD)
Gender	27 Female	
	10 Male	
Ethnicity	22 Caucasian	
	8 Asian	
	4 Hispanic	
	3 African	
Marital status	18 Married	
	14 Never Married	
	5 Divorced	
Employment status	8 Unemployed	
	29 Employed	
Highest level of education	3 Elementary	
	10 High School	
	20 Post-secondary	
	4 Graduate school	
Average family income	13 LT $40,000	
	15 $40–80,000	
	9 GT $80,000	
Comorbidity	12 Other anxiety	
	13 Depression	
Age		41 (11.85)
Worry Chronicity (in years)		20 (0.42 – 59)

Table 2

Means of All Independent and Dependent Variables

Variable	*M*	*SD*	*d*	95% CI
Pre-CBT PSWQ	65.95	9.02		
Post-CBT PSWQ	42.39	15.61		
One year PSWQ	37.38	21.51		
Therapist-rated HCS	4.17	0.81		
Client-rated HCS	3.91	0.93		
Opposition CCT	19.46	15.40		
Ambivalent CCT	32.35	20.68		
Effect size pre to post CBT			1.85	1.29 – 2.37
Effect size pre to 1-year post CBT			1.73	1.18 – 2.25

Note. PSWQ: Penn State Worry Questionnaire (scores could range from 16 to 80); HCS: Homework Compliance Scale (scores could range from 0 to 6); CCT: Counter-Change Talk (scores could range from 0 to 120).

Table 3

Correlations Among All Measures

Measure	1	2	3	4	5	6	7
1. Opposition CCT	------	.40*	−.52***	−.55***	.14	.58***	.46***
2. Ambivalent CCT		------	−.18	−.13	.30	.28	.31*
3. Homework_ Therapist-rated			------	.86***	.14	−.38*	−.33*
4. Homework_ Client-rated				------	.15	−.34*	−.25
5. Pre-treatment PSWQ					------	.12	.38*
6. Post-treatment PSWQ						------	.43**
7. One year post-treatment PSWQ							------

Note.

* p < .05,

** p<.01,

*** p < .001;

CCT = Counterchange Talk

Table 4

Regression Analyses Examining Opposition and Ambivalent CCT in the Prediction of Homework Compliance and Worry Outcomes

	β	*t*	*p*
Dependent Variable: Therapist Rated Homework Compliance			
Block 1: R^2 Change=.02; F(1, 35) = 0.74, p=.395			
Baseline PSWQ	.14	0.86	.395
Block 2: R^2 Change=.30; F(3, 33) = 5.11, p=.005**			
Opposition CCT	−.54	−3.43	.002**
Ambivalent CCT	−.03	−0.19	.848
Dependent Variable: Client Rated Homework Compliance			
Block 1: R^2 Change=.02; F(1, 35) = 0.81, p=.374			
Baseline PSWQ	.15	0.90	.374
Block 2: R^2 Change=.32; F(3, 33) = 6.17, p=.002**			
Opposition CCT	−.60	−3.96	<.001***
Ambivalent CCT	.05	0.30	.769
Dependent Variable: Post-Treatment Penn State Worry Questionnaire (PSWQ)			
Block 1: R^2 Change=.01; F(1, 35) = 0.48, p=.495			
Baseline PSWQ	.11	0.69	.495
Block 2: R^2 Change=.32; F(3, 33) = 5.59, p=.003**			
Opposition CCT	.55	3.58	<.001***
Ambivalent CCT	.05	0.32	.750
Dependent Variable: One-Year Penn State Worry Questionnaire (PSWQ)			
Block 1: R^2 Change=.14; F(1, 35) = 5.75, p=.022*			
Baseline PSWQ	.38	2.40	.022*
Block 2: R^2 Change=.17; F(3, 33) = 5.01, p=.006**			
Opposition CCT	.39	2.48	.018*
Ambivalent CCT	.07	0.40	.693

Note. CCT: Counterchange Talk; PSWQ: Penn State Worry Questionnaire;

* p<.05,

** p<.01,

*** p<.001