

LEARNING TO MANAGE RESISTANCE AND AMBIVALENCE:
CAN DELIBERATE PRACTICE TRAINING REDUCE THE INFLUENCE OF
DIFFERENCES IN PRETRAINING EMPATHIC SKILL?

NIKOO NOROUZIAN

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Abstract

Motivational Interviewing (MI) is an evidence-based approach for appropriately responding to client expressions of resistance to, and ambivalence about, change. Existing MI training programs typically produce only modest improvements to observer-rated MI skill; improvements that quickly erode without post-training enrichments and which are largest for therapists with high pretraining empathic skill. This study examines whether the relationship between baseline therapist empathy and sustained MI skill is moderated by training type: a deliberate practice (DP) workshop, versus a traditional workshop with fewer opportunities for practice and feedback. Data were derived from an MI training study in which these workshops were delivered to 88 randomly assigned therapists (44 per group). Before training, therapists completed measures of general empathy (across client contexts) and responsive empathy (for the specific context of resistance). At 4-month follow-up, therapists completed test interviews with ambivalent individuals to assess three observer-rated training outcomes: level of resistance, errors in responsivity to ambivalence, and appropriate responsivity to ambivalence. Workshop type was a significant moderator of only the relationships between baseline responsive empathy and follow-up outcomes of resistance and responsivity errors. While higher levels of baseline responsive empathy were associated with better outcomes for the traditional training group (less resistance, fewer errors), DP-trained therapists achieved superior outcomes *regardless* of their initial level of responsive empathy. Results suggest that DP training may lessen the importance of possessing strong pretraining responsive empathy skills. This research has implications for facilitating dissemination of MI through clarifying which training procedures are most effective for which therapists.

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Table of Contents

Abstract	ii
Acknowledgements	iii
Table of Contents	v
List of Tables	vii
List of Figures	viii
Introduction.....	1
Resistance.....	3
Ambivalence.....	5
What is MI?.....	7
MI Approaches to Managing Resistance and Ambivalence	9
Research Regarding Responsivity to Resistance and Ambivalence.....	11
MI Training Approaches	13
DP Approaches to Psychotherapy Training	17
Therapist Characteristics Associated with MI Training Outcomes	22
Therapist Empathy.....	24
Why Might Integrating DP into MI Training Reduce the Influence of Baseline Empathy?	28
The Present Study.....	32
Method	35
Participants	35
Therapist Trainees	35
Ambivalent Community Members	36
Ambivalent Simulators	38
Workshops.....	38
DP	38
Traditional	40
Baseline Empathy Measures	41
General Empathy	41
Responsive Empathy	43
Follow-up MI Skill Measures	45
Resistance	45
Responsivity	46

Control Variable Measures.....	51
Baseline MI Skill	51
Baseline DP Usage	51
Procedure.....	52
Analytical Approach	54
Missing Data.....	56
Results.....	58
Sample Characteristics	58
Intercorrelations of Study Variables by Group	59
Model Diagnostics.....	60
Hypothesis 1: Workshop Group Will Moderate the Relationship between Baseline Empathy and Follow-up Resistance	62
Hypothesis 2: Workshop Group Will Moderate the Relationship between Baseline Empathy and Follow-up Responsivity Errors	63
Hypothesis 3: Workshop Group Will Moderate the Relationship between Baseline Empathy and Follow-up Appropriate Responsivity	65
Discussion	66
Workshop Group Moderated the Relationships between Responsive Empathy and Outcomes of Resistance and Responsivity Errors.....	66
No Moderation Effect for Appropriate Responsivity.....	68
No Moderation Effect for General Empathy.....	70
Clinical Implications	72
Strengths, Limitations, and Future Directions	76
Conclusion.....	81
References.....	84
Appendix A: Examples of Change Topics for Ambivalent Community Members.....	121
Appendix B: Helpful Responses Questionnaire	122
Appendix C: Thomas Gordon’s 12 Roadblocks to Active Listening	123
Appendix D: Resistance Vignette Task Scoring Guidelines and Examples.....	125
Appendix E: Resistance Coding Guidelines	127
Appendix F: Motivational Interviewing Skill Code 1.1 Coding Guidelines	129
Appendix G: Therapist Demand and Support Code Manual	136
Appendix H: Responsivity Sequence Coding Guidelines and Examples.....	138

List of Tables

Table 1: Demographic Characteristics for Therapist Trainees by Group.....	115
Table 2: Means, Standard Deviations, and Ranges for Study Variables by Group.....	116
Table 3: Intercorrelations of Study Variables for the Traditional Group	117
Table 4: Intercorrelations of Study Variables for the Deliberate Practice Group	118

List of Figures

Figure 1: Workshop Type as a Moderator of the Relationship between RVT and Resistance...	119
Figure 2: Workshop Type as a Moderator of the Relationship between RVT and Errors.....	120

Learning to Manage Resistance and Ambivalence: Can Deliberate Practice Training Reduce the Influence of Differences in Pretraining Empathic Skill?

Motivational Interviewing (MI) is a psychotherapy approach for enhancing intrinsic motivation for change and effectively responding to moments in which clients express resistance to, and ambivalence about, therapeutic change (W. R. Miller & Rollnick, 2002; Westra, 2014). Since resistance and ambivalence are consistent and robust predictors of negative psychotherapy outcomes (e.g., Constantino et al., 2019; Lombardi et al., 2014; Westra & Norouzian, 2018), it is essential to ameliorate, rather than perpetuate, these detrimental therapy processes. Addressing this need, MI is an evidence-based approach for managing resistance and ambivalence such that treatment outcomes are enhanced (Aviram et al., 2016; Olson et al., 2021). MI, which is often integrated with other therapies or incorporated as a prelude, has demonstrated promise as a transdiagnostic intervention given its empirical support across a range of clinical contexts including severe generalized anxiety disorder (Westra et al., 2016), depression (Van Voorhees et al., 2009), eating disorders (Wade et al., 2009), and concurrent psychosis and substance use (Herman et al., 2022).

Despite the importance of MI, existing training programs for teaching clinicians MI suffer from multiple problems. Reviews of MI training studies have repeatedly found that skill acquisition is not sustained unless training workshops are supplemented with intensive post-training enrichments such as ongoing supervision (Hall et al., 2016; Schwalbe et al., 2014; Walters et al., 2005). As well, there is significant between-therapist variability in skill acquisition and learning time such that not all therapists learn MI easily (Forsberg et al., 2010), with training effects often depending on pretraining characteristics such as therapist empathy (Schumacher et al., 2018).

In response to these issues, deliberate practice (DP), an approach emphasizing effortful and repeated practice in accordance with expert feedback, is emerging as an effective innovation in the domain of psychotherapy skill development (Rousmaniere et al., 2017). Given the interpersonally challenging nature of moments of client disagreement about change (Coutinho et al., 2011), repeated practice may be particularly essential for learning to work with resistance and ambivalence. Notably, a recent MI training study demonstrated that trainees achieve longer-lasting skill benefit following a brief, DP-enhanced workshop regarding MI skills for managing resistance and ambivalence (Westra et al., 2021). However, it is unclear whether such training can reduce the influence of pretraining differences in therapist empathy.

To address this gap, the aim of this dissertation is to examine whether incorporating DP principles into MI training may reduce the extent to which pretraining empathic ability predicts sustained MI skill in appropriately responding to resistance and ambivalence. That is, does deliberate, feedback-responsive practice in MI lessen the need for therapists to be empathically skilled at the outset of MI training? Or, is empathic ability important to long-lasting MI training outcomes regardless of whether one receives DP-enriched instruction? This research aligns with an impetus to clarify which psychotherapy training procedures are most effective for therapists with different pretraining characteristics (Beidas & Kendall, 2010; Carpenter et al., 2012; Clements-Hickman & Reese, 2020; Madson et al., 2009; W. R. Miller et al., 2006). As noted by Carpenter and colleagues (2012), identifying both therapist *and* training factors associated with skill acquisition is essential for facilitating efficient dissemination of MI.

Before further delineating the aims of the present study, the relevant literature will be reviewed. First, resistance and ambivalence will be defined, and an overview will be provided of the research regarding these key psychotherapy processes. Next, MI will be described and MI

strategies for handling resistance and ambivalence will be outlined. Following this, the extant research regarding DP approaches to psychotherapy training will be described. Then, therapist characteristics associated with MI training outcomes, including therapist empathy, will be reviewed. To conclude, this will be followed by a discussion of why integrating DP into MI training might decrease the capacity of pretraining empathy to influence training outcomes.

Resistance

Resistance is defined as an interpersonal process in which a client impedes, opposes, or blocks the direction of the therapist or therapy (Chamberlain et al., 1984). Put differently, resistance involves a therapy interaction in which therapist directiveness (i.e., therapist behaviours that lead the client towards a specific goal or therapy agenda) is ‘resisted’ by the client. As an example, resistance may involve a therapist suggesting a mindfulness meditation intervention and a client expressing skepticism regarding the helpfulness of meditation. Rather than a stable client characteristic, resistance takes ‘two to tango’ and reflects disagreement, disharmony, or a lack of collaboration between therapist and client (Stiles, 2009; Westra, 2014). That is, there must be someone or something to resist. Indeed, in the context of MI, persistent resistance is considered a clinician skill error since resistance can only thrive in the context of therapist directiveness that is not sensitive to a client’s level of readiness for therapeutic change (Westra & Norouzian, 2018; Olson et al., 2021). Research supports this dyadic conceptualization of resistance with increased therapist direction and demand, as opposed to empathy and support, consistently leading to greater resistance (Aspland et al., 2008; Patterson & Forgatch, 1985; W. R. Miller et al., 1993).

Although rare relative to therapeutic collaboration, resistance is widely considered to be a critical clinical event capable of derailing therapy process (e.g., in-session engagement;

Jungbluth & Shirk, 2009) and outcomes such as posttreatment symptom reduction (Binder & Strupp, 1997; Constantino et al., 2019; Westra & Norouzian, 2018). The frequency of moments of resistance has been empirically linked to a myriad of negative outcomes across a variety of clinical contexts. For instance, in the context of cognitive behavioural therapy (CBT) for severe generalized anxiety disorder, resistance has been associated with noncompliance with therapy homework exercises (Hara et al., 2015) and poorer symptom outcomes of increased worry up to 1-year posttreatment (Aviram & Westra, 2011; Constantino et al., 2019). In a review of treatments for clients with comorbid mild to moderate depression and substance use disorder, resistance was identified as a predictor of treatment dropout (Beutler et al., 2011). Further evidence linking resistance to attrition comes from a study by Schwartz and colleagues (2019) examining resistance as a predictor of outcomes for CBT for panic disorder. As well, in adolescent clients with depression, Jungbluth and Shirk (2009) demonstrated a relationship between resistance and in-session disengagement. In addition to predicting outcomes, resistance may also play a key role in clients' experience of therapy. For example, qualitative research asking clients to identify 'important' moments in therapy found that clients were most likely to choose moments of disagreement with the therapist (Viklund et al. 2010). While this study did not examine whether clients found these moments to be important in a positive or negative way, another study found that that resistance was associated with more pessimistic client expectations of whether therapy will be helpful (Mamedova et al., 2020). Further, Hara and colleagues (2015), as well as Watson and McMullen (2005), have identified resistance as a predictor of poorer client perceptions of the working alliance (i.e., the therapist-client relationship, including the degree of collaboration regarding therapy tasks and goals; Bordin, 1979). Overall, moments of resistance

in psychotherapy have a strong, adverse influence on therapy process, treatment outcomes, and clients' experience of psychotherapy.

Ambivalence

Another key phenomenon in MI is ambivalence about therapeutic change; a common client experience involving simultaneous desire and reluctance to change (W. R. Miller & Rollnick, 2013; Westra & Arkowitz, 2010). Since change in psychotherapy is a nonlinear and potentially turbulent process, clients often feel conflicted regarding change with one intrapsychic 'voice' that might express wanting to change, while another may feel afraid of change or wish to stay the same (Westra & Aviram, 2013). The degree to which a client feels ambivalent about, versus motivated and ready for, change is widely regarded as a crucial to therapy outcomes (Engle & Arkowitz, 2006; Norcross et al., 2011; W. R. Miller & Rollnick, 2002; Westra, 2011). Moreover, theories of motivation emphasize how enduring therapeutic change depends on clients' intrinsic motivation for, and active engagement in, the change process (Overholser, 2005; Ryan & Deci, 2008).

Beyond theory, there is a wealth of empirical evidence documenting how ambivalence can disrupt psychotherapy process and outcomes. In particular, MI process research in the substance use domain supports the importance of observer-rated client language expressing motivation for, or ambivalence about, change as a marker of therapy process (W. R. Miller & Rollnick, 2012). This field of research differentiates change talk (CT; statements in support of change indicating one's intent, desire, need, or commitment to change) from counter-change talk (CCT), statements that argue either against change or in favour of staying the same (Hallgren & Moyers, 2011). These two kinds of client motivational language are considered in reference to a specific goal for therapeutic change. As an example, if the therapy goal is to reduce alcohol use,

CT might consist of arguments in favour of reduction whereas CCT might involve client language regarding reasons to drink alcohol. Through observationally coding motivational language early in treatment, this body of research has repeatedly demonstrated the capacity of CT (e.g., Aharonovich et al., 2008; Amrhein et al., 2003) and CCT (e.g., Baer et al., 2008; Campbell et al., 2010) to predict positive and negative intervention outcomes, respectively.

Research regarding ambivalence has also been extended to other clinical domains. Across two randomized controlled trials of CBT versus MI integrated with CBT (MI-CBT) for severe generalized anxiety disorder (Westra et al., 2009a; Westra et al., 2016), CCT expressed early in treatment emerged as a substantive predictor of therapy homework noncompliance and poorer therapy outcomes (Goodwin et al., 2019; Lombardi et al., 2014; Sijercic et al., 2016). As well, higher levels of CCT have been linked to a greater likelihood of subsequently experiencing alliance ruptures (i.e., significant disruptions to the working alliance between client and therapist; Hunter et al., 2014), and lower subsequent client-ratings of the working alliance (Norouzian et al., 2020). More broadly, research utilizing self-report measures has demonstrated associations between ambivalence (operationalized as low self-rated motivation) and negative treatment outcomes in the context of adolescent depression (Lewis et al., 2009), obsessive-compulsive disorder (Keijsers et al., 1994a), and agoraphobia (Keijsers et al., 1994b). Additionally, self-reported low motivation has been shown to predict premature termination from cognitive behavioural intervention in a sample of clients with panic disorder (Keijsers et al., 2001) and a nonclinical sample of participants with nonelevated depressive symptoms (Alfonsson et al., 2016).

Taken together with the literature on resistance, moments of disagreement in which clients express ambivalence about, or resistance to, change are key clinical events that, when

managed inappropriately, exert a negative influence on psychotherapy process and outcomes. Thus, it is essential to appropriately manage these moments with MI-consistent approaches.

What is MI?

MI is a brief client-centered, directive therapy for increasing intrinsic motivation for change that offers specific strategies for managing resistance and ambivalence (W. R. Miller & Rollnick, 2002; 2013; Westra, 2014). Through addressing these important clinical issues, MI complements existing treatments by enhancing engagement and treatment response within many areas including severe generalized anxiety disorder (Westra et al., 2016), obsessive-compulsive disorder (McCabe et al., 2019), depression (Swartz et al., 2006; Van Voorhees et al., 2009), eating disorders (Cassin et al., 2008; Wade et al., 2009), and concurrent psychosis and substance use (Bellack et al., 2006; Herman et al., 2022; Kavanagh et al., 2004). MI is a highly efficacious approach with meta-analyses demonstrating that MI is equal or superior to other interventions (e.g., CBT) and better relative to control or placebo conditions (Burke et al., 2003; Hettema et al., 2005; Lundahl et al., 2010). To further describe MI, two of its major components are outlined below: 1) a relational component known as MI spirit; and 2) a technical component of responsivity to in-session markers of therapy process.

MI Spirit

Stemming from Carl Rogers' (1951, 1956) client-centered therapy, MI emphasizes a 'spirit' of empathy and support. This includes developing a safe, collaborative atmosphere that offers empathic understanding for a client's resistance to, or conflicting feelings about, change. In line with Rogers' (1957) core relational conditions for facilitating client change and growth, MI spirit emphasizes the importance of accurate empathy (i.e., empathy that effectively captures a client's perspective), unconditional positive regard, and genuineness. MI spirit is essential such

that, akin to words without music, MI skills for managing ambivalence about change would fall flat if used without embodying the underlying spirit (Rollnick & W. R. Miller, 1995). Research also supports the importance of MI spirit with a recent meta-analysis by Pace and colleagues (2017) finding a significant association between higher observer-rated therapist MI spirit, as well as empathy, with increased client language expressing motivation for change (i.e., CT). Thus, a key element of MI is the empathic and supportive lens it offers for understanding, and effectively working with, resistance and ambivalence.

In this vein, MI does not view either resistance or ambivalence as a ‘problem’. Rather, MI conceptualizes sustained resistance as reflecting a lack of therapist skill for appropriately managing resistance (Westra & Norouzian, 2018). This is consistent with Rogers (1942) who viewed resistance as a natural client reaction to deficits in the therapy relationship. Similarly, unequivocal readiness for change is considered the exception rather than the norm, with ambivalence constituting a benign disclosure of normal uncertainty about therapeutic change (Westra & Aviram, 2013). Supporting this, Sijercic and colleagues (2016) differentiated two kinds of CCT: oppositional CCT involving expressions of ambivalence alongside resistance, from non-oppositional CCT in which ambivalence is disclosed in the absence of resistance. This study, conducted in the context of CBT for GAD, found that only oppositional CCT was associated with poorer therapy outcomes, whereas CCT statements within a harmonious therapy context were unrelated to outcomes.

Responsivity to Process Markers

In addition to MI spirit, another major component of MI is appropriate responding to in-session process markers of disagreement about therapeutic change: resistance and ambivalence. Resistance and ambivalence are regarded as process markers given the aforementioned

importance of these relatively rare moments to proximal (e.g., quality of the working alliance between therapist and client) and distal (e.g., symptom reduction following therapy) therapy outcomes. The term ‘process marker’ highlights how these transient, shifting phenomena provide real time information regarding therapy prognosis (Westra & Di Bartolomeo, 2022). This aligns with Greenberg’s (1986) argument that each moment in psychotherapy is not equally important; that is, some moments are particularly consequential to outcomes. As such, moment-to-moment attunement and responsivity to process markers is crucial. Considered to be an important therapist skill in MI, as well as psychotherapy in general, responsivity refers to an if-then approach of flexibly responding to process markers (the *if*-context; e.g., client expressions of disagreement about change) with indicated interventions (the *then*-activity; e.g., MI-consistent strategies) that are likely to support positive therapy processes and outcomes (Constantino et al., 2013; Stiles et al., 1998). Through responsivity, MI has been found to promote interpersonal harmony in the therapeutic relationship as well as treatment effectiveness (Aviram et al., 2016; Constantino et al., 2019; Hara et al., 2021; Olson et al., 2021). The next section reviews specific MI approaches to responsively managing resistance and ambivalence, as well as research supporting these approaches.

MI Approaches to Managing Resistance and Ambivalence

For both the contexts of resistance and ambivalence, MI-consistent strategies of empathy and support are indicated, whereas MI-inconsistent behaviours of demand and directiveness are contraindicated (Westra & Norouzian, 2018). More specifically, the recommended approach for navigating resistance is twofold. First, it is critical for therapists to understand resistance as a ‘stop signal’ indicating disharmony in the therapeutic relationship, as well as that the therapist is beyond the client’s current level of readiness for change (W. R. Miller & Rollnick et al., 2002).

Within MI, resistance is an indicator for therapists to immediately pause directive change-oriented strategies likely to perpetuate disharmony, and to instead shift to prioritizing the alliance through support and empathic exploration (Beutler et al. 2011; Ilgen et al. 2006). Second, to re-establish harmony and collaboration, therapists should ‘roll with’, or get alongside, resistance (Westra, 2014). As outlined by Westra, the MI skill of rolling with resistance entails therapist responses such as empathizing with resistance (e.g., reflecting the client’s reluctance to change), hearing the wisdom in it (e.g., reframing resistance to affirm the client’s positive qualities such as their determination), or supporting client autonomy in choosing if, when, and how they wish to proceed with the process of therapeutic change. In contrast, inappropriate responsivity to resistance (i.e., responsivity errors) entail therapist reactions that obviously persist in demanding, or directing a client towards change (e.g., continuing with therapy tasks despite client concerns, insisting on assigning homework, attempting to persuade the client of the benefits of therapeutic change).

Similarly, for ambivalence, MI espouses an empathic and supportive approach (Westra, 2014). This can include empathizing with conflicted feelings about change through reflections, validating uncertainty about change as a normative client experience, or affirming the client’s strengths. Moreover, a key component of MI is supporting clients as the expert regarding their own feelings (including ambivalent feelings). In contrast to more directive therapies such as CBT in which therapists share their expertise (e.g., psychoeducation about anxiety) with the client, MI adopts a client-as-expert stance to provide a safe space for clients to disclose about, and explore, opposing feelings about change (Khattra et al., 2017). On the other hand, MI-inconsistent responses to ambivalence include arguing in favour of change, invalidating or dismissing ambivalent feelings, or questioning the validity of the client’s concerns about change. Such

responses demand change and place the therapist in the role of ‘advocate’ for change rather than someone who wishes to hear both sides of a client’s ambivalence (Arkowitz & Westra, 2004). As well, through directing a client towards change, a therapist risks ‘taking all the good lines’ while the client is put in the position of arguing against change, as well as opposing the therapist (Rollnick et al., 2007). For this reason, resistance is theorized to arise as a result of the combination of client ambivalence and therapist responsivity errors involving inappropriately timed directiveness (Moyers & Rollnick 2002; Westra & Norouzian, 2018).

Research Regarding Responsivity to Resistance and Ambivalence

Consistent with MI’s approach of responsively managing resistance and ambivalence through support and empathy, research has consistently demonstrated that directiveness increases resistance while supportiveness reduces it. For instance, in intervention for clients struggling with their alcohol use, W. R. Miller and colleagues (1993) found that therapists who used a directive, as opposed to client-centered, counselling style elicited significantly more resistance from their clients. In turn, this was associated with poorer alcohol use outcomes one year after the end of treatment. Similarly, in a study using an ABAB research design, therapists were instructed to alternate between supportive and directive counselling styles within a session and the latter style was found to evoke significantly more resistance than the former (Patterson & Forgatch, 1985). Moreover, research has demonstrated that alliance ruptures (a similar construct to resistance reflecting disharmony in the client-therapist relationship) occur more often in the context of therapist demand (e.g., persisting with an intervention despite client reluctance) whereas therapist support (e.g., exploring and validating client concerns) can re-establish harmony in the therapeutic alliance (Aspland et al., 2008; Olson et al., 2021; Shukla et al., 2021).

Research regarding MI also provides strong support for the effectiveness of MI-consistent responding. For example, MI-consistent behaviours have been shown to predict improvements to client substance use outcomes (W. R. Miller et al., 1993; Vader et al., 2010), whereas MI-inconsistent responding has been associated with worse outcomes (Apodaca & Longabaugh, 2009). As well, using data from two randomized controlled trials of intervention for severe generalized anxiety disorder, the addition or integration of MI to CBT was associated with substantial reductions in observer-rated resistance (Aviram & Westra, 2011; Constantino et al., 2019). Further, through a mediational analysis, Constantino and colleagues identified reduced midtreatment resistance as a mechanism for the superior 1-year follow-up therapy outcomes achieved by clients who received MI-CBT, as opposed to CBT alone. Relatedly, Hara and colleagues (2021) found that more affiliative and supportive, rather than hostile or demanding, therapist behaviours during disagreement mediated the superior treatment outcomes for MI integrated with CBT. Consistent with an insight from Henry and colleagues (1990) that ‘a little bad process goes a long way’, Hara and colleagues also demonstrated that each single instance of therapist hostility or disaffiliation was associated with a quarter of a standard deviation reduction in treatment outcomes. Notably, this study showed that CBT alone therapists, who did not receive training in MI skills for responsivity to resistance and ambivalence, exhibited significantly more hostile and fewer affiliative therapist behaviours than their MI-trained counterparts. As well, consistent with the idea that perpetuated resistance is indicative of a deficit in therapist MI skill (Westra & Norouzian, 2018), episodes of disagreement were more prolonged for CBT alone, as opposed to MI-CBT therapists. Extending this, Olson et al. (2021) demonstrated that, relative to CBT alone therapists with no MI training, MI-CBT therapists exhibit substantially more supportive, empathic behaviours and fewer demanding, directive

behaviours, both in general and during moments of ambivalence. Moreover, across the entire sample, fewer errors in responsivity to ambivalence (i.e., inappropriately reacting to these moments with demand or directiveness) were significantly associated with better treatment outcomes at 1-year follow-up.

In another study, Aviram et al. (2016) directly tested the importance of moment-to-moment responsivity to psychotherapy process markers. This was achieved by examining natural variation in MI skill in responsivity to resistance (i.e., responding to moments of disagreement about change in an empathic and supportive manner) among CBT therapists with no training in MI. Relative to therapists who were less empathic and more controlling during moments of disagreement, therapists with greater ‘natural’ MI skill (i.e., those who were more likely to respond to instances of resistance by empathizing with the client or supporting client autonomy) had better treatment outcomes. As well, responsivity during moments of disagreement, as opposed to during therapy in general (i.e., at randomly selected moments), was found to be 10 times stronger as a predictor of outcomes. These findings were robust even when CBT competence was taken into account.

Overall, this body of research underscores the effectiveness of MI-consistent responsivity to resistance and ambivalence. As such, there is an impetus to train therapists in MI skills for managing resistance and ambivalence.

MI Training Approaches

MI has a strong history of dissemination efforts with over 15 million treatment providers trained worldwide (W. R. Miller & Rollnick, 2009). According to a systematic review of 27 MI training studies (Madson et al., 2009), traditional MI training programs typically rely on brief workshops ranging between 9 to 16 hours in length. Traditional MI workshops are generally

capable of producing improvements in MI skill from pre to postworkshop with Madson and colleagues finding that only one of the reviewed studies reported no change in self-reported skill, and likewise for objectively-measured skill (e.g., observer-rated MI adherence). More quantitatively, a meta-analysis of 21 studies reported a medium effect size ($d = .76$) for average improvement on behavioural outcome measures immediately following MI training (Schwalbe et al., 2014).

Although existing MI training approaches have demonstrated efficacy for skill acquisition, they suffer from multiple problems. First, while MI workshops have large effects on self-rated MI skill, they produce relatively modest improvements to observer-rated MI skill (Decker & Martino, 2013; Madson et al., 2009; Schwalbe et al., 2014; Walters et al., 2005; W. R. Miller & Mount, 2001). As well, results are mixed for client outcomes (e.g., resistance, motivational language in favour of change, behavioural change such as reduced alcohol use). Some studies have found positive effects (Brug et al., 2007; W. R. Miller et al., 2004) while others report no significant change (Chossis et al., 2007; W. R. Miller & Mount, 2001).

Second, a consistent finding in the literature is that skills acquired from a one-time MI workshop erode over time unless subsequent opportunities for training and practice (e.g., continued feedback or coaching regarding samples of a therapist's work) are offered (Hall et al., 2016; Schwalbe et al., 2014). Strikingly, research has demonstrated that trainees often revert to baseline MI skill levels (W. R. Miller et al., 2004; W. R. Miller & Mount, 2001). Further, in a systematic review of 15 MI training studies assessing sustained MI skill, Hall and colleagues identified only two studies in which at least 75% of therapists retained beginning proficiency in observer-rated MI spirit at a follow-up timepoint. The benchmark of 75% was chosen since this is the minimum competency standard for MI therapists in clinical trial contexts. Post-training

skills have also been found to erode quickly. According to a systematic review of training for psychosocial addictions treatments including MI (Walters et al., 2005), postworkshop skills decline in as little as 12 weeks in the absence of post-training enrichments.

A third issue is that there is substantial between-therapist variability in propensity for learning MI (Forsberg et al., 2010; Imel et al., 2014; Martino et al., 2011). In a sample of 189 therapists, Imel and colleagues found that approximately 40% of the variability in post-training MI adherence was accounted for by differences among therapists, even when client differences were held constant. Another study found that clinicians vary in both post-training skill and the amount of time required to learn MI skills (Forsberg et al., 2010). Extending this, Martino and colleagues evaluated a stepwise approach for training alcohol and drug counselors in MI to a predefined criterion for observer-rated proficiency in accordance with the standard used in clinical trials. The steps comprised of an online self-learning course, eight hours of workshop training across four weeks, and two months of one-on-one supervision with feedback on audio-recorded sessions (with client consent). This study demonstrated that clinicians vary in the amount of training they need to attain adequate competency in, and adherence to, MI. In particular, age and years of clinical experience emerged as significant clinician-level predictors such that counsellors who were older, as well as counsellors who were more experienced, were more likely to require additional training. In contrast, their younger, less experienced counterparts readily learned MI with less intensive training approaches. In light of such results, as well as Hall and colleagues' (2016) finding that it is atypical for more than 75% of clinicians to sustain basic proficiency in MI, some researchers have asserted that not everyone may be capable of achieving competence in MI (W. R. Miller & Moyers (2016; 2017). As articulated by Rollnick and Gobat (2016, p. 1157): for some clinicians, "their talents might lie elsewhere". As

such, a recurring recommendation in the literature is that it may be prudent to screen therapists for pretraining characteristics likely to facilitate MI skill acquisition (Gaume et al., 2009; W. R. Miller et al., 2005; W. R. Miller & Moyers, 2017; Stein et al., 2015). At the same time, the literature has also highlighted the importance of training characteristics (e.g., frequency of opportunities for practice) to promoting skill development (Carpenter et al., 2012).

Related to the importance of training characteristics, a fourth problem is that extant MI training approaches suffer from an overreliance on didactic approaches. Most traditional MI workshops involve a mix of didactic presentation of key concepts and experiential training (e.g., roleplay activities), though didactic instruction is the predominant approach (Madson et al., 2009). Westra and colleagues (2021) estimated that only approximately 40% of the total time in typical MI workshops involves interactive exercises and video illustrations of MI skills accompanied by debriefing. This is despite established evidence that didactic training activities (e.g., passive listening to presentations) are the least effective training approaches for facilitating clinical skill acquisition (D. Davis et al., 1999; Forsetlund et al., 2012). Given the complexity of MI, which has been compared to the challenge of learning a sport or musical instrument (W. R. Miller & Rollnick, 2009), practice accompanied by feedback may be crucial for learning MI (W. R. Miller et al., 2006). As noted by Westra and colleagues (2021), practice may be particularly necessary for learning MI skills for managing moments of client disagreement about change given the challenging nature of these moments. According to qualitative research, these moments often elicit therapist emotions such as confusion, guilt, or even anger towards one's client (Coutinho et al., 2011). This 'pull' for decreased empathy has also been empirically demonstrated by Francis and colleagues (2005) who found that therapists are more likely to respond to depictions of high, as opposed to low, levels of resistance with nonempathic, directive

responses. Extending this, Hara and colleagues (2018) demonstrated that higher levels of in-session resistance are associated with subsequent lower client ratings of therapist empathy. Thus, despite the importance of responsively managing disagreement with MI-consistent interventions of empathy and support, disagreement can ‘derail’ therapists into responding inappropriately (i.e., with low empathy). This ‘derailing’ effect has also emerged in other therapy domains. For example, in the context of CBT for panic disorder, therapists were found to display lower levels of adherence to treatment protocols when working with clients with higher levels of hostility (Boswell et al., 2013).

In light of these four issues with traditional MI training approaches, trainers have been shifting towards supplementing brief workshops with individual supervision and other approaches (Madson et al., 2019). However, such training enrichments are time-consuming and costly (Martino et al., 2016; Olmstead et al., 2011). As such, there is a need for more efficient alternatives that nevertheless emphasize practice.

DP Approaches to Psychotherapy Training

To address the shortcomings of traditional training approaches for MI and other psychotherapies, DP is emerging as a potential model for successful psychotherapy skill development (Rousmaniere et al., 2017; J. Young & Maack, 2021). DP has been defined as “individualized training activities specifically designed by a coach or a teacher to improve specific aspects of an individual’s performance through repetition and successive refinement” (Ericsson & Lehmann, 1996, p. 278-279). This method of deliberate, effortful, and repeated practice in accordance with expert feedback has proven efficacious in a variety of fields including music, chess, sports, and medicine (Ericsson & Pool, 2016). While a meta-analysis of 88 studies characterized the benefit of DP as small given that 86% of the variability in skill was

accounted for by variables other than the amount of practice (McNamara et al., 2014), S. D. Miller and colleagues (2020) noted that this meta-analysis used an overly broad definition of DP. In a recapitulation of the original meta-analysis that restricted study inclusion to only bona fide instances of DP, S. D. Miller and colleagues found a significant difference between the effect of true DP, and non-DP, on performance. As well, these authors highlighted that the average effect of DP ($r = .40$; similar to McNamara and colleagues' original correlation of $r = .38$) is large, particularly in the context of psychology.

As summarized by Ericsson and Pool (2016) in their book *Peak: Secrets from the New Science of Expertise*, the advent of DP aligns with robust evidence that individuals generally attain a stable skill level with further improvement not inevitably arising as a result of more experience. Rather, skill improvement requires rehearsal of successively more skillful behaviours with tailoring of one's approach in response to feedback. In line with this, research has demonstrated that experience alone is not enough to improve psychotherapeutic skill (Goldberg et al., 2016a; Tracey et al., 2014) and that more, as opposed to less, experienced clinicians generally do not achieve significantly superior outcomes (Budge et al., 2013; Minami et al., 2009; Okiishi et al., 2006; Wampold & Brown, 2005). In fact, Goldberg and colleagues demonstrated a very small, albeit statistically significant, *negative* change in therapists' capacity to achieve successful treatment outcome across a period of approximately five years. This finding was robust even when accounting for therapist and client characteristics, although there was considerable between-clinician variability such that some therapists improved while others declined or stayed the same. Given these findings, DP has been recommended as a potential avenue for facilitating sustained skill development in the context of psychotherapy training (Goldberg et al., 2016a; S. D. Miller et al., 2007; Tracey et al., 2014). As well, related to the

aforementioned literature on responsiveness, Boswell and colleagues (2020) have argued that it may be particularly fruitful to train clinicians in deliberately and repeatedly practicing appropriate responsiveness to process markers (e.g., ambivalence).

Existing evidence for DP in the context of psychotherapy is promising (Anderson et al., 2020; Chow et al., 2015; Goldberg et al., 2016b; Hill et al., 2020; Westra et al., 2021). For example, in an empirical study of 1,632 clients seen by 17 therapists, Chow and colleagues demonstrated that time spent in activities aimed at improving therapeutic performance (e.g., reviewing videos of therapy sessions, attending supervision) was a significant predictor of client outcomes. Though this study used a retrospective self-report measure of DP-related activities, a notable strength was that measure items were developed in consultation with a leading DP researcher, K. Anders Ericsson. In another study, seven years of longitudinal data were examined for 153 therapists working with 5,128 clients within an agency utilizing DP and related approaches such as routine outcome monitoring (Goldberg et al., 2016b). In contrast to Goldberg and colleagues' (2016a) finding of average skill decline for therapists in a setting that did not incorporate DP, this study found evidence of improvement in therapeutic skill over time. In addition, Hill et al. (2020) reported significant pre- to post-training improvement in the psychotherapy skill of immediacy for psychodynamic therapists who attended an 8-hour DP workshop followed by approximately four hours of individual DP training across two months. Training effects were demonstrated for both self-report (e.g., self-efficacy) and client (e.g., client-rated working alliance) outcomes.

Three studies have also provided preliminary support for the superior efficacy of DP relative to control conditions (Anderson et al., 2020; Perlman et al., 2022; Westra et al., 2021). First, in the study by Anderson and colleagues, 101 undergraduate students with expressed

interest in helping professions (e.g., psychology) were randomized to receive either DP-informed training in facilitative interpersonal skills (a composite of eight skills relevant to psychotherapy: verbal fluency, emotional expression, persuasiveness, warmth, hopefulness, empathy, alliance bond capacity, and appropriate responsivity to alliance ruptures), or a control condition. Those who received DP-informed training were exposed to videos of skillful versus poor responses to different client presentations, as well as provided with opportunities to practice responding to video stimuli. In contrast, the control condition involving watching videos comparable in format but unrelated to training in psychotherapy skills and with no opportunities for practice. Following training, students who received the DP-informed, as opposed to control, format demonstrated superior observer-rated facilitative interpersonal skills. However, the results of this study are limited by the lack of a parallel control condition (e.g., didactic training in facilitative interpersonal skills).

Second, a randomized control trial from Perlman and colleagues (2022) demonstrated further evidence in favour of a DP approach to training. In this study, 56 undergraduate students with aspirations for a career in a helping profession received 90 minutes of psychotherapy training. Participants were randomized to either a control condition involving a traditional training approach (e.g., video demonstration of cognitive therapy techniques), or DP training involving practice in appropriately responding to challenging psychotherapy situations (e.g., alliance ruptures) using facilitative interpersonal skills and a specific therapy approach for repairing ruptures (alliance-focused training). While accounting for baseline skill level, participants who received DP training demonstrated significantly greater levels of facilitative interpersonal skills at post-training relative to participants who received traditional training. A

limitation of this study is the control condition's focus on a different therapy approach (i.e., cognitive therapy versus facilitative interpersonal skills and alliance-focused training).

Third, following a pilot study (Singer-Nussbaum et al., 2018) with promising findings regarding the feasibility and effectiveness of a 2-day MI workshop incorporating DP principles, Westra and colleagues (2021) conducted a randomized controlled trial in which 88 therapists were randomly assigned to either a DP workshop or a traditional version; the latter having relatively few opportunities for practice and especially feedback. Training outcomes were assessed at both postworkshop and four months following the workshop. Immediately after training, therapists in the DP, as opposed to traditional, workshop group reported significantly greater confidence in using MI skills and demonstrated superior skill in responsive empathy to resistance (i.e., rolling with resistance through empathic and supportive responses) as measured via a video vignette task. As well, at 4-month follow-up, DP-trained therapists achieved better performance in video-recorded test interviews with ambivalent interviewees recruited from the community. Specifically, they elicited less observer-coded resistance from interviewees, exhibited higher observer-rated MI proficiency (a composite of empathy and MI spirit modelled together), and were rated as more empathic by interviewees. Interestingly, there were also significant between-group differences for *change* in training outcomes between postworkshop and follow-up. While traditionally trained therapists declined in responsive empathy to resistance and interviewee-rated empathy, DP trainees sustained their skill in responsivity to resistance vignettes and *increased* in interviewee-rated empathy. However, both groups exhibited some evidence of decline for observer-rated resistance and MI proficiency outcomes between postworkshop to 4-month follow-up. Nevertheless, the significant difference in level of decline for *some* MI skills (i.e., responsive empathy, interviewee-rated empathy) suggests that DP-

enriched training may have mitigated the extent to which skills typically erode following traditional MI workshops (Hall et al., 2016; Schwalbe et al., 2014). Notably, despite evidence of more substantial decline in MI skill for the traditional group, therapists in both groups reported similar levels of confidence in using MI at 4-month follow-up. That is, traditionally trained therapists may have been unaware of the extent to which their skills eroded. As well, this study found evidence that trainees in the DP, as opposed to traditional, group were significantly more likely to practice MI skills between postworkshop and follow-up testing. As such, continued practice may have contributed to the sustained skill benefit achieved by trainees in the DP group.

Overall, although research on DP for psychotherapy is in its early stages, there is compelling preliminary evidence for its effectiveness. The extant literature consistently supports the efficacy of DP approaches for psychotherapy training, including in the domain of MI. However, one important area that has not yet been explored is whether DP can lessen the influence of pretraining therapist characteristics on training effects.

Therapist Characteristics Associated with MI Training Outcomes

Therapist characteristics have been implicated as one of the most important determinants of training efficacy and, thereby, effective dissemination, of psychotherapy training (Beidas & Kendall, 2010). In light of this, the DP training model has been criticized for its tendency to downplay the role of individual differences in predicting skill improvement (Campitelli & Gobet, 2011). As articulated by Clements-Hickman and Reese (2020), this may be especially inappropriate in the context of psychotherapy given strong evidence that therapist characteristics are robust predictors of variability in client outcomes (Barkham et al., 2017; Norcross & Lambert, 2011). Similarly, in the context of MI, a study by Moyers and colleagues (2016) demonstrated that 11% of the variability in client alcohol use outcomes was accounted for by

therapist characteristics. Further, therapist attributes may be particularly important for MI training since MI directly involves personal aspects of therapists such as genuineness in embodying MI spirit and conveying empathic understanding (W. R. Miller & Rose, 2009). This is also in line with the aforementioned evidence of substantial between-therapist variability in MI skill acquisition (Forsberg et al., 2010; Imel et al., 2014; Martino et al., 2011).

To date, several therapist variables have been found to influence the effectiveness of therapist training in MI including less endorsement of a traditional disease model of addiction (i.e., viewing addiction as an ‘innate’ disease outside of one’s control; Baer et al., 2009) and a stronger vocabulary (Carpenter et al., 2012). One of the most consistent findings is that stronger baseline counselling skills (e.g., observer-rated MI skill; skill in empathic listening on a video vignette task) are associated with greater skill acquisition following MI training (Baer et al., 2004; Carpenter et al., 2012; Martino et al., 2011; Schumacher et al., 2018; Smith et al., 2012). Further, limited initial counselling skill has been identified as a barrier to benefiting from MI training (Mitcheson et al., 2009; W. R. Miller & Mount, 2001).

Another widely researched therapist factor is years of clinical experience. While some studies have reported experience to be unrelated to MI skill acquisition (Baer et al., 2004, 2009; de Roten et al., 2013), others indicate that greater experience may interfere with learning MI (Dunn et al., 2015; Oppenheim et al., 2019). As well, Martino and colleagues (2011) found that clinicians who require more intensive training approaches to learn MI are more likely to be older, more experienced, and less likely to have a graduate degree. However, there is mixed evidence for the relationship between formal education and propensity for learning MI. There is some evidence of a nonsignificant association with MI training outcomes (Hartzler et al., 2007), yet also evidence that having a graduate degree may predict better MI skill acquisition (Baer et al.,

2009). Another finding from Schumacher and colleagues (2018) indicated that prior formal training in MI had a large effect size ($d = 1.15$), albeit below the threshold for statistical significance ($p = .11$), for predicting the dose of training required to attain expert competency in MI. A limitation of this study was its small sample size of 30 psychology doctoral/postdoctoral interns. Lastly, there is some evidence that clinicians who are highly motivated to learn MI may achieve proficiency more readily (Schumacher et al., 2018; W. R. Miller et al., 2004) relative to less motivated samples of clinicians (Mitcheson et al., 2009; W. R. Miller & Mount, 2001).

Therapist Empathy

Related to the aforementioned finding that baseline counselling skills are a robust predictor of post-training MI skill, empathy may be a particularly crucial therapist factor. According to Carl Rogers, therapist empathy is defined as a “therapist’s sensitive ability to understand the client’s thoughts, feelings, and struggles from the client’s point of view. It is the ability to see completely through the client’s eyes, to adopt [their] frame of reference” (Rogers, 1980, p. 85). Often examined as an MI training outcome (e.g., Baer et al., 2009; Smith et al., 2018; Stein et al., 2015), empathy is considered a core psychotherapy skill and one of the ‘active ingredients’ through which MI improves treatment outcomes (W. R. Miller & Moyers, 2015) given the centrality of accurate empathy to embodying MI spirit (W. R. Miller & Rose, 2009). Implicated as an important aspect of MI client satisfaction (Angus & Kagan, 2009; Marcus et al., 2011), therapist empathy has consistently been associated with client improvement in the context of MI (e.g., Borsari et al., 2015; Constantino et al., 2019; Moyers & W. R. Miller, 2013). More broadly, a meta-analysis of 82 samples demonstrated that therapist empathy is a moderately strong ($d = .58$) predictor of client treatment outcomes across a range of client presenting problems and therapy approaches (Elliot et al., 2018). For example, in the context of supportive-

expressive short-term psychotherapy for clients with mild to moderate depression and/or anxiety alongside interpersonal difficulties, Abargil and Tishby (2022) evaluated therapist empathy using a subtle emotion recognition task. Across a sample of 33 therapist-client dyads, this study's results indicated that therapists with a greater ability to accurately identify subtle emotions (such as those typical in the context of psychotherapy) demonstrated superior psychotherapy outcomes.

Considering the evidence that empathy is a crucial clinical skill, it is possible that therapists who exhibit greater empathy prior to receiving psychotherapy training may learn psychotherapy more readily than less empathic therapists. This may be particularly true for MI given the emphasis on MI spirit and building a genuine, understanding, and supportive therapeutic relationship. As articulated by Greeno and colleagues (2017, p. 805), empathy is fundamentally aligned with MI spirit since "empathic behaviors and responses demonstrates respect for individuals, belief in their right to self-determination, and recognizes clients' dignity and strengths". This aligns with evidence that empathy is associated with prosocial behaviours that emphasize the humanity of others such as volunteering (Unger & Thumuluri, 1997) and donating to charities (M. H. Davis, 1983a). Further, there is reason to believe that low empathic ability may interfere with learning MI and, in particular, the MI skill of appropriate responsivity to resistance and ambivalence. At the extreme, low empathy has been associated with antisocial outcomes such as aggression (Mehrabian, 1997), bullying (Gini et al., 2007), and criminal recidivism (Bock & Hosser, 2013). In a clinical context, it is plausible that low empathy might be associated with therapist behaviours incompatible with MI spirit and detrimental to the therapeutic alliance (e.g., criticizing, lecturing). While this does not appear to have been directly tested in the extant literature, Moyers and W. R. Miller (2013) reviewed evidence that low, as opposed to high, empathy therapists have weaker therapeutic alliances with their clients and are

more likely to conduct therapy that leads to dropout, relapse, and negative treatment outcomes. As well, if a therapist is not able to accurately perceive or empathize with client expressions of ambivalence about, or resistance to, change, therapists might exhibit responsivity errors such as obliviously persisting with therapy tasks despite client disengagement. This is consistent with evidence that accurate perception of others, a key component of empathy, is linked to relationship harmony (Murray et al., 1998) and effective communication (Eidelson & Epstein, 1982). Further, considering the potential of resistance and ambivalence to elicit negative emotions in therapists (Coutinho et al., 2011), low empathy may interfere with responding appropriately to one's client since poorer empathic ability has been associated with difficulty regulating one's own emotions (Eisenberg, 2000).

Beyond the theoretical arguments for the importance of empathy to training outcomes, existing MI training research supports the capacity of pretraining therapist empathy to predict MI skill acquisition. For instance, in a sample of 22 clinicians who attended a 2-day MI training program, clinicians with higher, as opposed to lower, initial empathic proficiency (operationalized as the observer-rated ratio of reflections to questions) became more skillful after training (i.e., offered more reflections relative to questions than they did prior to training) and demonstrated better skill maintenance at 2-month follow-up (Baer et al., 2004). In addition, Schumacher and colleagues (2018) found that, among 29 doctoral interns who received supervisory training in MI, higher reflective listening scores on a video vignette task at the outset of training were associated with requiring fewer supervision sessions to achieve expert competence in MI. In another study, data from the Westra et al. (2021) trial was used to assess pretraining trait empathy and empathic ability (measured via a written vignette task) as predictors of training outcomes following a 2-day MI workshop using either a traditional, or DP-

enriched, training approach (Oppenheim et al., 2019). Across the full sample of 88 clinicians, baseline trait empathy and empathic ability were positively associated with post-training self-reported MI skill and empathic ability, respectively. Several other studies have also assessed general skillfulness in MI (e.g., composite scores of MI skills such as empathy, MI-adherent behaviour, and low rates of MI-nonadherent behaviour) as a baseline predictor of training outcomes (Carpenter et al., 2012; Martino et al., 2011; Smith et al., 2012). Consistently, these studies have demonstrated that higher MI skill at the outset of training is associated with better MI skill acquisition. On the other hand, at least one study has found that baseline empathy was unrelated to MI training outcomes (Greeno et al., 2017). In a sample of 54 social work students, Greeno and colleagues found that initial empathy did not predict MI training outcomes at any time point (ranging between immediately following training and five months post-training). However, an important limitation of this study was its use of a self-report measure of trait empathy.

Given these findings, researchers have frequently suggested that prescreening therapists for empathic skill may facilitate more efficient dissemination of MI (Gaume et al., 2009; Stein et al., 2015; W. R. Miller et al., 2005; W. R. Miller & Moyers, 2017). Reflecting on their empirical observations, W. R. Miller and Moyers noted that clinicians who are selected for higher levels of empathic skill appear to learn MI more readily (W. R. Miller et al., 2005) relative to unscreened clinicians (W. R. Miller & Mount, 2001). In a trial conducted by W. R. Miller and colleagues (2005, p. 194), a sample of 44 therapists who passed a pretest for empathic skillfulness were found to show “relatively few problems in manifesting the clinical style” of MI. This is notable given the typically challenging nature of learning MI (W. R. Miller & Rollnick, 2009). Using data from the same trial, initial therapist empathy was found to predict observer-coded empathy

four months after receiving training in MI (W. R. Miller & Moyers, 2013). This was despite the restricted range of the sample (i.e., since therapists were selected for high empathy). Further, using a subset of data from the same trial, within-therapist differences in observer-coded empathy from sessions for 38 clinicians and 700 clients emerged as a robust predictor of client alcohol use outcomes (Moyers et al., 2016). That is, while there were no between-therapist differences in empathic skill given the sample's limited range, differences in demonstrated empathy across sessions within clinicians' therapy caseloads were associated with better client outcomes.

Overall, pre-existing therapist empathy prior to training appears to be a consistent and potent predictor of MI training outcomes. While prescreening has shown promise as an approach for disseminating MI in an efficient manner, it is possible that DP-enriched MI training may present a more inclusive alternative (i.e., one that can effectively train clinicians with *varying* levels of pretraining empathic skill). Since research has not yet addressed whether integrating DP into MI training might lessen the influence of baseline therapist empathy, the theoretical basis for this possibility is outlined below.

Why Might Integrating DP into MI Training Reduce the Influence of Baseline Empathy?

There are some theoretical reasons to expect that DP-enriched MI training might lessen the influence of pretraining differences in empathic skill on training outcomes. First, DP may 'even the playing field' between low, versus, high empathy clinicians by increasing therapist skill in managing difficult therapy moments. Since moments of client disagreement about change have been empirically shown to decrease therapist empathy (Francis et al., 2005; Hara et al., 2018), therapists with high pretraining empathy may tend to achieve better MI training outcomes due to pre-existing empathic skill buffering them against this expected decrease in empathy. This

relates to the importance of empathy to MI spirit (Greeno et al., 2017) since highly empathic therapists may have an easier time embodying, and maintaining, MI spirit during moments of resistance and ambivalence. As well, greater empathic ability has been associated with a stronger ability to regulate one's own emotions (Eisenberg, 2000). This may be beneficial for learning MI given the challenging nature of disagreement and its tendency to elicit nonempathetic reactions (e.g., anger) from therapists (Coutinho et al., 2011). Thus, therapists with stronger initial skillsets in empathy may be able to learn MI more readily than less empathic therapists. At the same time, given the difficult, and sometimes personal, nature of disagreement, deliberate and repeated practice with MI-appropriate responding (i.e., offering empathic reflects, supporting client autonomy) may be essential for learning the MI skill of responsivity to resistance and ambivalence (Westra et al., 2021). That is, practice may help clinicians learn to regulate their emotions during these challenging moments and to maintain an empathic and supportive MI spirit. As such, DP may be able to increase skill for less empathic clinicians, thereby negating the relative advantage of highly empathic therapists. Supporting the plausibility of this, a qualitative examination of a DP approach to training counselling students, McLeod (2022) found that internalizing principles of DP allowed trainees to be less 'derailed' by stressful therapy events and to instead view these as opportunities for learning and growth. Similarly, Hill et al. (2020) reported qualitative data indicating that trainees find DP particularly helpful for managing their personal emotions and countertransference.

A second theoretical reason pertains to another way that DP training might reduce the disparity in training outcomes between clinicians with low, versus, high pretraining empathic skill. To first explicate the disparity, the overlap between low empathy and MI-inconsistent behaviours (Moyers & W. R. Miller, 2013; W. R. Miller et al., 1991) might mean that greater

empathic ability confers an advantage for learning to appropriately respond to resistance and ambivalence. Given the propensity of extreme levels of low empathy to predict antisocial behaviours (e.g., Gini et al., 2007), as well as evidence linking low empathy in a clinical context to poorer therapeutic alliances (Moyers & W. R. Miller, 2013), milder difficulties with empathy may contribute to MI-inconsistent therapist behaviours (e.g., dismissing client ambivalence about change, invalidating client skepticism regarding therapy homework). Further, since accurate perception of others, an essential component of empathy, has been linked to relationship harmony (Murray et al., 1998), empathy may play a key role in accurately identifying client ambivalence about, and resistance to, change and effectively responding to these moments to promote collaboration and stability in the therapeutic alliance. Conversely, low empathy may increase the likelihood of a therapist to fail to notice, or inappropriately respond to, client expressions of ambivalence and resistance. Taken together, it is plausible that low empathy therapists have more existing MI-inconsistent behaviours to ‘unlearn’ at the outset of training and that poor empathic skill may interfere with learning MI-consistent behaviours, perhaps especially in the context of traditional MI training that does not provide opportunities for deliberate and repeated practice in responding in new, MI-consistent ways. As asserted by Hall and colleagues’ (2016, p. 1145), “the complexity of MI may lie not simply in the acquisition of new skills..., but in the suppression of previous practice behaviours (giving advice, directing, confronting, talking instead of listening) that are inconsistent with the spirit of MI”. The importance of unlearning has also been highlighted in a qualitative survey of experienced MI trainers which found that most trainers view trainees’ existing MI-inconsistent behaviours as vital to address in order to facilitate MI skill acquisition (Schumacher et al., 2014). As well, past MI training trials which have found that improvements in trainee MI proficiency were primarily

the result of reducing MI-*inconsistent* responding, and not increasing MI-*consistent* behaviours (Gaume et al., 2009; Rubel et al., 2000; W. R. Miller et al., 2004).

Third, since difficulties with demonstrating empathy are common among clinicians who have not yet learned MI, DP may offer a powerful approach that can promote MI skill among clinicians in general (i.e., regardless of initial level of empathic skill). In MI, it is considered normative for clinicians not proficient in MI to react to client disagreement with a ‘righting reflex’ (W. R. Miller & Rollnick, 2013). Defined as a natural desire to help individuals who are suffering by reflexively trying to ‘right’ their problems, this reflex involves nonempathic, MI-inconsistent behaviours such as giving unsolicited advice. In line with this, therapists who were randomly assigned to interview a simulator depicting high, as opposed to low, levels of resistance were found to demonstrate more inappropriate responsivity (e.g., directiveness) and express less empathy or, at best, “hollow empathy” (Francis et al., 2005, p. 1180). This may be the norm rather than the exception given estimates that the majority of therapy sessions contain markers of ‘bad process’ (e.g., inappropriate responsivity to disharmony in the therapeutic relationship; Muran & Eubanks, 2020). Through deliberate and repeated practice, DP training may enable therapists with varying levels of empathic skill to minimize MI-inconsistent behaviours and to instead exhibit MI-consistent behaviour.

In sum, the extant literature suggests that DP-enriched MI training may be potent enough to reduce the gap between high, versus low, empathy clinicians. As well, incorporating DP may facilitate ‘unlearning’ of MI-inconsistent behaviours that may be more typical among clinicians with lower levels of pretraining empathy. Further, given the widespread nature of limited therapist empathy in response to moments of resistance and ambivalence, DP may be able to improve MI skill across clinicians with different levels of initial empathic ability. Thus, it is

theoretically plausible that MI training integrated with DP would be potent enough to decrease the influence of pretraining empathic skill on training outcomes. The present study, outlined below, seeks to empirically examine this possibility.

The Present Study

Recommendations for efficient psychotherapy skill dissemination emphasize the importance of *both* therapist and training characteristics (Beidas & Kendall, 2010; Carpenter et al., 2012; Clements-Hickman & Reese, 2020; Madson et al., 2009; W. R. Miller et al., 2006). To date, MI training research has highlighted the importance of initial clinician empathic ability (e.g., Moyers & W. R. Miller, 2013) and intensive postworkshop enrichments (e.g., ongoing supervision; Schwalbe et al., 2014) to sustained skill acquisition. However, with the advent of DP as a potent approach for efficient psychotherapy skill development (Chow et al., 2015), a key research question is whether a brief DP-enriched workshop in MI can lessen the need for a strong skillset in empathy prior to training. Since responsivity to resistance and ambivalence requires therapists to quell their ‘natural’ impulse to respond with directiveness (Francis et al., 2005), these MI skills may be particularly amenable to the benefits of deliberate, repeated practice. In this vein, the aim of this dissertation was to evaluate whether incorporating DP principles into an MI workshop reduces the extent to which pretraining therapist empathy is associated with training outcomes related to the responsive management of resistance and ambivalence. This was tested using data from a recent MI training study (Westra et al., 2021) that compared the efficacy of a DP-enriched MI workshop to a traditional version with relatively few opportunities for practice and feedback. Thus, the present study falls under the umbrella of exploratory research since it is a secondary analysis of a larger trial (Althouse, 2016). Building on the Westra and colleagues parent study (which did not examine the influence of baseline therapist empathy on

training outcomes), the focus of the present study was on the interaction between therapist differences in initial empathic skill and training type (DP versus traditional).

Given the rarity and importance of sustained skill (rather than merely skill acquisition) in MI training (Hall et al., 2016), the current study focused solely on *long-term* training outcomes. That is, while the Westra et al. (2021) parent study assessed training outcomes at both postworkshop and 4-month follow-up, this dissertation concentrated on MI skills demonstrated four months after receiving either a DP or traditional format of an MI workshop. This approach was also chosen since the parent study found that group differences were larger at follow-up with the DP group demonstrating skill maintenance, or continued improvement, for certain skills (responsive empathy to resistance, interviewee-rated empathy) whereas the traditional group exhibited skill decline. As such, training outcomes assessed at the follow-up timepoint were best suited to the present study's aim of examining workshop group as a moderator of the association between baseline empathy and *sustained* MI skill.

Due to limitations of self-report empathy measures, such as their weak ability to predict observer-rated empathy (e.g., Greeno et al., 2017; Ogle et al., 2013) and their susceptibility to social desirability bias (Batson et al., 1987), the current study measured empathy via two vignette tasks in which therapist's responses to client vignettes were scored by trained raters. In this way, the current study conceptualizes empathy as a skill rather than a trait. In addition to aligning with Rogers' (1980) definition of empathy as an 'ability', this is consistent with recent studies in the MI training literature (e.g., W. R. Miller & Moyers, 2013), as well as the broader field of psychology (e.g., Abargil & Tishby, 2022), that examine empathy as a skill. While traditional empathy measures have assessed empathy as a stable personality variable (e.g., M. H. Davis, 1983b), there is evidence that trait empathy is not significantly associated with observer-

rated empathic behaviour (Greeno et al., 2017; Ogle et al., 2013). Further, observer-coded empathy has been found to be a robust predictor of MI training outcomes (Moyers et al., 2016; W. R. Miller & Moyers, 2013). Beyond the benefits of directly assessing empathic skill rather than one's perception of their tendency to be empathic, this dissertation's use of multiple empathy measures also allowed for context-dependent assessment of two kinds of empathy: 1) *general* empathic ability across various client contexts; and 2) *responsive* empathy to the specific context of resistance.

As with self-rated empathy measures, self-report MI skill measures are hindered by limitations. For example, MI training studies typically find large training effects for self-reported skill but relatively modest effects for observer-rated skill (Madson et al., 2009; Schwalbe et al., 2014). As well, therapists' assessment of their own skills is typically inflated with therapists often failing to notice client dissatisfaction and lack of progress (Macdonald & Mellor-Clark, 2015). As a more rigorous examination of MI skill in managing ambivalence and resistance, the present research examined three observer-rated MI training outcomes in video-recorded test interviews with ambivalent individuals: 1) level of resistance; 2) errors in responsivity to ambivalence involving inappropriately responding to ambivalence with demand or directiveness; and 3) instances of appropriate responding to ambivalence with support or empathy. In this way, one 'client' outcome (interviewee resistance to the direction of the therapist/therapy) and two therapist skill outcomes (responsivity errors, and appropriate responsivity) were assessed. This allowed for a more stringent test of trainee skill given mixed evidence regarding the capacity of MI training to improve client outcomes (Brug et al., 2007; Chossis et al., 2007; W. R. Miller et al., 2004; W. R. Miller & Mount, 2001). As well, to maximize both external validity and standardization, training outcomes were assessed in test interviews with two different kinds of

ambivalent interviewee participants: ambivalent community members, and simulators portraying a standardized ambivalent client. Simulators are commonly employed for skill testing purposes in the field of medicine, including psychiatry (Hardoff & Schonmann, 2008), and are gaining popularity for assessing therapist competence including in the context of MI (e.g., Imel et al., 2014; W. R. Miller et al., 2004; W.R. Miller & Mount, 2001).

The current study hypothesized that training type (DP versus traditional) would moderate the relationship between both measures of baseline empathic ability and all follow-up training outcomes: 1) resistance; 2) responsivity errors; and 3) appropriate responsivity. Specifically, it was expected that, relative to DP-trained therapists, therapists who attended a traditional MI workshop would demonstrate a stronger relationship between greater general and responsive empathy at baseline and superior follow-up training outcomes (i.e., elicit less resistance from ambivalent interviewees, demonstrate fewer responsivity errors, and exhibit greater levels of appropriate responsivity). In other words, it was theorized that incorporating DP into MI training would *reduce* the influence of individual differences in preworkshop therapist empathy on training outcomes.

Method

Data were derived from the Westra et al. (2021) parent study in which 88 therapist trainees were randomly assigned to receive one of two formats of a 2-day MI training workshop: a DP workshop ($n = 44$), or a traditional workshop with comparatively few opportunities for practice and feedback ($n = 44$). As noted above, training outcomes assessed at 4-month follow-up were used in the present study.

Participants

Therapist Trainees

Therapists ($N = 88$), from any discipline and at any level of experience, were recruited from the Greater Toronto Area psychotherapy practice community. The sole exclusion criterion was previous supervised practice in MI. To avoid creating an expectancy for superior training in one workshop over another, advertisements described two iterations of the same free 2-day MI workshop, merely occurring on separate dates. Therapist trainees were not informed of workshop differences until the end of the 4-month follow-up testing. Trainees in the two workshop groups did not significantly differ in the degree to which they believed the deception, with neither group holding strong beliefs about the possibility of workshop differences (Westra et al., 2021). Advertisements were distributed to the local practice community via email. In addition to free MI training, trainees received \$75 as an incentive for participating in the 4-month follow-up testing.

Demographic characteristics for therapist trainees are presented by workshop group in Table 1. The methodology of the Westra et al. (2021) parent study involved balancing workshop groups on demographic variables of discipline, experience, and primary theoretical orientation. As such, the groups had comparable demographic characteristics with nonsignificant between-group differences for age and years of psychotherapy experience (both p 's $> .34$). Across the entire sample, trainees were predominantly female (75 females, 13 males) and Caucasian (63%), with a mean age of 33.81 years ($SD = 9.19$; range = 23 – 64) and an average of 4.17 years of experience ($SD = 4.91$; range = 2 months to 22 years). Most trainees were in the discipline of psychology (46%) and reported a master's degree as their highest level of education (51%). The majority reported their primary theoretical orientation as client-centered (38%) or cognitive-behavioural (33%). Among trainees, 34% were current students.

Ambivalent Community Members

Community members ($N = 74$ at 4-month follow-up) were recruited from York University and the Greater Toronto Area to participate as interviewees in test interviews used to assess trainees' MI skill. There was a unique ambivalent community member for each trainee, though four community members did not arrive to participate as scheduled and 10 of the 88 trainees did not attend follow-up testing. Posters and online advertisements described the study as the "Unsure Study"; a study in which participants would have 20 minutes to discuss a change they were ambivalent about making with an individual "trained to help people sort through conflicting feelings". Community members were informed that this was not therapy, but rather a research study assessing trainee interviewing skills. Individuals recruited from York University were introductory psychology students who participated for course credit. Those recruited from the Greater Toronto Area received \$20 for participation. Telephone screening was conducted to rule out major mental health problems, as well as to ensure that change topics were suitable to the study's objective of testing trainees' proficiency in managing ambivalence. Exclusion criteria included past psychiatric hospitalizations, psychosis, mania, personality disorders, substance use disorder within the past two years, history of self-injury or planning for suicide, suicidal ideation within the past year, persistent depressed mood in the past 6 months, and current posttraumatic sequelae.

Most community members were female (60 females, 14 males) with a mean age of 24.3 years ($SD = 8.31$; range = 18 –59). Highest level of education consisted of 62% high school diploma, 31% bachelor's degree, and 7% master's or doctoral degree. Most were current students ($n = 61$). Ethnic backgrounds were reported as 38% Asian, 30% Caucasian, 13% African-Caribbean/African, 11% Middle Eastern/West Asian, 7% multiracial, and 1% Hispanic/Latin American. Change topics included academic/career choices (47%), relationships (22%), health

behaviors (15%; e.g., losing weight, quitting smoking), work (8%), and procrastination (8%). Examples of change topics are provided in Appendix A.

Ambivalent Simulators

Three simulators were hired from the Toronto Metropolitan University (formerly Ryerson University) Film Department to portray a standardized ambivalent client during 4-month follow-up test interviews. All simulators were female with a mean age of 34.67 years ($SD = 4.73$). One simulator was Hispanic/Latin American, and two were Caucasian. Prior to interviews, simulators received training from the lead author of the parent study regarding their character: a client who was ambivalent about being assertive with friends, with some recognition of possible benefits of assertiveness alongside fear of potential interpersonal consequences to valued and longstanding friendships.

Workshops

The DP and traditional workshops were both free 2-day, in-person MI workshops led by Dr. Henny A. Westra, a leading MI researcher and practitioner with expertise in the responsive management of resistance and ambivalence. Though both workshops covered identical content about responsivity to resistance and ambivalence, the DP workshop had more opportunities for practice and feedback.

DP

The DP workshop was designed in accordance with the Ericsson and Pool (2016) conceptualization of DP as effortful practice that includes full and conscious attention, combined with repetition and feedback from an expert coach who guides trainees towards skillful performance on well-defined and specific goals. In line with S. D. Miller and colleagues' (2020)

definition of bona fide DP, this included pushing trainees to practice beyond their current skill level and to successively refine their efforts in response to individualized feedback.

The workshop structure comprised a half-day of didactic training, followed by opportunities for practice and feedback over the remainder of the 2-day workshop. To focus on a well-defined goal, the skill of responsivity to ambivalence and resistance was targeted rather than focusing on multiple or broader MI skills. Practice exercises featured brief (5 to 30 second) video vignettes across a variety of clinical contexts (e.g., anxiety, depression, substance use, health behaviors, etc.). Vignettes were chosen to depict several types of challenging client expressions of ambivalence and resistance (e.g., ambivalence about therapy, therapy homework noncompliance, disagreement, criticism of the therapist/therapy) that routinely elicit therapist reactivity (Coutinho et al., 2011) and inappropriate responsivity (e.g., directiveness; Francis et al., 2005) due to their difficulty and sometimes personal tone. Trainees were guided to identify ambivalence and resistance, discriminate client language expressing motivation for change (i.e., CT) from utterances indicating ambivalence about change (i.e., CCT), discriminate appropriate from inappropriate therapist responsivity, and repeatedly practice empirically indicated MI-consistent strategies for responding to ambivalence and resistance (e.g., amplified reflection, reframe, autonomy support; W. R. Miller & Rollnick, 2002; Westra, 2014). Exercises incorporating these vignettes used different formats (e.g., roleplay, paper-and-pencil, and small- and large-group activities) and the workshop leader guided trainees to try different MI-consistent strategies. This variety allowed trainees to develop their skills beyond their comfort zone. To facilitate effortful practice, time was provided for trainees to brainstorm responses to vignettes before receiving feedback. Though individualized feedback was not possible given the workshop's group format, the workshop leader provided feedback to the group by inviting

several individuals to share their response for each vignette and debriefing these responses by offering specific feedback regarding which response elements may perpetuate versus ameliorate resistance. Following this, the workshop leader provided multiple examples of ideal, MI-consistent responses. Trainees subsequently had additional opportunities for practice in which they could incorporate feedback to successively refine their skills.

A pilot study of the DP workshop with 21 psychology graduate and undergraduate students was undertaken to refine procedures and test possible effectiveness of the DP format (Singer-Nussbaum et al., 2018). This study found that participants in the DP format reported high workshop satisfaction and increased confidence in using MI between pre and postworkshop, as well as demonstrated increased MI-consistent responding to vignettes depicting ambivalence and resistance. A limitation of this study was its lack of a control group.

Traditional

The traditional workshop was the same workshop that the lead author of the parent study had delivered over the past decade. It consisted of didactic presentation of MI concepts, video demonstrations depicting good and poor therapist performance, discussion of and illustrative exercises regarding key MI principles, and some opportunities for practice (e.g., paper-and-pencil exercises on identifying CT and CCT, roleplay exercises regarding rolling with resistance). The traditional workshop contained all of the same concepts and video demonstrations as the DP workshop and, consistent with the tradition of typical MI workshops, approximately 40% of total workshop time involved interactive exercises and video illustrations. However, relative to the DP workshop, the traditional workshop had comparatively minimal opportunities for practice, repetition, and especially feedback. That is, they ‘practiced’ but not with immediate debriefing and feedback on responding.

Baseline Empathy Measures

Trainees' pretraining level of empathic skill was measured in two ways: 1) *general* empathy across a variety of client contexts; and 2) *responsive* empathy to the specific context of resistance.

General Empathy

The Helpful Responses Questionnaire (HRQ; W. R. Miller et al., 1991) was used to measure general empathic skill. The HRQ is a 6-item paper-and-pencil test of skill in empathic responding to written vignettes (see Appendix B). Each item is a short paragraph simulating a client's communication of an issue in the context of psychotherapy. Instructions ask respondents to write down a brief (one to two sentence) 'helpful response' (i.e., their immediate reply if they wished to be helpful to the client). The HRQ is a widely used measure of therapist empathy (e.g., Stein et al., 2015; T. L. Young & Hagedorn, 2012) with high interrater (coefficients ranging between .71 to .91) and split-half (Cronbach's α values ranging between .89 to .92) reliability according to W. R. Miller and colleagues. They also reported evidence of validity such that HRQ scores for a sample of 190 clinicians significantly increased following six to eight hours of training in empathy and active listening. Further evidence for the HRQ's validity comes from Smith and colleagues (2018) who demonstrated that HRQ scores were associated with observer-coded empathy.

HRQ items are scored by trained raters on a scale ranging between 1 (poor, superficial empathic responding) and 5 (skillful, deep empathic responding), with total scores ranging from 5 to 30. A score of 1 is defined as a response with no empathic reflections and a minimum of one of Gordon's (1970) 12 'roadblocks' to effective therapeutic listening (e.g., giving advice, persuading with logic; see Appendix C). A score of 2 consists of a response containing, either no

reflection or roadblock, or *both* a reflection and a roadblock within a single response. Scores of 3 or higher involve the absence of roadblocks and various types of reflections. A simple reflection that merely repeats the client's words earns a score of 3, while a paraphrased reflection that adds plausible inferred meaning is assigned score of 4. To earn a score of 5, a response must qualify for a score of 4 *and* incorporate a metaphor, simile, or other complex reflection of a client's emotions or internal experience.

Two minor adaptations were made to the HRQ for the present study. First, while the original HRQ is untimed with an average administration time of 15 to 20 minutes (W. R. Miller et al., 1991), trainees in the current study were given a total time limit of nine minutes. This allotted approximately 90 seconds to read and respond to each item, which allowed for a more valid assessment of empathic skill since psychotherapy necessitates timely responses to clients. This is also in keeping with the original HRQ's instruction that responses should reflect an *immediate* reply. Second, since respondents were aware that they would be attending an MI workshop, responses were not penalized for incorporating MI-consistent response elements *beyond* reflections (e.g., open questions to explore ambivalence such as "what's good about not making a change?", affirmations such as "you are determined to figure this out"). For example, while questions are typically considered a roadblock, MI-consistent questions were scored as neutral (i.e., neither a roadblock nor a reflection). This is consistent with past approaches to adapted HRQ scoring in the literature (e.g., Walters et al., 2008).

HRQ items for the current study were scored by a team of three raters: the dissertation author (a doctoral student in clinical psychology) who had previous HRQ scoring experience, and two senior undergraduate students in psychology who received training from the dissertation author before progressing to scoring study materials. After a 3-hour training session, raters

practiced with test materials over a period of two months, by which point raters achieved reliability of .90 or better against criterion ratings. To assess interrater reliability, 25% of study materials were randomly selected and double-rated. Intraclass coefficients ranged between .81 and .93, indicating excellent agreement among raters given Cicchetti's (1994) threshold of .75.

Responsive Empathy

The Resistance Vignette Task (RVT; Westra et al., 2021) is a novel vignette task assessing responsive empathy to the context of resistance. This vignette task was developed by Westra and colleagues based on the Video Assessment of Simulated Encounters – Revised (VASE-R; Rosengren et al., 2008). While the VASE-R evaluates a range of MI skills, the RVT assesses the specific skill of rolling with resistance; that is, appropriately responding to moments of resistance with empathy and support.

The RVT consists of one practice item followed by 10 test items. Each item is a video vignette depicting a client expression of resistance (e.g., disagreement, criticism of the therapy) that would qualify for a code of clear or hostile resistance according to an empirically supported resistance coding manual (Westra et al., 2009b). Vignettes portray a range of clinical contexts (e.g., eating disorders, depression). These brief (5-10 second) excerpts were mostly drawn from YouTube videos of psychotherapy, though two were abbreviated items (brief client statements) from the facilitative interpersonal skill task (Anderson et al., 2009; <https://fisresearch.com>) and two were abbreviated depictions of alliance ruptures from the Centre for Alliance-focused Training website (<https://therapeutic-alliance.org>). Each vignette is an isolated client expression of resistance, without preceding or subsequent therapist responses that may bias respondents. After viewing each vignette, respondents have 45 seconds to write what they would say next in response to this client.

Trained raters code each item for the extent to which resistance is responded to appropriately with empathy and support, as opposed to inappropriate responsivity through either the failure to use empathy or directive/challenging statements that are likely to engender further resistance. The RVT scoring system, which was adapted from scoring guidelines for the “rolling with resistance” subcomponent of the VASE-R, ranges from -1 (low responsive empathy likely to increase resistance) to 2 (high responsive empathy likely to decrease resistance). A score of -1 is assigned to directive or challenging responses likely to increase resistance (e.g., advice, leading questions, judgements). Any response containing an element scored as -1 is considered a ‘spoiled’ response. Thus, even if a reflection is present within a response, the entire response is scored as -1. Scores of 0 are given to neutral responses likely to increase or decrease resistance (e.g., open questions), while a score of 1 reflects a moderately empathic response likely to decrease resistance (e.g., empathic reflection, validation, affirmation, autonomy support). To earn a score of 2, responses are required to be ‘rich’ with high levels of empathy and MI spirit (e.g., multiple reflections). Total RVT scores can range from -10 to 20. Coding guidelines and examples of low, versus high, responsive empathy responses are provided in Appendix D.

Westra et al. (2021) reported good internal consistency (ranging between .75 and .81) and a significant positive correlation between the RVT and a composite measure of empathy and MI spirit. They also demonstrated that the RVT can differentiate those who received a DP, as opposed to traditional, training workshop on responsivity to resistance and ambivalence. Further, in an examination of the RVT’s predictive validity, Di Bartolomeo and colleagues (2022) found that higher RVT scores were concurrently associated with lower levels of observed resistance in actual test interviews with ambivalent individuals. Moreover, higher RVT scores were both

concurrently and prospectively associated with observed therapist responsivity, including fewer responsivity errors, in test interviews.

For the present study, RVT items were coded by a doctoral level clinical psychologist and two senior undergraduate students in psychology. Coders reviewed the manual and practiced with test materials for approximately 15 hours. After adequate reliability (.80 or better) was achieved, coders progressed to study materials. Based on double-coding of a subset of 20% of study materials, interrater reliabilities ranged from .81 to .86, indicating excellent agreement.

Follow-up MI Skill Measures

Trainees' MI proficiency was examined at 4-month follow-up within two outcome domains: 1) the frequency of interviewee resistance to the direction of the therapist/therapy; and 2) observer-rated skill in responsivity to ambivalence. These outcome domains were evaluated in test interviews with ambivalent community members and simulators, respectively. After first outlining how resistance was measured, the process of assessing two indices of responsivity (errors in responsivity and appropriate responsivity) will be described.

Resistance

The Adapted Client Resistance Code (Adapted CRC; Westra et al., 2009b) is an observational coding system that was used to code resistance (i.e., an interpersonal process involving client opposition to the direction of the therapist/therapy; Chamberlain et al., 1984) in 4-month follow-up test interviews with ambivalent community members. The Adapted CRC measure was adapted from Chamberlain and colleagues' Client Resistance Code. Adaptations were made to enhance reliability and validity including collapsing different types of resistance (e.g., disagreeing, blaming, not responding) into one general resistance category, and tailoring the measure to code resistance in video recordings rather than written transcripts. Several studies

have found the Adapted CRC to have good interrater reliability and predictive validity (Aviram & Westra, 2011; Aviram et al., 2016; Westra, 2011; Zickgraf et al., 2015).

Resistance is coded by segmenting videos into 30-second time bins and assigning each bin one of the following codes: 0 (absence of resistance); 1 (minimal, qualified resistance); 2 (clear, unqualified resistance); or 3 (hostile or confrontational resistance). Coding guidelines are outlined in Appendix E. In line with evidence that only clear (a code of 2) and hostile (a code of 3) resistance are predictive of psychotherapy outcomes (Aviram et al., 2011), resistance was calculated by dividing the number of bins containing a code of at least 2 by the total number of bins. This value was multiplied by 100 so that the final variable represents the percentage of all bins containing at least clear resistance.

In the current study, test interviews were coded for resistance (i.e., opposition by an ambivalent interviewee to either the direction of the therapist trainee or the test interview) by five doctoral students in clinical psychology (including the dissertation author) and a doctoral level clinical psychologist. Prior to coding study interviews, coders practiced with test materials, shadow coded expert coders, and met regularly as a group to review discrepancies. After attaining acceptable reliability (.80 or greater), interviews were coded by pairs of coders. Weighted kappa coefficients for each pair of coders were calculated from a random sample of 20% of interviews and these ranged from .70 to .88 reflecting good-to-excellent agreement.

Responsivity

The present study measured responsivity, conceptualized as therapist attunement to client or process characteristics that contributes to better outcomes (Constantino et al., 2013; Stiles et al., 1998), within 4-month follow-up test interviews with simulators. Specifically, therapist responsivity to interviewee ambivalence about change was measured in accordance with a novel

procedure developed by Shukla and colleagues (2021). This involved using two observational coding systems in conjunction with each other: the Motivational Interviewing Skill Code Version 1.1, (MISC 1.1; Glynn & Moyers, 2009) and the Therapist Demand and Support Code (TDSC; Westra et al., 2020). Respectively, these systems were used to code interviewee expressions of ambivalence and demanding versus supportive therapist responses. Together, this allows for assessment of two responsivity indices: 1) responsivity *errors* (instances in which interviewee ambivalence is inappropriately responded to with therapist demand) ; and 2) *appropriate* responsivity (supportive therapist responses to interviewee ambivalence). After first outlining the MISC 1.1 and TDSC coding systems, the procedure for identifying and quantifying responsivity indices will be described.

Coding Interviewee Ambivalence. As a first step in the process of measuring therapist responsivity to interviewee ambivalence, the MISC 1.1 was used to identify instances of interviewee ambivalent motivational language. This coding system captures two types of interviewee motivational language: CT (i.e., statements in support of change); and CCT (i.e., statements expressing ambivalence about change that argue either against change or in favour of the status quo). Since interviewees may have variable and multiple behaviours they wish to change, a specific target behaviour for change must be identified prior to coding motivational language. For example, if the target behaviour is quitting smoking, a statement coded as CT would represent movement towards the target such as expressing a reason for quitting (e.g., “smoking is bad for my health”). In contrast, CCT statements represent movement away from the target such as describing barriers to quitting (e.g., “I don’t think I have the willpower to quit”). Coding guidelines are outlined in Appendix F. Given the present study’s intention to assess

therapist responsivity to ambivalence, CCT codes were the sole focus. The MISC 1.1 has good reliability and strong predictive validity (e.g., Lombardi et al., 2014; Moyers et al., 2009).

In preparation for coding CCT, interviews were transcribed, and each interviewee utterance was parsed into thought units (i.e., any utterance that expressed a complete thought). Since interviewees vary in their level of verbosity and sometimes articulate several codable statements in rapid succession, parsing allowed for more reliable coding that could account for verbosity. The coding team consisted of a doctoral level clinical psychologist and a senior undergraduate student in psychology who received training from the clinical psychologist. After achieving acceptable reliability (.80 or greater), study interviews were coded using both video and transcripts. Approximately 80% of interviews were coded by the pair of coders while the remainder were coded independently. Prior to coding interviews, coders were aware of the target behaviour (being assertive with friends), which was the same for all simulator interviews. To assess interrater reliability, 50 to 100 thought units from 20% of interviews were independently double-coded. The average unweighted kappa coefficient for CCT was .87, indicating excellent agreement.

Coding Therapist Demand and Support. The second step in the assessment of responsivity was using the TDSC to code therapist responses to interviewee ambivalence (i.e., CCT). This novel coding system was developed by the lead author of the Westra et al. (2021) parent study based on extensive experience with reviewing and coding therapy sessions using the Adapted CRC (Westra et al., 2009b) and the Motivational Interviewing Treatment Integrity Index (a measure of therapist competence in MI; Moyers et al., 2010). Expanding on these measures, the TDSC provides a rapid assessment of two key types of therapist behaviours: Demand (attempts to direct clients towards change or 'fix' the client) and Support

(communication of an intent to understand, support or ‘back up’ the client). Demand is widely considered to be inappropriately responsive to ambivalence due to its propensity to perpetuate resistance in ambivalent individuals, whereas supportive behaviours are known to ameliorate resistance (Patterson & Forgatch, 1985; W. R. Miller & Rollnick, 2002; Westra, 2014). As well, hostile or demanding, rather than affiliative or supportive, therapist behaviours in response to client disagreement have been shown to predict poorer treatment outcomes (Hara et al., 2021; Olson et al., 2021). The TDSC has demonstrated excellent interrater reliability and preliminary evidence of validity in two samples (Olson et al., 2021; Shukla et al., 2021).

The TDSC codes instances of specific, observable therapist behaviours of Demand and Support (see Appendix G for coding manual). Demand behaviours are indicative of low levels of therapist supportiveness and have been associated with low MI spirit (Olson et al., 2021; Shukla et al., 2021). Derived from Gordon’s (1970) roadblocks to active listening, Demand behaviours include advising, lecturing, problem-solving, warning, and criticizing. Demand can also involve offering praise that conditionally reinforces client behaviours that comply with the direction of the therapist. Regardless of the specific type, therapist behaviours coded as Demand can be accurately paraphrased as, “you need to, or should, change.” In contrast, therapist behaviours coded as Support (e.g., reflecting, empathizing, validating, normalizing, sympathizing, supporting, affirming, summarizing) can be validly paraphrased as “I am trying to hear you, know you, and back you up”. Though not used in the present study, the TDSC also includes an Other code for neutral therapist behaviours that reflect neither Demand nor Support (e.g., minimal encouragers, simple paraphrases, exploratory questions, small talk).

Prior to TDSC coding, interviews were transcribed, and therapist volleys were parsed into thought units. The coding team comprised of a doctoral level clinical psychologist, a master’s

level psychology graduate student, and a senior undergraduate student in psychology. The latter two coders received training from the clinical psychologist, involving practice coding and group discussion, until satisfactory reliability (.80 or higher) was achieved. To expediate the coding process, approximately 60% of interviews were coded in pairs while the remainder were coded independently. Approximately 50-100 thought units from a subset of 20% of pair-coded interviews were double-coded by the remaining coder. Similarly, a random sample of 20% of all independently coded interviews were coded by a different coder. The average unweighted kappa coefficients were .84 for Demand and .88 for Support, representing excellent agreement.

Assessing Responsivity Indices. The third and final step for measuring therapist responsivity to interviewee ambivalence involved using the MISC 1.1 and TDSC coding systems in parallel. Specifically, dialogue sequences involving therapist responses (Demand or Support, coded via the TDSC) to interviewee ambivalence (CCT, coded using the MISC 1.1) were categorized into two responsivity indices: 1) responsivity errors, operationalized as instances in which CCT is inappropriately responded to with therapist Demand; or 2) appropriate responsivity, involving interviewee utterances of CCT that are appropriately followed by therapist Support. This was achieved by first classifying each interactant's talk-turn (typically multiple statements) according to the predominant type of statement in that volley (i.e., Demand, Support, or Other for therapists; CCT or CT for interviewees) by determining the gestalt, or what was 'most alive'; a determination that was typically self-evident. For example, if a client stated, "I want to quit drinking, but life is short and what else would I do?", CCT is most salient since the portion following the word "but" appears to be 'the point' of this utterance while the expressed desire to quit drinking sounds like a 'throwaway' remark. Next, Demand, Support, and CCT frequencies were divided by the total number of interactant utterances (i.e., therapist

utterances for Demand and Support; interviewee utterances for CCT) to control for variability in verbosity. Following this, sequences of therapist responses to interviewee utterances were quantified to assess the frequency of responsivity errors (i.e., CCT-Demand) versus instances of appropriate responsivity (i.e., CCT-Support). Finally, the frequencies of CCT-Demand and CCT-Support were divided by the total number of dialogue sequences beginning with interviewee CCT and followed by a therapist response. These final variables were multiplied by 100 to represent the percentage of all therapist-interviewee exchanges in which therapists demonstrated either an error in responsivity, or appropriate responsivity, to ambivalence. Responsivity sequence coding guidelines, including examples of responsivity error and appropriate responsivity sequences, are provided in Appendix H.

Control Variable Measures

Baseline MI Skill

The Motivational Interviewing Knowledge Self-Assessment (MISSA; Madson et al., 2013) was used to assess trainees' preworkshop, self-reported level of MI skill. This 18-item measure was shortened to 15 items to correspond to the MI skills most relevant to the workshop content in the current study. For each item, participants rate their degree of confidence from 0 (low) to 4 (high), with total scores ranging from 0 to 60. Sample items include: "tailor my approach to match client stage of change"; "support clients' capacity for self-direction"; and "recognize ways clients express resistance to behavior change". Madson and colleagues reported excellent internal consistency ($\alpha = .94$) and found that MISSA scores differentiated those who received a 1-hour lecture in MI as part of a counselling course from those who received an MI course. In the present sample, the MISSA had good internal consistency ($\alpha = .87$).

Baseline DP Usage

The Retrospective Analysis of Psychotherapists' Involvement in Deliberate Practice (RAPID; Chow et al., 2015) was used to measure trainees' pretraining usage of DP to improve therapeutic performance. This self-report questionnaire asks respondents to estimate the number of hours spent on each of 20 different therapy-related practice activities (e.g., supervision, clinical workshops, reading therapy-related materials, reviewing session videotapes) in the last month. As evidence for predictive validity, Chow and colleagues found that, unlike other therapist characteristics, time spent engaging in DP was a significant therapist-level predictor of therapist-level outcomes in a large sample of 1,632 clients and 17 therapists. The RAPID had an adequate internal consistency estimate of .75 in the current study.

Procedure

All procedures for the parent study and the current research were approved by a local Institutional Ethics Review Board, and informed consent was obtained from all participants. Among respondents to trainee recruitment advertisements, trainees were selected to maximize diversity in discipline, level of experience, and primary theoretical orientation (see Westra et al., 2021 for details). The final sample of 88 trainees were randomly assigned to either the DP ($n = 44$) or traditional workshop ($n = 44$), with workshop groups balanced on the aforementioned trainee selection variables. The DP and traditional workshops were scheduled two weeks apart, with both taking place in-person over two consecutive days in the same room at York University.

Prior to the workshop, trainees completed a demographic questionnaire assessing characteristics such as years of psychotherapy experience. At preworkshop, trainees also completed the MISSA, RAPID, HRQ and RVT. Though training outcomes were assessed at both postworkshop and follow-up, only follow-up data were included in the present study since between-group differences were larger at follow-up than at postworkshop (Westra et al., 2021)

and, therefore, more suitable to this dissertation's aim of assessing workshop group as a moderator. At 4-month follow-up, to assess MI training outcomes, each trainee completed two 20-minute, video-recorded test interviews: one with an ambivalent community member, and one with a simulator portraying a standardized ambivalent client. Each trainee was assigned to a different community member, and each of the three simulators saw approximately a third of the trainees. To ensure counterbalancing, simulators were equally represented across workshop groups. While trainees were informed that they would meet with both a community member and a simulator, simulators remained in character throughout and did not disclose their role to trainees. Informal feedback from trainees indicated that interviews with the simulators felt like a real therapeutic interaction. Interview videos were coded by trained members of the research team for observer-rated MI skill training outcomes of resistance and responsivity. To measure baseline therapist empathy, trained coders rated HRQ and RVT data for general and responsive empathy, respectively. All coders were blind to workshop condition and consensus meetings were conducted to resolve cases of discrepancy.

To allow for a complementary assessment of training outcomes across interviewee type, resistance was measured in ambivalent community member interviews while responsivity indices were evaluated in simulator interviews. This capitalized on external validity and standardization, respectively. In community member interviews, instances of resistance were spontaneous and genuine, in contrast to the scripted resistance delivered by simulators. In addition, resistance was not examined in simulator interviews since, relative to community members, simulators in the present sample consistently displayed substantially more resistance (Di Bartolomeo et al., 2021). This is consistent with MI training studies in which simulators' responses to clinicians have been more unyielding than the typical client (e.g., W. R. Miller et al., 2004). Thus, the high resistance

rate among simulators limited the variability and usefulness of this data for this dissertation. Similarly, for responsivity to interviewee ambivalence about change, this was solely measured in simulator interviews since community member interviews were found infeasible for reliable coding due to their nonstandardized nature (Shukla et al., 2021). While the target behaviour that interviewees were ambivalent about was often difficult to discern in community member interviews (sometimes only becoming apparent at the end of the interview), this was known and consistent from the outset for interviews with simulators portraying a standardized client. As well, it was ideal to gauge responsivity in simulator interviews since the higher frequency of resistance among simulators offered more opportunities for trainees to respond to moments of disagreement about change.

Analytical Approach

Linear regression analyses were conducted to assess whether workshop group was a significant moderator of the relationship between baseline therapist empathy and training outcomes at 4-month follow-up. Two measures of baseline empathy (general empathic skill measured via the HRQ, and responsive empathy assessed via the RVT) were examined as predictors of three training outcomes: 1) resistance in interviews with ambivalent community members; 2) responsivity errors to interviewee ambivalence in simulator interviews; and 3) appropriate responsivity to interviewee ambivalence in simulator interviews.

Given evidence that greater levels of experience may interfere with one's ability to learn MI (Dunn et al., 2015; Martino et al., 2011; Oppenheim et al., 2019), years of psychotherapy experience was included as a covariate in all analyses. As well, to account for trainees' baseline level of MI skill as well as individual differences among trainees in preworkshop DP usage, MISSA and RAPID scores were included as control variables, respectively. As such, all

regression coefficients below represent estimates when trainees' levels of preworkshop experience, MI skill, and DP usage are held constant.

Six linear regression models were conducted to assess moderation separately for each predictor-outcome pair (i.e., HRQ and RVT each as predictors of resistance, responsivity errors, and appropriate responsivity). Separate regression models were chosen over a multivariate approach due to issues with multicollinearity when the highly correlated empathy predictors (see Tables 3 and 4) were modelled simultaneously. As well, given the study's aim of assessing workshop group as a moderator of two separate measures of therapist empathy and training outcomes, separate regression models allowed for more readily interpretable interaction results. However, it should be noted that utilizing multiple models increased the risk of Type I error (i.e., finding false positive results). While methods for handling this issue (e.g., Bonferroni adjustment) were considered, the present study chose not to account for multiple comparisons given the preliminary nature of this research. Instead, the reader is urged to view the results below as initial findings that must be replicated in a different sample in order to determine the validity of the results. This is in line with Althouse (2016) who argued that multiple comparison adjustment is inappropriate for exploratory research including studies drawn from a larger trial (such as the present study which is a secondary analysis of data from the parent study; Westra et al., 2021). For such studies, Althouse recommends describing the results 'as is', encouraging readers to draw their own conclusions, and highlighting the need for additional replication studies. Another argument against adjusting for multiple comparisons comes from Rothman (1990) who noted that a drawback of adjustment is inflated Type II error (i.e., the risk of 'missing' potentially important findings). To my knowledge, this dissertation is the first study to examine training type as a moderator of the relationship between baseline therapist empathy and

MI training outcomes. As such, it was deemed more important to minimize false negatives, as opposed to false positives, to explore this research question and generate more hypotheses to promote further research on this topic (including replication studies).

For each model, covariates, workshop group, the predictor variable (HRQ or RVT), and the categorical-continuous interaction term (either workshop*HRQ or workshop*RVT) were simultaneously entered into the model. If the interaction coefficient was significant, simple slopes were analyzed to examine relationships within each workshop group. For a nonsignificant interaction, the interaction term was dropped from the model to examine the association between therapist empathy and training outcomes *across* workshop groups.

Missing Data

Since 25 participants (28% of the sample) had missing data for at least one of the study variables, multiple imputation was used to impute missing data. In this method, each missing value is substituted by a series of random values imputed based on an imputation model. This is in contrast to single imputation methods in which only a single value is substituted for each missing value. Multiple imputation is commonly employed as an approach to address missing data due to attrition, nonresponse, and other factors (Asendorf et al., 2014; Biering et al., 2015), including in the domain of clinical psychology (e.g., Eskildsen et al., 2020; Goldstein et al., 2020). As well, multiple imputation is widely considered superior to other methods for handling missing data (e.g., single imputation, listwise deletion) that have drawbacks such as biased standard errors (van Buuren, 2012).

In the current study, data were missing due to a variety of factors including therapist trainee attrition (11% of trainees did not return for follow-up testing) and ambivalent community member no-shows ($n = 4$). Attrition ($n = 3$ for the DP group; $n = 7$ for the traditional group) did

not significantly differ between groups ($t(87) = 1.30, p = .19$). Based on a nonsignificant Little's test ($\chi^2(47) = 50.9, p = .32$), it was considered plausible that the data were missing completely at random. Thus, the data met the assumption required for multiple imputation that data is either missing completely at random or missing at random (van Ginkel et al., 2020). These missingness mechanisms are in contrast to data missing *not* at random (i.e., when there is a relationship between the propensity of a value to be missing and those missing values). Though the data met the missing completely at random assumption required for listwise deletion (i.e., using the data 'as is' by conducting analyses on a smaller sample of only cases with no missing data), multiple imputation is still considered preferable given the additional statistical power it confers (van Ginkel et al., 2020). As well, when more than 10% of data are missing, listwise deletion may produce biased results (Bennet, 2001). Multiple imputation is also increasingly recommended for studies affected by attrition with researchers arguing that, even when the missing completely at random assumption is met, "listwise deletion should be avoided" since solely including participants without missing data could bias results, particularly if attrition occurred due to a systematic reason (Asendorpf et al., 2014, p. 458). That is, multiple imputation reduces (though it does not eliminate) the likelihood that results will be biased by factors that might have led some participants, but not others, to drop out of a study.

To conduct multiple imputation, the multivariate imputation by chained equation, or 'mice', package in R statistical software was used with the imputation model method of predictive mean matching (van Buuren & Groothuis-Oudshoorn, 2011). All variables intended for use in regression analyses, including the moderator and interaction terms (Lee et al., 2014; von Hippel, 2009), were included in the imputation model. The number of imputations was set to 30, in line with recommendations to use at least 20 multiple imputations (Sterne et al., 2009) and

a value similar to the proportion of incomplete cases (White et al., 2011). Though traditional guidelines suggest that five imputations may be sufficient (Rubin, 1987), a greater number of imputations has been demonstrated to improve the precision of imputed values (Bodner, 2008). To create replicable results, the seed value, which is a randomly generated arbitrary starting value that the 'mice' package uses when predicting imputed values, was fixed at 103. The 'mice' package was then used to conduct each analysis using the imputed data (consisting of 30 imputed datasets). To complete the multiple imputation process, the 'mice' package was employed to pool results to compute a single set of results for each analysis, including effective degrees of freedom which necessarily varied across analyses as a by-product of the multiple imputation process. Thus, all results below, including sample characteristics and intercorrelations, represent the final pooled results for the full sample of 88 therapist trainees.

Results

Sample Characteristics

Means, standard deviations, and ranges for all study variables are presented separately for each workshop group in Table 2. There were no significant between-group differences for all baseline variables (experience, MISSA, RAPID, HRQ, and RVT; all p 's $> .26$). However, two-sample independent t -tests indicated that groups significantly differed for two of the 4-month follow-up training outcomes: resistance ($t(78) = 3.24, p < .01$) and responsivity errors ($t(64) = 2.14, p < .05$). Specifically, less resistance and fewer errors (i.e., better outcomes) were observed during follow-up test interviews for trainees in the DP group, relative to trainees in the traditional group. For the third training outcome, appropriate responsivity at 4-month follow-up, groups did not significantly vary in their performance in test interviews ($p = .14$).

Of note, though there were no significant between-group differences for MISSA and RAPID scores at baseline, these variables were included as covariates in all analyses to account for any initial individual differences in self-reported MI skill and DP usage. That is, despite nonsignificant group differences, individual differences may nevertheless have influenced training outcomes. As well, accounting for baseline differences in DP usage may allow for a more accurate assessment of workshop type (DP versus traditional) as a moderator.

Intercorrelations of Study Variables by Group

The intercorrelations among measures were analyzed separately for each treatment group and Pearson correlation coefficients are presented in Tables 3 and 4 for the traditional and DP groups, respectively. Two of the covariates, MISSA and RAPID scores, were not significantly correlated with any study variables for either workshop group (all p 's > .17). However, for experience, there was one significant correlation. Greater years of experience at baseline was significantly negatively associated with lower preworkshop RAPID scores (i.e., lower levels of DP usage; $p < .05$) within the traditional group but not within the DP group. This association suggests that, at baseline, more experienced trainees within the traditional group exhibited lower levels of DP usage.

For both workshop groups, the baseline empathy predictor variables, HRQ and RVT, were significantly positively associated with each other. As well, within both workshop groups, the relationships between the 4-month follow-up outcome variables followed the same pattern: resistance and responsivity errors were significantly positively correlated to each other, while appropriate responsivity was significantly inversely associated with both of the other training outcomes. This is in line with this study's operationalization of better MI proficiency as less resistance, fewer responsivity errors, and greater appropriate responsivity during test interviews.

Within the traditional group, baseline HRQ scores were significantly inversely correlated with two of the follow-up outcomes: resistance and responsivity errors. Thus, for trainees who received the traditional workshop, higher general empathy at baseline was associated with less resistance and fewer responsivity errors in follow-up test interviews. Likewise, baseline RVT scores for traditional trainees were significantly inversely associated with follow-up responsivity errors. However, the relationship between RVT and resistance was below the threshold for statistical significance ($p = .08$). For the third outcome (follow-up appropriate responsivity), the intercorrelations with both HRQ and RVT scores were nonsignificant. In other words, for those in the traditional group, baseline level of empathic skill on either the HRQ or RVT were unrelated to trainees' appropriate responsivity performance in follow-up test interviews.

Within the DP group, the only significant correlation was between the HRQ and responsivity errors. These variables were inversely correlated such that, for DP trainees, greater, as opposed to poorer, general empathic skill at baseline was related to fewer errors in responsivity at 4-month follow-up. All other intercorrelations were nonsignificant. Specifically, for trainees who received the DP workshop, baseline general empathic ability measured via the HRQ was unrelated to resistance and appropriate responsivity performance at follow-up testing. And, baseline responsive empathic skill on the RVT was not related to performance on any of the follow-up training outcomes (resistance, responsivity errors, and appropriate responsivity)

Model Diagnostics

Model diagnostics were conducted for all study models and there was no evidence to suggest significant departures from the assumptions for linear regression models. In line with the normality of residuals assumption, an examination of the histograms of each model's residuals did not indicate substantial deviations from normality. Skew and kurtosis values (which ranged

between .22 to .88, and - .28 to 1.18, respectively) were within acceptable thresholds of $-2/+2$ (George & Mallery, 2010). As such, no data transformations were required. For the linearity and homoscedasticity assumptions, plots of each predictor-outcome pair, Studentized residuals by each predictor, and Studentized residuals by model-predicted values all indicated that these assumptions were plausible. Lastly, observations were assumed to be independent because each therapist trainee met with a unique ambivalent community member, and since near-zero ($< .0001$) intraclass correlations indicated that the nesting of therapists within three ambivalent simulators did not produce a degree of nonindependence that would warrant the use of other statistical methods (e.g., multilevel modeling) given a threshold of .01 (Musca et al., 2011). Beyond regression assumptions, an examination of plots of hat values, Studentized residuals, and Cook's Distances indicated that there did not appear to be any outliers in the dataset with either extreme leverage, discrepancy, or influence, respectively. Additionally, low variance inflation factor values (ranging between 1.02 and 2.10) indicate that multicollinearity was unlikely to be a problem using a conservative threshold of 2.5 (Johnston et al., 2018).

To assess the accuracy of imputed data, observed values and imputed values were compared. Graphical checks (e.g., density plots) and examination of the means and standard deviations of observed and imputed values indicated no significant discrepancies. All means were less than .10 standard deviations apart, and the ratio of all observed to imputed standard deviations was between .99 to 1.01, falling well within suggested guidelines of two standard deviations and a .50 to 2 ratio, respectively (Nguyen et al., 2017). Sensitivity analyses indicated that the pattern of results was consistent across a different number of imputations (5 versus 30) and a different randomly generated seed value (9994 instead of 103).

For comparison, the models below were tested using listwise deletion instead of multiple imputation. The results were largely the same as those reported below with the exception of one additional significant interaction. For the model assessing workshop group as a moderator of the relationship between HRQ and responsivity errors, the interaction coefficient was significant ($\beta = 1.50$; $t(56) = 2.11$, $p < .05$) as hypothesized. The interaction indicated that baseline general empathic skill was significantly inversely associated with responsivity errors at follow-up for the traditional group ($\beta = -2.13$; $t(56) = -4.37$, $p < .001$) but not for the DP group ($\beta = -0.63$; $t(56) = -1.19$, $p = .24$). However, since multiple imputation improves statistical power relative to listwise deletion (van Ginkel et al., 2020), this result may be biased (Bennet, 2001) and should be interpreted with caution.

Hypothesis 1: Workshop Group Will Moderate the Relationship between Baseline Empathy and Follow-up Resistance

Workshop group was examined as a moderator of the relationship between baseline empathy and resistance in 4-month follow-up test interviews. Since there were two measures of empathy (HRQ and RVT), two linear regression analyses were conducted to separately examine each interaction.

To assess the workshop*HRQ interaction, follow-up resistance was regressed on the covariates (years of experience, as well as baseline MISSA and RAPID scores), workshop group, baseline HRQ, and the workshop*HRQ interaction term. In contrast to hypotheses, the interaction coefficient was nonsignificant ($\beta = .62$; 95% CI = $-.68, 1.92$; $t(67) = .94$, $p = .35$) indicating that the relationship between HRQ and resistance did not significantly differ between groups. To examine the relationship between baseline HRQ and follow-up resistance *across* workshop groups, the interaction term was omitted from the model. Results indicated that, for

the entire sample, baseline general empathic skill was significantly inversely associated with resistance in follow-up test interviews ($\beta = -.78$; 95% CI = -1.47, -.09; $t(61) = -2.21$, $p < .05$). In other words, higher levels of initial general empathy were associated with less follow-up resistance (i.e., better training outcome), and vice versa such that lower baseline general empathy related to greater levels of follow-up resistance (i.e., poorer training outcome). Quantitatively, for each 1-point decrease in baseline HRQ score (for which scores in the present sample ranged between 6, low empathy, and 27, high empathy), trainees elicited almost 1% more resistance from ambivalent community members.

For the workshop*RVT interaction, a similar regression was conducted with follow-up resistance regressed on the covariates, workshop group, baseline RVT, and the workshop*RVT interaction term. In line with hypotheses, there was a significant interaction ($\beta = 1.44$; 95% CI = .21, 2.67; $t(65) = 2.30$, $p < .05$). This interaction (see Figure 1) was composed of an association that was slightly below the threshold for statistical significance within the traditional group ($\beta = -.96$; 95% CI = -1.97, .06; $t(53) = -1.85$, $p = .07$) and a nonsignificant association within the DP group ($\beta = .48$; 95% CI = -.27, 1.23; $t(75) = 1.26$, $p = .21$). Relative to the DP group, responsive empathy in the traditional group was more strongly associated with levels of resistance in follow-up test interviews. Though below the threshold for significance, the regression coefficient for the traditional group indicates that each 1-point decrease in baseline RVT score (a measure with scores ranging between -7, low empathy, and 16, high empathy) was associated with nearly a 1% increase in resistance during test interviews. For the DP group, initial skill level in responsive empathy was unrelated to follow-up resistance.

Hypothesis 2: Workshop Group Will Moderate the Relationship between Baseline Empathy and Follow-up Responsivity Errors

Next, two regression models were analyzed to examine workshop group as a moderator of the relationships between each baseline empathy measure (HRQ and RVT) and errors in responsivity to ambivalence during 4-month follow-up test interviews.

Like earlier models, a regression was conducted with follow-up responsivity errors regressed on the covariates, workshop group, baseline HRQ, and the workshop*HRQ interaction term. Counter to hypotheses, the interaction was nonsignificant ($\beta = .78$; 95% CI = $-.78, 2.34$; $t(56) = .98, p = .33$) indicating that the relationship between baseline HRQ and responsivity errors did not significantly vary as a function of workshop group. With the interaction term omitted from the model, there was a significant inverse relationship ($\beta = -1.85$; 95% CI = $-2.67, -1.04$; $t(54) = -4.45, p < .001$) such that, across both groups, lower, as opposed to higher, baseline general empathy was associated with more responsivity errors at follow-up (i.e., poorer training outcome). In particular, for each 1-point decrease in baseline HRQ scores, there was an almost 2% increase in errors during simulator interviews .

For the workshop*RVT interaction, the follow-up responsivity errors variable was regressed on covariates, workshop group, baseline RVT, and the workshop*RVT interaction term. As hypothesized, there was a significant interaction ($\beta = 1.86$; 95% CI = $.27, 3.45$; $t(57) = 2.30, p < .05$). The interaction (see Figure 2) was composed of a significant negative association within the traditional group ($\beta = -1.49$; 95% CI = $-2.70, -.27$; $t(60) = -2.40, p < .05$) and a nonsignificant association within the DP group ($\beta = .37$; 95% CI = $-.63, 1.37$; $t(61) = .73, p = .47$). For the traditional group, lower baseline responsive empathy was associated with more responsivity errors at follow-up (and vice versa for higher responsive empathy). Specifically, each 1-point decrease in baseline HRQ score was associated with approximately 1.5% more errors in test interviews. However, for the DP group, trainees demonstrated a similar number of

responsivity errors in follow-up test interviews regardless of whether their initial skill level in responsive empathy was high or low.

Hypothesis 3: Workshop Group Will Moderate the Relationship between Baseline Empathy and Follow-up Appropriate Responsivity

Lastly, two regression analyses were conducted to examine workshop group as a moderator of the relationships between each baseline empathy measure (HRQ and RVT) and the level of appropriate responsivity to ambivalence during 4-month follow-up test interviews.

Akin to previous models, a regression was analyzed with follow-up appropriate responsivity regressed on the covariates, workshop group, baseline HRQ, and the workshop*HRQ interaction term. In contrast to hypotheses, the interaction was nonsignificant ($\beta = .14$; 95% CI = -1.60, 1.89; $t(62) = .16$, $p = .87$) indicating that the relationship between baseline HRQ and appropriate responsivity did not significantly vary as a function of workshop group. With the interaction term omitted from the model, the relationship across workshop groups was slightly below the threshold for statistical significance ($\beta = .86$; 95% CI = -.09, 1.81; $t(51) = 1.77$, $p = .08$). Though below the threshold for significance, the regression coefficient indicates that each 1-point decrease in baseline HRQ score was associated with almost 1% fewer instances of appropriate responsivity to ambivalence in follow-up test interviews. That is, lower general empathic skill prior to training related to poorer MI proficiency in appropriate responsivity.

For the workshop*RVT interaction, follow-up appropriate responsivity was regressed on covariates, workshop group, baseline RVT, and the workshop*RVT interaction term. Though a significant interaction was hypothesized, workshop group did not moderate the relationship between baseline responsive empathy and follow-up appropriate responsivity ($\beta = .91$; 95% CI =

-.76, 2.59; $t(58) = 1.07, p = .29$). That is, both groups displayed similar relationships between baseline responsive empathy and follow-up appropriate responsivity. After omitting the interaction term from the model, there was a nonsignificant across-group relationship ($\beta = .27$; 95% CI = -.58, 1.13; $t(60) = .65, p = .52$) indicating that, for both groups, trainees' initial level of skill in responsive empathy was unrelated to their follow-up appropriate responsivity performance.

Discussion

The present study examined two formats of an MI workshop (DP versus traditional) as a moderator of the relationship between therapist trainees' baseline level of empathy and observer-rated MI skill four months after the workshop. Both workshops involved training in using MI to responsively manage resistance and ambivalence, though the DP workshop offered greater opportunities for effortful practice and feedback. Initial empathic skill was measured in two ways: *general* empathy (i.e., across clinical contexts) versus *responsive* empathy to the specific context of resistance. At 4-month follow-up, MI skill training outcomes of resistance and responsivity to ambivalence (including responsivity errors, and instances of appropriate responsivity) were assessed in test interviews with ambivalent community members and simulators portraying a standardized ambivalent client, respectively. As outlined below, results diverged for the different types of training outcomes and measures of empathy.

Workshop Group Moderated the Relationships between Responsive Empathy and Outcomes of Resistance and Responsivity Errors

In line with hypotheses, workshop group significantly moderated the association between trainees' pretraining level of responsive empathy and two of the three follow-up training outcomes: resistance and responsivity errors. The results indicated that DP training decreased the

importance of possessing strong skills in responsive empathy to the context of resistance prior to training. For trainees who received an MI workshop that incorporated DP principles, their initial level of responsive empathy did not predict follow-up MI proficiency in resistance management and prevention of errors in responsivity to ambivalence. In contrast, within the traditional group, trainees' initial level of responsive empathy was more strongly related to observer-rated MI skill in follow-up test interviews. In particular, among traditional workshop trainees, lower (as opposed to higher) preworkshop skill in responsive empathy was significantly associated with more errors in responsivity when simulators expressed ambivalence about change. Less empathic trainees in the traditional group also elicited higher levels of resistance from ambivalent community members (albeit slightly below the significance threshold; $p = .07$). These results were robust to accounting for baseline self-reported MI skill, preworkshop individual differences in DP usage, and years of experience (a therapist characteristic routinely associated with training outcomes in the extant literature; e.g., Martino et al., 2011). Based on two-sample independent t -tests, this study also found a significant between-group difference such that, relative to their traditional workshop counterparts, trainees in the DP group demonstrated significantly better MI skill (i.e., less resistance and fewer responsivity errors) four months following the workshop. This suggests that, even for those with low pretraining responsive empathy, trainees who received a DP, as opposed to traditional, workshop achieved superior sustained skill in managing resistance and minimizing responsivity errors to ambivalence.

These results are consistent with past findings that engagement in DP was a more substantive predictor of client outcomes than therapist characteristics such as experience (Chow et al., 2015). The present findings also align with evidence that opportunities for effortful practice and feedback (e.g., DP training, individual postworkshop coaching after an MI

workshop) promote sustained skill development (Schwalbe et al., 2014; W. R. Miller et al., 2004; Westra et al., 2021). Extending these findings, the present study suggests that training approaches emphasizing deliberate, repeated practice not only facilitate maintenance of acquired skills but also decrease the need for possessing strong pretraining skill in responsive empathy to resistance. This is notable since, for traditional MI training approaches, baseline counselling skill has repeatedly been found to be positively related to MI skill acquisition (Barwick, 2012; Carpenter et al., 2012; Martino et al., 2011; Smith et al., 2012). In particular, therapist empathy has consistently emerged as a robust predictor of training outcomes, with greater initial empathic skill predicting superior training outcomes (e.g., Oppenheim et al., 2019) and better skill maintenance (e.g., Baer et al., 2004). Contrasting with these findings, the current study highlights how brief, DP-enriched training in MI may be an effective training approach for clinicians *regardless* of their initial skill level in responsive empathy.

No Moderation Effect for Appropriate Responsivity

Counter to hypotheses, no evidence of moderation was found for the third training outcome: MI proficiency in appropriate responsivity to ambivalence. That is, whether trainees received DP or traditional training, this did not significantly alter the influence of initial empathic skill (both general and responsive empathy) on follow-up performance in appropriate responsivity. This finding may indicate that a particular strength of the DP workshop was *reducing* inappropriate responsivity, rather than necessarily *promoting* appropriate responding, in trainees with variable levels of baseline empathic skill. This is consistent with W. R. Miller and Rollnick's (2002) conceptualization of MI as involving two skills: 1) suppressing the *wrong* response of the 'righting reflex' (i.e., reacting to client disagreement about change with directive, nonempathic responses); and 2) learning the *right* response of responding to moments of

disagreement with empathy and support. Given evidence that ‘bad process’ (e.g., inappropriately responding to disagreement with reduced empathy, alliance ruptures) may be the norm rather than the exception in psychotherapy (Francis et al., 2005; Muran & Eubanks, 2020), the DP workshop’s emphasis on effortful practice and feedback regarding ways to ‘roll with’, or avoid, perpetuating disagreement may confer a unique advantage for teaching clinicians to stop ‘doing the wrong thing’ (Schumacher et al., 2014). In this way, receiving DP training appears to minimize the extent to which a strong skillset in empathy is required for training outcomes related to the *absence* of detrimental therapy process (i.e., resistance, errors in responsivity to ambivalence; e.g., Aviram & Westra, 2011; Olson et al., 2021) rather than the *presence* of beneficial process (i.e., appropriate responsivity; e.g., Aviram et al., 2016).

In line with this, past trials of MI training have found that improvements in post-training skill are largely the result of diminishing MI-inconsistent responding rather than increasing MI-consistent responses (Gaume et al., 2009; Rubel et al., 2000; W. R. Miller et al., 2004). As well, Martino et al. (2011) found that older and more experienced substance use counsellors were more likely to require additional training to achieve competency in MI, perhaps because they had more to ‘unlearn’ than their younger, less experienced counterparts. Diminishing pre-existing, overlearned MI-inconsistent habits is also thought to be essential for skill acquisition capable of improving *client* outcomes (Hall et al., 2016; Schumacher et al., 2014; W. R. Miller et al., 2004; W. R. Miller & Mount 2001). This is consistent with the current study’s finding of a between-group difference such that therapists in the DP group elicited significantly less resistance from ambivalent community members (a proxy for therapy clients), relative to their traditional group counterparts. That is, DP-trained therapists were particularly skilled at *minimizing* the negative ‘client’ outcome of expressed resistance.

Another important factor is that the MI workshops in the present study focused on training therapists to manage *difficult* therapy moments where clients express ambivalence about, or resistance to, change. That is, the workshops may have emphasized strategies for *preventing* responsivity errors to resistance and ambivalence rather than necessarily increasing clinician skill in appropriate responsivity to difficult, and non-difficult, moments in therapy. As such, the differential moderation effects for inappropriate responsivity (i.e., responsivity errors) versus appropriate responsivity may partially be an artifact of the workshops themselves. In particular, increased practice in minimizing inappropriate responsivity may have lessened the extent to which baseline responsive empathy predicted training outcomes for the DP group relative to the traditional group.

No Moderation Effect for General Empathy

In contrast to hypotheses, the pattern of results differed between general and responsive empathy. In particular, unlike for responsive empathy, training type did *not* significantly moderate the relationship between baseline general empathy and any follow-up training outcomes (resistance, responsivity errors, and appropriate responsivity). Thus, both groups demonstrated similar relationships between pretraining levels of general empathy and 4-month follow-up training outcomes. Specifically, across both groups, higher (as opposed to lower) baseline general empathy was significantly associated with greater MI proficiency on two follow-up training outcome indices: less resistance and fewer responsivity errors. For appropriate responsivity, the relationship with general empathy was in the same direction, albeit below the threshold for statistical significance ($p = .08$). These results are consistent with findings that training effects are sensitive to individual differences in baseline therapist empathy (Baer et al.,

2004; Oppenheim et al., 2019; Schumacher et al., 2018) such that stronger initial empathic skill predicts better training outcomes.

These results suggest that, unlike for responsive empathy, a brief 2-day DP workshop may *not* have the capacity to reduce the influence of general empathy on sustained MI skill acquisition in the domains of resistance and responsivity to ambivalence. Put differently, a 2-day DP workshop in MI may be inadequate for minimizing the influence of general empathic skill. Given the complexity of learning MI (W. R. Miller & Rollnick, 2009) and especially the skill of appropriate responsivity (Hall et al., 2016), more intensive training may be needed to promote MI skill development and maintenance for trainees with different initial skillsets. This is consistent with findings that some clinicians may benefit from lengthier training regarding MI skills (Forsberg et al., 2010) as well as the shift in MI training towards providing postworkshop opportunities for trainees to continue honing their skills (Madson et al., 2019). However, an alternative interpretation of these results is that baseline skill in general empathy may be an important predictor of post-training skill acquisition over and above the type of training one receives. This is in line with evidence of the robust capacity of baseline therapist empathy to predict observer-rated MI skill (Moyers & W. R. Miller, 2013) and client outcomes (Moyers et al., 2016) even among therapists with high empathic skill. Thus, while pretraining skill in responsive empathy may not be necessary prior to DP training in MI, it does appear that possessing greater general empathy may be advantageous for benefiting from any type of MI workshop (traditional or DP). Relatedly, this dissertation found that general empathy, but not responsive empathy to resistance, was important for learning appropriate responsivity to ambivalence. Specifically, across workshop groups, trainees' initial level of skill in responsive empathy was unrelated to their follow-up appropriate responsivity performance. Thus, higher

general empathic skill may confer a unique advantage for learning how to appropriately respond to client expressions of ambivalence in a supportive and empathic manner.

Clinical Implications

This dissertation has important implications for clarifying which MI training procedures are most effective for therapists with different pretraining characteristics. This study suggests that a strong skillset in general empathy may maximize one's benefit from a 2-day workshop in MI-consistent responding to resistance and ambivalence. Further, traditional MI training that is not enriched with DP may be adequate for therapists with high pretraining empathic skill. On the other hand, for trainees with low levels of empathic skill, DP-enriched training may be essential for learning MI. In particular, the present findings offer a hopeful message that *any* therapist may be able to learn MI (i.e., regardless of their baseline level of skill in responsive empathy), provided that training includes opportunities for deliberate and repeated practice alongside expert feedback. This stands in contrast to suggestions in the literature that some clinicians may be incapable of learning MI (e.g., Rollnick & Gobat, 2016). That is, rather than prematurely assuming that clinicians with limited empathic skill are not suited to learning MI, the current study highlights the importance of not just *therapist* characteristics but also *training* characteristics. As noted by Carpenter and colleagues (2012), identifying both types of factors is essential for facilitating efficient dissemination of empirically supported MI skills.

Particularly promising is this study's finding that a brief (2-day), group-format ($n = 44$) DP workshop in MI was sufficient for training therapists in the complex skill of responsive management of resistance and ambivalence, even for therapists with limited pretraining ability in responsive empathy to resistance. This provides support for DP as an efficient MI training framework that is accessible to therapists of various responsive empathy skill levels, without

requiring resource-intensive approaches (e.g., postworkshop supervision) to ensure that all therapists acquire MI skills (e.g., Martino et al., 2011). This addresses a gap in existing MI training programs, which often require combining workshops with post-training support (Madson et al., 2009; Schwalbe et al., 2014) that can be costly to implement (Martino et al., 2016; Olmstead et al., 2011). Thus, DP training in MI may present a more economical approach. Rather than the old adage of ‘practice makes perfect’, perhaps practice that is deliberate is the critical element of efficient and effective MI training.

Deliberate and repeated practice with ‘rolling with’ client disagreement may be especially suited to teaching clinicians with different levels of responsive empathic skill to resist the ‘pull’ to inappropriately respond to disagreement with demanding or directive responses (Francis et al., 2005). The present study highlights how, regardless of one’s pretraining level of responsive empathy, DP training may confer a particular advantage for learning to *refrain* from clinician skill errors that may perpetuate deleterious therapy processes (e.g., sustained resistance; Westra & Norouzian, 2018), rather than necessarily learning how to appropriately respond to client ambivalence about change with empathy and support. However, to learn the skill of appropriate responsivity, strong existing general empathic ability may be a prerequisite. The robust capacity of general empathy for predicting training outcomes, over and above training type, has potential implications for prescreening therapists for empathic skill to target MI training to candidates with high empathic ability. A targeted training approach has often been recommended in the literature (e.g., Gaume et al., 2009; Stein et al., 2015; W. R. Miller et al., 2005; W.R. Miller & Moyers, 2017) given the high cost of training (Martino et al., 2016; Olmstead et al., 2011) and evidence of high between-clinician variability in skill acquisition and learning time (Forsberg et al., 2010). Therapist empathy may be a vital screening factor given

evidence that it can promote MI skill acquisition (W. R. Miller et al., 2005), sustained observer-rated MI proficiency (W. R. Miller & Moyers, 2013), and client outcomes (Moyers et al., 2016)

On the other hand, proponents of DP caution against emphasizing ‘innate’ talent given the possibility that this will discourage individuals and prevent them from achieving their full potential (Ericsson & Pool, 2016). Relatedly, qualitative research indicates that novice psychotherapists often doubt their competence and feel anxious regarding whether or not they have ‘natural’ talent as a clinician (Hill et al., 2007). It is plausible that prescreening may unhelpfully exacerbate such fears, whereas Hill and colleagues argue that it may be critical to help beginning therapists cope with profession-related anxiety and develop greater self-efficacy. As well, Clements-Hickman and Reese (2020) note the importance of considering systemic factors since social inequities such as inadequate resources may interfere with therapist development, including level of empathic skill. As such, it is possible that prescreening therapists for empathic skill may perpetuate existing inequities rather than fostering an egalitarian training environment consistent with the spirit of MI. In addition, it may be the case that more intensive DP training (i.e., beyond a brief, 2-day workshop) could support clinicians to learn MI (including the skill of appropriate responsivity) regardless of their pretraining level of general empathic skill. One possibility is a stepwise approach that provides clinicians with additional training (e.g., individual supervision) as needed depending on their level of MI proficiency following each stage of training. This resembles the approach used by Martino and colleagues (2011) who found that some clinicians could achieve competence in MI with minimal training whereas others benefited from further support. Such an approach, especially in combination with DP principles, may retain some of the economical advantages of a brief MI workshop while increasing the

capacity of clinicians to learn both appropriate responsivity *and* how to minimize responsivity errors.

Whether through a focus on training or clinician characteristics or both, more efficient dissemination of MI skills in responsivity to resistance and ambivalence can help therapists support their clients more effectively. By training therapists to responsively manage resistance and ambivalence, therapists may be more likely to avoid engendering sustained resistance in their clients, which is considered a clinician skill error in the context of MI (Westra & Norouzian, 2018). Since resistance has consistently been associated with poor treatment outcomes (Aviram & Westra, 2011; Beutler et al., 2011; Constantino et al., 2016) and other deleterious effects in the context of psychotherapy (e.g., client disengagement, lower client outcome expectations; Hara et al., 2015; Mamedova et al., 2020), MI training in responsivity may have far-reaching benefits.

Extending findings from Westra and colleagues (2021) and Di Bartolomeo et al. (2022), the current research also provides further support for the predictive validity of the RVT. This study's finding of a significant positive intercorrelation between baseline RVT and HRQ scores, coupled with the RVT's ability to predict resistance and responsivity error follow-up training outcomes for the traditional group, reflect the RVT's validity as a measure of responsive empathy to resistance. This context-responsive measure of empathy presents a novel addition to traditional empathy measures that assess empathy as a trait (e.g., M. H. Davis, 1983b). While such measures conceptualize empathy as a stable personality variable, thereby implicitly assuming that trait empathy is necessarily associated with behavioral expressions of empathy, multiple studies have found that self-rated trait empathy was not significantly associated with observer-rated empathic behaviour (Greeno et al., 2017; Ogle et al., 2013). As well, highlighting

the importance of context, the RVT distinguishes general empathic skill across a variety of contexts (e.g., W. R. Miller et al., 1991) from empathy that is conveyed ‘at the right time’; that is, responsive empathy to moments of resistance when communicating empathic understanding is particularly crucial (Aspland et al., 2008; Westra & Norouzian, 2018).

Strengths, Limitations, and Future Directions

The present study has several strengths. First, rather than using self-report or other less rigorous measurement approaches, this study used observational coding measures to directly assess therapist performance on training outcomes of resistance and responsivity to ambivalence. This included the use of well-validated coding systems for resistance and ambivalence: the Adapted Client Resistance Code (Westra et al., 2009b) and the MISC 1.1 (Glynn & Moyers, 2009), respectively. Second, empathy was assessed via skill testing measures with responses to written or video vignettes of client situations scored by trained raters. These measures were chosen over self-report measures of empathy that have been found to be unrelated to observed empathic performance (Ogle et al., 2013). Third, this study’s use of two different measures of empathy is a strength since this allowed for differentiation between general empathic skill and responsive empathy to the context of resistance. The latter is a novel addition that is in keeping with the extant literature’s emphasis on the importance of context-responsivity in psychotherapy (Constantino et al., 2013; Stiles et al., 1998). Fourth, training outcomes were assessed in a complementary fashion, with resistance coded in interviews with ambivalent community members and responsivity coded in simulator interviews. This provided examinations that were generalizable and standardized, respectively. Lastly, this study’s use of multiple imputation ensured that missing data was handled in a manner that conserved statistical power and was less

likely to produce biased results relative to listwise deletion or other approaches (Bennet, 2001; van Buuren & Groothuis-Oudshoorn, 2011; van Ginkel et al., 2020).

This dissertation also has multiple limitations. First, the sample size ($n = 88$) was limited in statistical power and, since data were drawn from a parent study, it was not possible to recruit a larger sample in accordance with an a priori power analysis. As well, most therapist trainees were Caucasian females in the discipline of psychology who were relatively young and inexperienced. Further, a substantial proportion (34%) were students and optimal training methods may differ for students versus professionals (Maslowski et al., 2021). These factors limit the generalizability of the results to therapists from other demographic backgrounds, and future studies are recommended to use larger and more diverse samples. Second, although baseline *self-reported* MI skill was included in all analyses as a covariate, baseline MI skill was not adequately controlled for through *observer-rated* variables that paralleled the observer-rated follow-up MI skill variables. Specifically, observer-rated resistance and responsivity indices were only assessed at 4-month follow-up and not at baseline. Though pretraining test interviews were not included in the parent study to reduce measurement burden and facilitate study recruitment, the lack of baseline observational measures in the parent study's procedure precluded the possibility of truly controlling for baseline MI skill. Third, the present study did not account for interviewee- or system-level factors that may have explained some of the variance in sustained MI skill. As noted in the literature, MI training effectiveness may be influenced by a range of factors including training, clinician, client, and organizational variables (Beidas & Kendall, 2010; Carpenter et al., 2012; de Roten et al., 2013). While the present study assessed the inclusion of DP principles (a training-level factor), therapist empathy (a trainee-level factor), and the interaction between these variables, it cannot be ruled out that differences

among ambivalent interviewees (e.g., level of readiness for change; Imel et al., 2011) or within trainees' work environments (e.g., organizational supportiveness; Baer et al., 2009; Goldberg et al., 2016b) influenced the results. Relatedly, while the present study focused on a quantitative analysis to align with existing MI training studies regarding baseline trainee empathy (e.g., Baer et al., 2004; Schumacher et al., 2018), future studies could benefit from exploring these complex variables through a qualitative or mixed methods approach. Fourth, despite the benefits of this dissertation's dual approach of assessing resistance in ambivalent community member interviews and responsivity to ambivalence in simulator interviews, this approach limits the comparability of the results. For example, it is possible that workshop group would not be a significant moderator of the relationship between responsive empathy and training outcomes if the interviewee samples were inverted. Fifth, the RVT is a novel measure of responsive empathy to resistance. Though there is preliminary support for its reliability and predictive validity as a measure of responsive empathy (Di Bartolomeo et al., 2022; Westra et al., 2021) to resistance, including within this dissertation, it could benefit from further assessment of its psychometric properties. Similarly, the TDSC, used in the measurement of responsivity indices, is a new coding measure and could benefit from further research to build on existing evidence for its reliability and validity (Olson et al., 2021; Shukla et al., 2021).

Two additional limitations pertain to the present study's statistical approach. First, this study's use of six separate linear regression models to assess moderation for each predictor-outcome pair inflated the Type I error rate. However, more parsimonious approaches such as multivariate regression were not feasible given issues with multicollinearity and the study's aim of understanding the interactions between training type and distinct types of therapist empathic skill. As well, adjusting for multiple comparisons was considered undesirable given the

exploratory nature of the present secondary analysis study and the drawback of increased Type II error. This is consistent with recommendations from Althouse (2016) and Rothman (1990). Nevertheless, the above results should be regarded with caution given the increased potential of ‘false positive’ results. Indeed, if a Bonferroni adjustment were applied, *none* of the significant moderation findings above would hold with the resultant threshold *p*-value (.008, calculated by dividing the standard threshold of .05 by 6 moderation analyses). As such, replication studies conducted in different samples are crucial to rule out the possibility of ‘false positive’ significant results. A second limitation was the substantial percentage (28%) of cases with missing data due to factors like trainee attrition at follow-up. Though multiple imputation was used to address this since data were assumed to be missing completely at random, the missing data may limit the interpretability of the results. For example, it is possible that a different pattern of results would have emerged with a complete dataset. Indeed, the parent study found that, across workshops, relative to trainees who attended 4-month follow-up testing, dropouts had significantly higher rates of resistance in postworkshop test interviews and lower self-reported MI skill (Westra et al., 2021). Thus, it is possible that trainees less satisfied with their MI proficiency may have been more likely to drop out of the research. Nevertheless, multiple imputation was preferable to other missing data methods including listwise deletion (i.e., limiting the sample to only cases with complete data) which are *more* likely to introduce bias due to systematic reasons for attrition (Asendorpf et al., 2014).

Regarding future directions, this study points to several potential areas of further exploration. First, this study evaluated a 2-day group-format DP workshop and future research may benefit from assessing other formats (e.g., lengthier MI training, individual opportunities for practice and feedback regarding MI skills). For instance, it may be the case that longer, more

individually-tailored DP training has the capacity to prevent poor pretraining skill in, not just responsive empathy, but also general empathy, from interfering with training outcomes. In this vein, a study targeting DP-enriched training to therapists with lower initial empathic skill may be helpful for clarifying the ability of DP to improve training outcomes for this population. Second, researchers may wish to examine the mechanism(s) through which DP training in MI minimizes the need for high pretraining ability in responsive empathy to resistance. For example, DP-enriched MI training might be potent enough to increase trainees' level of empathy such that individual differences are minimized by the end of training. Alternatively, or perhaps in combination with the former, it is possible that repeated practice allows therapists to acclimate to stressful instances of client disagreement that typically elicit therapist reactivity (Coutinho et al., 2011). Indeed, initial findings from Poulin and colleagues (2021) highlight how DP, relative to traditional, training in MI may cause a reduction in therapists' arousal to clients who express resistance or hostility. Third, given that the MI workshops in this study focused on *prevention* of clinical skill errors in responsivity to resistance and ambivalence, future training studies may wish to supplement this with greater instruction in MI skills for active empathic responding to resistance and ambivalence. Such research could examine the capacity of this enriched MI training to teach therapists of different empathic ability *both* how to refrain from therapist behaviours that may perpetuate resistance and ambivalence, *and* how to demonstrate more high-quality MI-consistent responses that appropriately manage client disagreement with empathy and support. Fourth, since the present findings suggest that existing ability in general empathy may be beneficial for improving MI skills in responsivity regardless of the kind of training one receives (i.e., DP or otherwise), future studies could benefit from examining factors that contribute to general empathic skill. For example, those with higher levels of pretraining general

empathy may be more experienced therapists with a greater degree of practice in empathic responding. On the other hand, higher general empathic ability may be more dependent on personality variables (e.g., M. H. Davis, 1983b). Even if therapist empathy is partially ‘innate’, an important research question articulated by Clements-Hickman and Reese (2020) is whether therapist characteristics may be malleable. In support of this, DP training has been found to improve trainees’ capacity for self-reflection and empathy (Hill et al., 2020) as well as facilitative interpersonal skills (a set of psychotherapeutic skills including empathy; Anderson et al., 2020). Thus, research could benefit from examining whether targeted DP training can shape characteristics historically considered to be intrapsychic.

Conclusion

This dissertation presents an evaluation of variants of MI training (a DP approach emphasizing deliberate and effortful practice accompanied by expert feedback, versus a traditional approach with comparatively few opportunities for practice and feedback) as a moderator of the association between baseline therapist empathy and training outcomes. Both training programs were 2-day workshops regarding the responsive management of ambivalence and resistance; an essential therapist skill given consistent empirical evidence that, when inappropriately managed, ambivalence and resistance have a detrimental influence on therapy outcomes (e.g., Constantino et al., 2019; Lombardi et al., 2014). While poor pretraining empathic skill typically interferes with learning MI (e.g., Baer et al., 2004), it was hypothesized that MI training that incorporates DP principles would reduce the influence of baseline empathy on training outcomes. Two types of baseline empathy were assessed: general empathic skill across therapy contexts, and empathy that is responsive to the specific context of resistance. To assess sustained MI proficiency (a notable feat in the context of MI training; Hall et al., 2016),

observer-rated MI skill was assessed four months post-training in test interviews with ambivalent individuals.

The results diverged for the two measured kinds of baseline empathy. While workshop group did not moderate the relationship between baseline *general* empathy and any MI skills assessed at 4-month follow-up (resistance management, minimizing errors in responsivity to ambivalence about change, and appropriate responsivity to ambivalence), training type did moderate the relationships between *responsive* empathy and two training outcomes: resistance and responsivity errors. Specifically, baseline responsive empathy was more strongly associated with follow-up training outcomes for the traditional workshop group than for the DP group. In particular, therapist trainees in the traditional group with lower (as opposed to higher) initial responsive empathy made significantly more responsivity errors involving responding to ambivalence with demand rather than support. As well, therapists in the traditional group with less pretraining skill in responsive empathy evoked more resistance in ambivalent individuals (albeit slightly below the threshold for statistical significance). In contrast, for therapists in the DP group, initial skill in responsive empathy to resistance had no bearing on the frequency of responsivity errors or level of resistance. In other words, limited pretraining responsive empathy did *not* hinder DP group trainees from learning to minimize responsivity errors or to manage resistance. Further, regardless of level of pretraining responsive empathy, DP group trainees demonstrated significantly superior MI skill (i.e., less resistance, fewer responsivity errors) at follow-up relative to their traditional workshop counterparts.

The present findings suggest that DP-enriched MI may alleviate the extent to which low baseline responsive empathy interferes with sustained MI proficiency. Thus, DP training may enable therapists with varying initial levels of responsive empathic skill to learn to manage

resistance and to minimize responsivity errors to ambivalence, thereby mitigating the potential of ambivalence and resistance to adversely influence therapy outcomes. On the other hand, a strong skillset in general empathy appears to be important for learning MI regardless of the type of training one receives since, across groups, trainees' pretraining level of general empathy was significantly associated with better MI training outcomes (less resistance, fewer responsivity errors). As well, since workshop group did not moderate the relationship between either form of baseline empathy and skill in appropriate responsivity at follow-up, DP training may be most beneficial for teaching therapists of variable skill in responsive empathy to *refrain* from inappropriately responding to ambivalence with nonempathic, demanding, or directive responses (as opposed to learning to actively respond with appropriate empathy and support). This research underscores the importance of deliberate, effortful practice to efficient and accessible dissemination of evidence-based MI skills in 'rolling with' resistance and preventing responsivity errors to client ambivalence about change.

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Table 1*Demographic Characteristics for Therapist Trainees by Group*

Variable	Traditional (<i>n</i> = 44)	Deliberate Practice (<i>n</i> = 44)
Age, <i>M</i> (<i>SD</i>; range)	34.80 (9.91; 24 – 64)	32.85 (8.45; 23 – 61)
Gender, <i>n</i>		
Male	6	7
Female	38	37
Ethnicity, <i>n</i>		
Aboriginal	1	1
African-Caribbean/African	0	3
Caucasian	27	28
Asian	12	9
Multiracial	2	1
Other	0	1
Missing	2	1
Highest Level of Education, <i>n</i>		
Bachelor's Degree or Diploma	13	15
Master's	21	24
Doctoral	10	5
Current Student, <i>n</i>	13	17
Primary Theoretical Orientation, <i>n</i>		
Client-centered	16	13
Cognitive-behavioural	17	16
Psychodynamic/Psychoanalytic	3	0
Process-experiential	1	2
Integrative	5	13
Other	2	0
Discipline, <i>n</i>		
Psychology	21	19
Counselling/Psychotherapy	2	6
Social Work	11	8
Nursing	4	6
Occupational Therapy	6	3
Other	0	2

Table 2*Means, Standard Deviations, and Ranges for Study Variables by Group*

	<i>M (SD; range)</i>	
	Traditional (<i>n</i> = 44)	Deliberate Practice (<i>n</i> = 44)
Baseline Control Variables		
Experience (years)	4.46 (4.82; 0 – 18)	3.88 (4.99; 0 – 22)
MISSA	33.86 (8.15; 10 – 50)	35.70 (7.77; 14 – 49)
RAPID	60.63 (46.99; 0 – 229)	74.24 (61.36; 0 – 355)
Baseline Empathy Measures		
HRQ	14.63 (5.71; 6 – 27)	14.88 (5.61; 6 – 26)
RVT	3.61 (5.56; -7 – 16)	3.56 (6.73; -7 – 16)
Follow-up Outcomes		
Resistance (% in community member interviews)	25.83 (20.00; 0 – 97.56)	13.64 (13.07; 0 – 48.78)
Responsivity Errors (% in simulator interviews)	32.42 (20.72; 0 – 81.82)	21.78 (21.32; 0 – 75)
Appropriate Responsivity (% in simulator interviews)	35.54 (22.85; 0 – 93.33)	43.56 (21.34; 0 – 93.33)

Note. MISSA = Motivational Interviewing Knowledge Self-Assessment; RAPID = Retrospective Analysis of Psychotherapists Involvement in Deliberate Practice; HRQ = Helpful Responses Questionnaire; RVT = Resistance Vignette Task.

Table 3*Intercorrelations of Study Variables for the Traditional Group*

Variable	2	3	4	5	6	7	8
1. Baseline Experience	.09 (.55)	-.34*	-.26 (.08)	-.11 (.48)	.29 (.08)	.27 (.11)	-.20 (.24)
2. Baseline MISSA	--	-.07 (.67)	-.06 (.72)	.04 (.82)	-.09 (.59)	.00 (.99)	.07 (.68)
3. Baseline RAPID		--	-.06 (.71)	-.09 (.55)	.07 (.67)	-.03 (.86)	-.17 (.38)
4. Baseline HRQ			--	.59***	-.34*	-.62***	.24 (.15)
5. Baseline RVT				--	-.30 (.08)	-.40*	.23 (.17)
6. Follow-up Resistance					--	.41**	-.50***
7. Follow-up Responsivity Errors						--	-.55***
8. Follow-up Appropriate Responsivity							--

Note. MISSA = Motivational Interviewing Knowledge Self-Assessment; RAPID = Retrospective Analysis of Psychotherapists Involvement in Deliberate Practice; HRQ = Helpful Responses Questionnaire; RVT = Resistance Vignette Task.

* = $p < .05$; ** = $p < .01$; *** = $p < .001$; nonsignificant p -values appear underneath each correlation (all two-tailed).

Table 4*Intercorrelations of Study Variables for the Deliberate Practice Group*

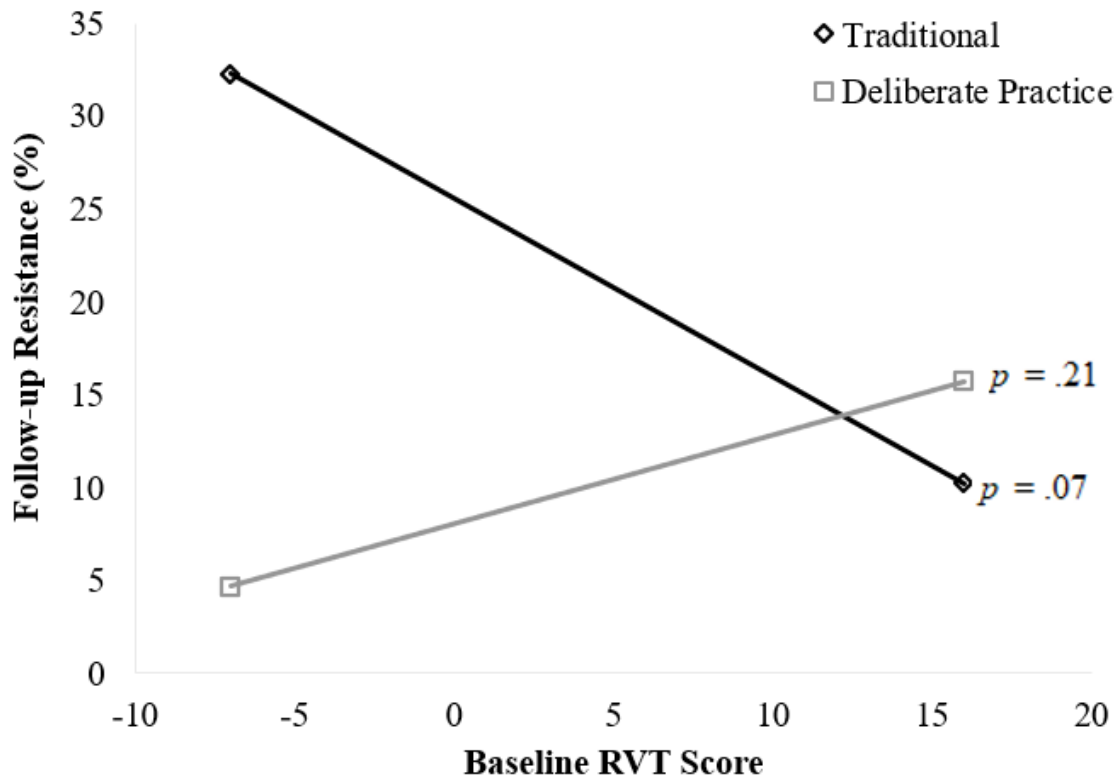
Variable	2	3	4	5	6	7	8
1. Baseline Experience	.04 (.81)	-.15 (.34)	-.21 (.19)	-.12 (.45)	-.06 (.71)	-.02 (.91)	-.05 (.74)
2. Baseline MISSA	--	.06 (.68)	.01 (.96)	-.02 (.90)	.10 (.57)	.18 (.29)	-.24 (.17)
3. Baseline RAPID		--	.07 (.65)	-.08 (.60)	.17 (.27)	-.09 (.57)	-.21 (.21)
4. Baseline HRQ			--	.42**	-.22 (.17)	-.39*	.25 (.14)
5. Baseline RVT				--	.20 (.20)	.11 (.51)	.01 (.94)
6. Follow-up Resistance					--	.58***	-.33*
7. Follow-up Responsivity Errors						--	-.43**
8. Follow-up Appropriate Responsivity							--

Note. MISSA = Motivational Interviewing Knowledge Self-Assessment; RAPID = Retrospective Analysis of Psychotherapists Involvement in Deliberate Practice; HRQ = Helpful Responses Questionnaire; RVT = Resistance Vignette Task.

* = $p < .05$; ** = $p < .01$; *** = $p < .001$; nonsignificant p -values appear underneath each correlation (all two-tailed).

Figure 1

Workshop Type as a Moderator of the Relationship between RVT and Resistance

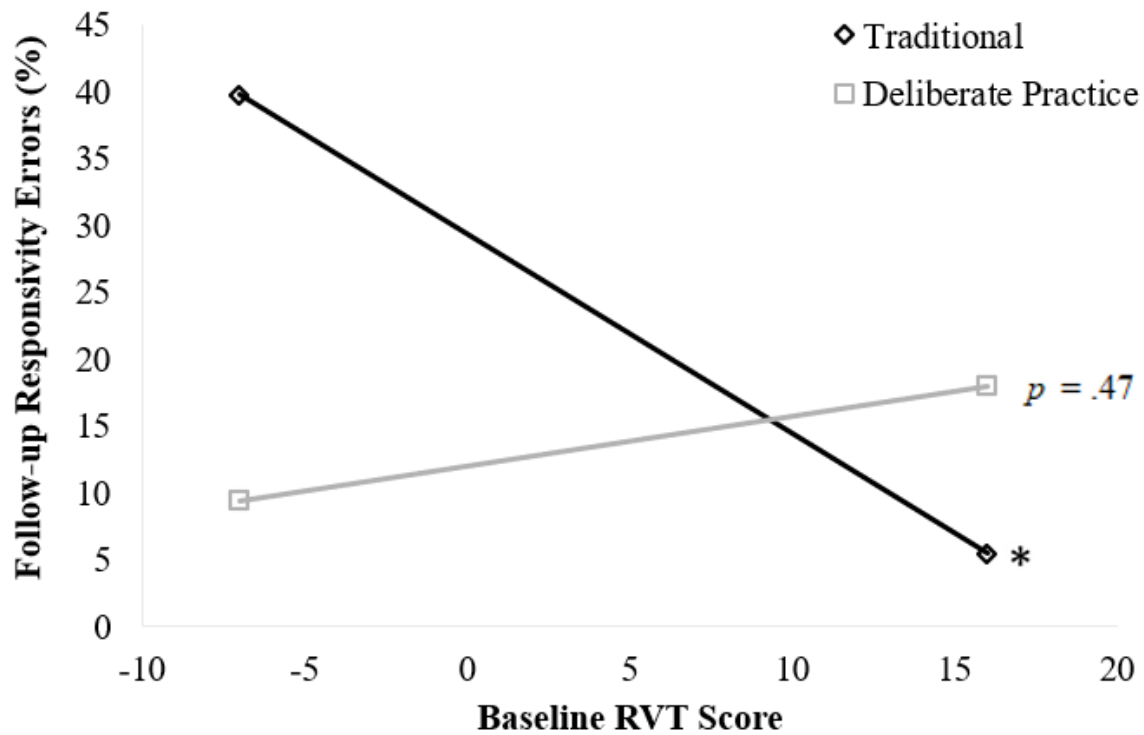


Note. Workshop group significantly moderated the relationship between baseline responsive empathy (RVT) and follow-up resistance, with a negative association slightly below the threshold for statistical significance within the Traditional group and a nonsignificant association within the Deliberate Practice group.

RVT = Resistance Vignette Task; * = $p < .05$.

Figure 2

Workshop Type as a Moderator of the Relationship between RVT and Errors



Note. Workshop group significantly moderated the relationship between baseline responsive empathy (RVT) and follow-up responsivity errors, with a significant negative association within the Traditional group and a nonsignificant association within the Deliberate Practice group.

RVT = Resistance Vignette Task; * = $p < .05$.

Appendix A: Examples of Change Topics for Ambivalent Community Members

Example 1: “My parents want me to go to medical school but I think I want to be a teacher. I can't tell my dad that though because he will so disappointed. He really has his heart set of me being a doctor. I want them to be proud of me, not disappointed.”

Example 2: “So I wanted to start a more structured exercise program but it's hard when you can't predict schoolwork. So it causes me anxiety sometimes to think about having a workout schedule because I don't want to get behind on my work.”

Example 3: “I really want to lose some weight but I find it hard to stick to anything. I just don't seem to have the willpower. And things are really stressful right now.”

Appendix B: Helpful Responses Questionnaire

The following six paragraphs are things that a person might say to you. For each paragraph imagine that someone is talking to you and explaining a problem that he or she is having. You want to help by saying the right thing. Think about each paragraph as if you really were in the situation, with that person talking to you. In each case write the next thing that you would say if you wanted to be helpful. Write only one or two sentences for each situation. Please print or write clearly.

1. A 41-year old woman says to you: “Last night Joe got really drunk and he came home late and we had a big fight. He yelled at me and I yelled back and then he hit me real hard! He broke a window and the TV set, too! I just don’t know what to do!”
2. A 36-year-old man tells you: “My neighbor is really a pain. He’s always over bothering us or borrowing things he never returns. Sometimes he calls late at night after we’ve gone to bed and I really feel like telling him to get lost.”
3. A 15-year-old girl tells you: “I’m really mixed up. A lot of my friends, they stay out real late and do things their parents don’t know about. They always want me to come along and I don’t want them to think I’m weird or something, but I don’t know what would happen if I went along either.”
4. A 35-year-old parent says: “My Maria is a good girl. She’s never been in trouble, but I worry about her. Lately, she stays out later and later and sometimes I don’t know where she is. She just had her ears pierced without asking me! And some of the friends she brings home – well I’ve told her again and again to stay away from that kind. They’re no good for her, but she won’t listen.”
5. A 43-year-old man says: “I really feel awful. Last night I got drunk again and I don’t even remember what I did. This morning I found out that the screen of the television is busted and I think I probably did it, but my wife isn’t talking to me. I don’t think I’m an alcoholic, you know, because I can go for weeks without drinking. But this has to change.”
6. A 59-year-old unemployed teacher tells you: “My life just doesn’t seem worth living anymore. I’m a lousy father. I can’t get a job. Nothing good ever happens to me. Everything I try to do turns rotten. Sometimes I wonder whether it’s worth it.”

*Source: Miller et al., 1991.

Appendix C: Thomas Gordon's 12 Roadblocks to Active Listening

1. Ordering, directing, or commanding

Direction is given with a voice of authority. The speaker may be in a position of power (e.g., parent, employer, counselor) or the words may simply be phrased and spoken in a way that communicates that the speaker is the expert.

2. Warning, cautioning, or threatening

These statements carry an overt or covert threat of negative consequences. For example, "If you don't stop drinking, you are going to die."

3. Giving advice, making suggestions, or providing solutions prematurely or when unsolicited

The message recommends a course of action based on your knowledge and personal experience. These recommendations often begin with phrases like "What I would do is."

4. Persuading with logic, arguing, or lecturing

The underlying assumption of these messages is that the client has not reasoned through the problem adequately and needs help to do so. Trying to persuade the client that your position is correct will most likely evoke a reaction and the client taking the opposite position.

5. Moralizing, preaching, or telling people what they should do

These statements contain such words as "should" or "ought," which imply or directly convey negative judgment.

6. Judging, criticizing, disagreeing, or blaming

These messages imply that something is wrong with the client or with what the client has said. Even simple disagreement may be interpreted as critical.

7. Agreeing, approving, or praising

Praise or approval can be an obstacle if the message sanctions or implies agreement with whatever the client has said or if the praise is given too often or in general terms, like "great job." This can lessen the impact on the person or simply disrupt the flow of the conversation.

8. Shaming, ridiculing, or labeling

These statements express disapproval and intent to correct a specific behavior or attitude. They can damage self-esteem and cause major disruptions in the counseling alliance.

9. Interpreting or analyzing

You may be tempted to impose your own interpretations on a client's statement and to find some hidden, analytical meaning. Interpretive statements might imply you know what the client's "real" problem is and puts you in a one-up position.

10. Reassuring, sympathizing, or consoling

Counselors often want to console the client. It is human nature to want to reassure someone who is in pain; however, sympathy is not the same as empathy. Such reassurance can interrupt the flow of communication and interfere with careful listening.

11. Questioning or probing

Do not mistake questioning for good listening. Although you may ask questions to learn more about the client, the underlying message is that you might find the right answer to all the client's problems if enough questions are asked. In fact, intensive questioning can disrupt communication, and sometimes the client feels as if he or she is being interrogated.

12. Withdrawing, distracting, humoring, or changing the subject

Although shifting the focus or using humor may be helpful at times, it can also be a distraction and disrupt the communication.

*Source: open-access material from the National Center for Biotechnology Information Bookshelf.

Appendix D: Resistance Vignette Task Scoring Guidelines and Examples

-1: Low responsive empathy, likely to make resistance worse (often some type of Demand for Change)

- Problem-solving, directive, advice, challenging, cheer-leading, leading question(s), coercive, pushy judgemental, fix-it
- **Note:** If any -1 element is present, the whole response is -1 (questions are often 0 or -1)

0: Neutral, doesn't make resistance worse but doesn't make it better either

- Low effort (“flat”) response
- Inaccurate reflections or reflections that are “off”
- Reflections turned into questions (i.e., spoiled reflections)

+1: Moderate responsive empathy, likely decreases resistance (usually “Supportive” responses)

- A single reflection (simple or complex)
- A paraphrase
- One “extra” quality reflecting high levels of support

+2 High responsive empathy, a rich/high-quality response likely to decrease resistance

- Multiple reflections. Two or more reflections (here both elements should be able to “stand on their own”).
 - **Note:** two reflections that say essentially the exact same thing would count as a 1, not a 2)
- Response contains qualities reflecting high levels of support
 - Affirmation or a reframe
 - Validating and/or normalizing
 - Autonomy support
 - Explicitly stated support
 - Overtly collaborating re relational climate
 - Response reflects high attunement to the way something is said
 - Use of joined language
 - Enthusiastic, emphatic, or resonant quality

Example Set #1:

Transcription of Video Vignette:

Therapist: You also mentioned your kids?

Client: Yeah, I have kids, I have two little kids

Therapist: And how have you seen this affecting them?

Client: Like I mean, I've been doing it their whole lives, I've been using in one form or another like their whole lives so um, I don't know if they're aware of it. I don't know. I mean I don't include them in my drug deals and I don't take them to go pick up drugs with me.

Examples of **low** responsive empathy (score of -1):

- You said they're aware because they have grown up around it. Do you think it's having any effect on them? Have you seen a visible effect?
- Ok, so there are some aspects of drug use that your kids aren't exposed to. What are some other areas where they might be more exposed?

Examples of **high** responsive empathy (score of 2):

- So, you have this sense that it does not impact them as much as others might think. Like, "I've deliberately made sure not to have my drug use impact them." Does that sound right?
- It sounds like you try to shield them from this, they may not have any sense of what is happening.

Example Set #2:

Transcription of Video Vignette:

Client: You know, I would need a bit more convincing to quit smoking because my grandfather's 92 and he smokes a pack of cigarettes every day, and you know he's 92! And he's been smoking for years.

Examples of **low** responsive empathy (score of -1):

- Fair enough - it sounds like it's hard to get motivated to change when he's doing so well even while smoking. So it's hard given what you're seeing, but a part of you is coming in here with some desire to change?
- Do you think it's having an impact on anyone in your life? Do you think others are worried about you? Why do you feel no concern? Maybe it's best not to base it off of only your grandfather.

Examples of **high** responsive empathy (score of 2):

- You're not convinced you need to quit. Your grandpa has been smoking for years and he's okay, so you'd need some more evidence that there's a need for you to quit.
- Right, so it's not convincing that smoking leads to certain health problems. So why would you stop?

Adapted with permission from Di Bartolomeo et al. (2022).

Appendix E: Resistance Coding Guidelines

Definition of resistance is "going against, opposing, blocking, or impeding the direction set by the therapist"

This is a process coding system. Content is secondary. Rely on what is being communicated beyond the words (i.e., ask yourself: "What is the intention of this client behavior?" irrespective of the words used)

Client statements of counter-change, lack of progress, hopelessness, or concerns with the therapy/therapist DO NOT automatically get coded as resistance. Whether resistance is inferred from clients statements depends on the context in which reservations are expressed (i.e., "Is the intent to go against the therapy/therapist, or not?")

Develop an interpersonal paraphrase. "What is the client saying to the therapist on an interpersonal level?"

Ask yourself: "Where is the therapist going?" The client's response can then be assessed for whether or not it complies with this direction

Types of interpersonal resistance:

- Disagree, Confront, Challenge, Doubt – Responses indicate dissatisfaction or skepticism about the therapy/therapist, disagreements with the therapist, or client's failure to comply with a session directive/homework. Must be clear from interpersonal context that the client's *intention is to oppose/disagree/challenge the direction set by the therapist*
- Own Agenda, Sidetracking, Interrupting – Responses indicate the client wants to discuss an issue different from the direction set by the therapist, persists in discussing tangential issues, or interrupting in order to oppose/block therapist
- Ignoring, Not Responding, Not Answering – Instances in which the client ignores the therapist by not responding/going in a different direction; withholding information by not responding, giving evasive, non-direct responses to a therapist's direct question; Short, highly abbreviated responses that are clearly non-cooperative
- Questions about the Therapist/Treatment – Questions that stem from underlying skepticism and are meant to doubt/challenge the therapist/therapy; questions about treatment procedures. *Tone and intent must be clearly resistant* (i.e., questions for the purpose of clarifying/getting information are not resistance)

Quality of interpersonal resistance (assigning codes to time bins):

- **0 – Absence of resistance.** Client is going along with therapist's direction (Default code is always 0)
- **1 – Minimal, Qualified resistance.** Client is NOT going along with therapist's direction and/or is being skeptical, BUT the context is generally one of cooperation (i.e., sending a mixed interpersonal message of opposition along with a simultaneous intent to cooperate)

with the therapist); Qualified, tentative, apologetic-like statements/behaviours with a gentle tone; Ambivalent (“yes... but”) responses (when the “Yes” part is not a throw-away response)

- **2 – Clear, Unequivocal resistance.** Client does not qualify their response, but straightforwardly states their disagreements, doubts, or challenges/questions the therapist. Can occur in process (e.g., sidetrack, ignore, talk over therapist) and/or in content (i.e., responses that are clearly doubtful or are intended to oppose therapist’s direction); nonverbal responses (i.e., vocal tone, behavioural gestures) that clearly send the message “I don’t agree”; Interruptions that are meant to communicate resistance (i.e., ignoring, blocking the therapist)
- **3 – Hostile, combative resistance.** Client’s tone is clearly hostile, combative, or discrediting of the therapist; responses often directly address the therapist personally (e.g., criticizing, questioning therapist’s competence); overly firm/emphatic responses; nonverbal behaviours that clearly indicate dismissal/dissatisfaction with the therapist

Codes are NOT mutually exclusive. You may assign *more than one code for each time bin* (Code 0 is an exception).

However, *each code may only be assigned once within the same time bin*

Carryover (i.e., instances in which the client’s resistance continues into the next time bin) continue to be coded at their initial form/quality of resistance, **UNLESS** the client did/said something that changes the quality of resistance

Coding system is designed to **capture *quality* of resistance (as defined by 0-3 scale) as opposed to *type* of resistance** (e.g., Ignore vs. Disagree). However, type of resistance is important when providing rationale for your code

*Adapted with permission from the Westra et al. (2009b) unpublished coding manual for the Adapted Client Resistance Code.

Appendix F: Motivational Interviewing Skill Code 1.1 Coding Guidelines

1. HOW TO CODE:

- Code from audio (not video) as this is a *LANGUAGE BASED* system and hence statements and their context matter (e.g., how they are said)
 - This aids in removing all visual information (e.g. non-verbals)
- For each coded statement, please specify the **target behaviour** that is being discussed
 - A target behaviour refers to the content area being discussed
 - Client speech is categorized as movement toward or away from this target behaviour.
 - The landscape of behaviours needing to be changed in treatment for anxiety is broad and diffuse and includes multiple, inter-related and shifting target behaviours
 - The particular nature of the behaviours is idiographic to each client depending on the unique expression of their anxiety and worry (e.g., planning and procrastination may be avoidance strategies for some but not for others). Thus, a range of target behaviours is allowed.
 - Typically, the target behaviour will frequently shift and change as the discussion moves from topic to topic.
 - Examples include anxiety, drinking, a relationship with a friend, perfectionism, panic, eating, etc.
 - These topic shifts need to be tracked
 - i.e., what is the change talk (CT) or counter-change talk (CCT) in reference to.
 - The simplest method is to note the target in the first instance in which it occurs and then record it again when it switches (instead of recording each instance beside the coded statement)
- When coding CT and CCT, adhere to the following formatting rules:
 - **For CCT: Highlight in yellow and bold the CT statement**
 - For CCT: Highlight in blue and underline the CCT statement
 - For each codable statement, parse into thought units (i.e., units of meaning or properties reflecting a complete thought). For example, a client will often articulate several codable statements one after the other in rapid succession. Ask yourself if each statement represents a complete thought (i.e., can stand on its own or is not dependent on the last thought). Each complete thought or independent separate statement is codable.

***Note:** The only exception is when a client lists reasons to change. Although these reasons may not represent a complete thought, they do represent a reason to change and should be coded as such.

For example:

Client: **1) Logically, I know nothing will happen if I stop worrying 1) but I just keep thinking it's not right. 2) I know nothing is going to happen_ 2) but it's just too hard to resist worrying about it. 3) I don't even know what the logical thoughts are 4) I just can't stop them**

So here, even though this is one long client lobby or turn at talk, it would receive 6 codes (2 CT and 4 CCT) because each is a separate or “new” statement

Client: 1) I’ve been noticing that I am looking at things differently with my kids. 2) I’ve been letting them organize the way they want. 3) And that’s what I should be proud of. 4) I have the fear that if I don’t let up, my kids are going to think they need to be perfect. 5) They’re going to feel like if they’re not perfect, 6) they won’t be loved or 7) important to me or whatever.

Here, there are 6 codable statements (including steps towards change and arguments for change). Even though the last statement is not a complete thought, it represents an additional reason to change and should be coded.

***Note:** What constitutes a complete thought is often a judgement call. In the example above, one could argue that the last statement is only one complete thought (vs. being three complete thoughts/reasons)

- Don’t worry about this too much - just use your best judgement on what constitutes a complete thought.
- Ask yourself, if each part of a statement could stand on its own or if each part represents a key or unique reason to change or stay the same

2. **WHAT TO CODE:**

In this system, you are listening for client statements that clearly reflect either:

- **CHANGE TALK:** Client language in which a client is endorsing or expressing agreement with change, arguing for change, or moving towards change in the target behaviour. Verbalizations eligible for coding include any statement that expresses:
 - Ability to change
 - Commitment to change
 - Desire to change
 - Need to change
 - Reason to change
 - Step toward change: Behavioural expressions of change are potentially codable - it must be *stated or implied* whether the client likes this or is advocating for this (which can be determined from vocal tone).
- **COUNTER-CHANGE TALK:** client language that reflects arguments against change, objections to change, or movements away from change in the target behaviour (or staying the same). Verbalizations eligible for coding include any statement that expresses:
 - Inability to change
 - Commitment to not change or stay the same
 - Desire to not change or stay the same
 - Need to not change or stay the same
 - Reason to not change or stay the same
 - Step away from change or step to stay the same: Behavioural expressions of not changing are potentially codable

***Note:** Only CT and CCT are coded – you do not need to separate the statements into these groupings (ability, need, etc.), but it sometimes helps to keep these common forms of CT and CCT in mind. These forms of CT/CCT can be used to describe your rationale for codes.

3. KEY QUESTIONS TO ASK WHEN CODING:

G. Ask yourself, “in this statement, is the client arguing for change (CT) or is the client objecting to or opposing change (CCT).”

- One easy way to do this is to ask yourself, which side of the person is making this statement i.e., the part of the person that argues for change OR the part of the person that insists that they cannot change or that it is not a good idea to change or objects to change or is defending not changing.
- In other words, ask yourself “Is this something the change voice would say” or “Is this something the status quo or counter-change voice would say”

H. Another key question to ask yourself is “Is it *stated* or *implied* that this is a good thing or a bad thing”

- This will really help in differentiating simple descriptions of problems from codable statements that reflect CT or CCT.
- In general, all problem descriptions do not get coded (e.g., I’m depressed a lot, I can’t sleep). Here, it is not clear whether such statements imply that this is a reason to change or not. In other words, statements that you could easily argue as EITHER CT or CCT do not get coded (i.e., they are ambiguous with respect to whether the person is clearly advocating for change or clearly advocating for the status quo).
- A client’s vocal tone can assist in determining whether the statement is codable (i.e., “I’m worrying less this week!” [in an excitable or proud tone], “I cannot stop worrying” [in a hopeless or pessimistic tone] – both statements would be codable)
- Descriptive statements can be used to justify or rationalize a position. It is helpful to think what is the client’s intention by providing the description.
 - Is the purpose to provide the therapist with more detail or is the client using the description to convince the therapist of a position for or against change. Descriptive statements can sometimes be reasons for or against change.

For example:

Therapist: Okay so uh... is there other possibilities that they’re looking at? (Here the therapist is asking for ways to think about the situation that aren’t so catastrophic)

Client: But my worry with celiac when I knew they were testing her for that, **1) first of all I think she’s fine 2) um... but second celiac, she can live with that forever and just take, you know control it with her diet. 3) You know she doesn’t have to take any medications. 4) She doesn’t have to have any transplants, nothing.** (The client is listing reasons why she shouldn’t worry about the testing. She is describing with an intention to justify a position - to change her worries about the testing. A paraphrase could be “It would be fine if she had a health problem that can be dealt with”)

The following examples are illustrations in which it is UNCLEARLY stated or implied that change is a good thing or a bad thing. And hence the following statements would not be coded.

Uncodable Statement	Reason not codable	What the statement would have to look like in order to be codable	New code
I don't like being told that what I'm doing is wrong	Not clear whether client is advocating for status quo (defending SQ) or suggesting changing it	I don't like being told that what I'm doing is wrong and that needs to change <u>I don't like being told that what I'm doing is wrong. That's just me.</u>	CT CCT
T: And if there is clutter, what will happen? C: Sometimes I get very upset or snappy	Needs to be more explicit, answering therapist's question unclear of whether she means it as an argument	<u>Sometimes I get very upset or snap so I need to clean it up</u>	CCT

- F. **Another key question to ask yourself is “if you were the therapist, what would you hear or how would you interpret the statement”** in other words, does it feel like an argument for or against change or is the person articulating a position. Sometimes you need to take into account the context (i.e., what is being talked about) to get a feel for whether a statement is codable.

For example:

Client: **I'm really looking forward to learning more about how to control my anxiety.**

Client: **It just seems like there's got to be a better way to handle my anxiety than how I'm functioning right now.**

Client: My anxiety is what makes me such a successful businesswoman

Client: Homework every week seems like a bit much to me

***Note:** Before coding a statement, always ask yourself “can I talk myself out of this code” or “are there competing interpretations that make this not codable (e.g., could this be merely descriptive?). If you cannot rule out that the person is just describing, the default is no code.

4. OTHER CODING TIPS

A. As a coder your personal values should not be used to decide what is CT or CCT.

- This issue often comes up when clients talk about what makes them feel less anxious (CT – “Taking Steps”). Any strategy that the client identifies as helpful in reducing their anxiety is CT.

For example:

Client: **When I get anxious, I close my eyes and take 10 deep breaths—that really calms me down**” is clearly a CT statement.

Client: **When I get anxious, I organize my books—that really calms me down”**
is also CT.

B. Pay careful attention to how clients describe their anxiety. The adjectives that they use can imply CT or CCT.

For example:

Client: **I have so many ridiculous worries**

This statement would be coded as CT. Describing one’s anxiety as “ridiculous” is a Reason To Change—why would someone find their worry *ridiculous* and not be motivated to change?

Client: That’s a legitimate worry

This statement would be coded as CCT. If one’s worry is *legitimate*, that’s a Reason Not To Change (or said more clearly, a reason to worry).

***Note:** this might intersect with Tip A—whether the worry seems ridiculous (or legitimate) to you or not does not enter into the equation.

C. Goal-setting is a CT free-for-all. Therapist questions like “What do you think your life would like without anxiety?” “What are you hoping to achieve through therapy?” and “What brought you here?” are almost always followed by CT statements from the client.

D. Any mention of past therapy is automatically coded as CT (Taking Steps).

E. “I don’t know” statements are often codable IF the meaning of the client statement is clearly implied.

For example:

Therapist: How do you think you might live without anxiety?

Client: [Without hesitation or thought] I don’t know.

Here, the client is clearly not reflecting on the therapist’s statement. We might instead paraphrase I don’t know as “I don’t want to go there” (CCT – Desire Not To Change). As this example also shows, the content of the therapist’s question is crucial in deciphering whether or not the client’s response is CCT. When clients respond too quickly with “I don’t know” to a therapist question, this may be CCT.

For example:

Therapist: So how would you begin to change this problem?

Client: I don’t know *[end of response]*.

Here, a paraphrase is “I’m not sure I could change or want to change” (CCT)

Therapist: So how would you begin to change this problem?

Client: I don’t know. I suppose I could.... *[client elaborates]*

Not codable as CCT. Here the paraphrase above no longer holds since the client is suggesting a possible solution. You would then go on to code whether the additional statement is CT or CCT.

F. CT/CCT statements have to do with the client's identified targets for change. If a client has not identified a topic as a target for change, yet is arguing for or against change in this area, these statements are still not codable.

For example:

Client: I don't know whether to switch my cell phone over to Telus from Rogers.
On the one hand, Rogers has a good deal. But I've heard that Telus's customer service representatives are more accommodating.

Although this "sounds" on the surface like CT/CCT talk since it has nothing to do with the client's identified change target (the client in this example has not identified switching cell phone providers as an area of change) it's not codable.

G. Watch for use of the word "but" during discussion of a change target. This word often marks where the client switches from CT to CCT or vice versa.

For example:

Client: 1) My anxiety helps me be successful, 2) because I'm so anxious that I always make sure everything is done perfectly, 1) **but it's exhausting.** 2) **What's the point in doing everything so well when I'm a nervous wreck all the time?"**

Here the "**but**" marks the changeover from CCT to CT.

Client: 1) **My anxiety is so stupid**–2) **I know I don't need to be actually worried**, 1) but no matter how many times I tell myself that, I just can't get rid of that anxious feeling. 2) There's no escaping it."

Here the "**but**" transitions from CT to CCT.

5. PARAPHRASING. Although all statements should be taken at face value (codable in and of themselves), at times you can easily paraphrase to get the meaning i.e., it is clearly implied that this is CT or CCT. Paraphrases should be easily recognizable to anyone. In other words, don't stray too far from the meaning to imply things that are not easily implied.

For example:

Client: **I know you're right** but...

Here, it is clearly implied that the client means to object to change with the "but..." (CCT).

Paraphrase: I know you're right but I'm not sure about it – don't know if I can do it etc.

Therapist: Is it getting easier to do the exposures?

Client: Actually, it's getting harder.

Here, an easy and accurate paraphrase (that stays close to the content) is "I'm not sure that changing is going to go well or produce desirable results" (CCT)

Therapist: So if you continued to feel anxious during the exposures-

Client: Oh geez.

Here, a paraphrase is “I’m not sure I would continue with this change if it kept being hard” (CCT).

6. **MINIMAL ENCOURAGERS.** Client brief statements (typically one word) that serve as minimal encouragers should not be coded (e.g., when a client says right, mhm - after a therapist statement). Be **careful to distinguish between “following” words like “sounds good” and actual CT statements.** Here, tone is crucial. Is the intent of the client’s statement to communicate “keep talking” (not CT) or “I am really excited about implementing this change strategy” (CT)? Scaling questions (where the therapist asks for a number follow the same rule - only codable if the response is elaborated). Examples of codable and uncodable statements are below:

NOT CODABLE

- Therapist: So this anxiety is costing you a lot.
Client: Yes. (Do not code)
- Therapist: So perfectionism has its advantages. You get things done right.
Client: Right. (Do not code)
- Therapist: On a scale from 1 to 100, how much does anxiety bother you?
Client: 100. (Do not code)

CODABLE

- Therapist: So this anxiety is costing you a lot.
Client: **1) Absolutely! 2) It’s really interfering in my life.** (Codable)
- Therapist: So your kids being anxious, that’s a reason for you to change.
Client: **1) Yes, of course! 2) I don’t want them turning out like me.** (Codable)
- Therapist: So perfectionism makes sure you get things done right.
Client: 1) Oh definitely! 2) And that’s important to me (Codable)
- Therapist: On a scale from 1 to 100, how much does anxiety bother you?
Client: **1) A clear 100. 2) It’s wrecking my life.** (Codable)

*Adapted with permission from unpublished material from Dr. Henny A. Westra, which were derived from the Glynn & Moyers (2009) MISC 1.1 coding manual.

Appendix G: Therapist Demand and Support Code Manual

Demand Behaviours

Demand is defined as any behaviour that attempts to “fix” the client and explicitly or implicitly communicates that the client should change. That is, such therapist statements can be validly paraphrased as “You need to or should change”.

After reviewing multiple resistance episodes (behaviors triggering resistance), Demand was defined as any of the following:

- Advising
- Suggesting
- Educating
- Lecturing
- Telling
- Fixing
- Warning
- Criticizing
- Coercing
- Pushing
- Demanding
- Cheerleading
- Offering Praise

Note: Only demands for change (i.e., “you should change”) are coded, not any other type of demand. For example, process-directive therapists control the process and often explicitly direct the process (e.g., “Let’s look at that more closely”, “There’s a contrast here between X & Y, what do you think of that?”, “Stop there and breath for a moment”, “Slow down, take your time...”, “Say more about X”, etc. Such demands for controlling/creating the conversation/process, are NOT coded as Demand because they do not carry the implicit message that the client should change. However, if any given therapist directive statement CAN be accurately paraphrased as “you should do this because you need to change / be fixed”, then it would be coded as Demand.

Support Behaviours

Support is defined as any behaviour that could be accurately paraphrased as communicating an intent to understand, support, or “back” the client. Such behaviors can be validly paraphrased as “I am trying to know you and back you up”.

Support behaviours include:

- Reflecting
- Empathizing
- Validating
- Normalizing

- Sympathizing
- Supporting
- Affirming
- Summarizing

Note that even a seemingly autonomy supportive therapist statement such as “As much as other people can want us to change, only we are able to change ourselves, right?”, can be and is coded as Demand *if it carries the implicit intent to advocate for change* (i.e. words without music, Miller & Rollnick, 2003). The exact same statement would be coded as supportive if it can be paraphrased as “You know the way and I have no agenda for you to change. You do what is right for you.”

In short, these two categories of behaviours differentiate two broad types of therapist intentions – to either have the client do or be something different, or to understand and support the client. All other therapist behaviours, that do not fall into Demand or Support are categorized as “**Other**”, including minimal encouragers (e.g. okay, right), simple paraphrases such as echoing, questions to gather information, exploratory questions, small talk, and any instance when the therapist’s intent could not be reliably discerned as Demanding or Supportive.

When coding for Demand and Support, codes need to be **clear and unambiguous**. If you cannot clearly code it as an instance of Demand or Support, defer to the ‘lower code’ of “Other”. In coding, it is often very useful to try to ‘play devil’s advocate’ by trying to challenge or argue against your code in order to see if it stands up to further scrutiny. Thus, if you can think of a paraphrase other than the one (Demand or Support) you thought of first, then you default to “Other”. It is helpful when first learning the system, to work with other coders, who often have a different paraphrase that might be equally credible. This allows you to internalize the process of challenging your first automatic interpretations and play devil’s advocate with yourself to see if your code “holds up”.

*Adapted with permission from the Westra et al. (2020) unpublished coding manual for the Therapist Demand and Support Code.

Appendix H: Responsivity Sequence Coding Guidelines and Examples

This manual describes how to code sequencing within the Demand and Support Code and the Manual for Motivational Interviewing Skill Code (MISC 1.1). Sequencing is done after the session coding for these two sessions has been completed. For the purpose of this analysis, we are interested in looking at how **therapists respond to a client's counter-change talk (CCT)**; so, **the sequence is from client to therapist** (not from the therapist to client).

Responsivity sequence codes:

- **Responsivity Error = CCT-Demand** (client CCT to therapist **Demand**)
- **Appropriate Responsivity = CCT-Support** (client CCT to therapist **Support**)
- **CCT-Other** = client CCT to therapist **Other**

A client code is identified by looking at all of the utterances the individual said in one set of utterances. So, for example, if a client speaks from 5:00-5:10, or from 5:00-7:00 (without therapist interruption), a code must be chosen to represent that whole set of utterances. The same is applied for the therapist; a code must be chosen to represent the whole set of utterances (without client interruption). Usually, the therapist code is the response **right after** what the client said (but there are exceptions). For the purpose of analyzing therapist responsivity, we are interested in finding moments where clients express counter-change talk (CCT). Identifying these moments is key.

It may be difficult to discern what code is appropriate for a whole set of client or therapist utterances. For example, if a client has both CCT and CT codes in one set of utterances (without therapist interruption), you must identify what is **most alive**. What motivational language do you hear most? It can be helpful to think of it as if you were a client or therapist. If you were a therapist, and a client just said both CCT and CT utterances, what was most live? On the other hand, if you were a client, and heard both Support and Demand utterances, what is most alive for you? Each session is different. Use your best judgment.

Example of Responsivity Error sequence

		<i>Sequence</i>	Therapist	Client
C	Thank you. Yeah, I guess. Yes, I do. But a part [00:01:49] of me as well the part that says don't talk about it, is the part that is very worried about offending, about upsetting my friends. [00:02:05]			CCT
	Questions if I'm compromising myself.			Not codable
	Worries about the potential outcome of having this conversation [00:02:20] with my friends, which is the I guess the worry that I might lose my friends or be ostracized from the group. [00:02:37]			CCT
	Yeah, and then I flip back to the other part of me very much wants to explore these boundaries [00:02:53] because this could be			CT

	a very good thing for the relationships and for myself.			
T	I like the that part of myself, and [00:03:09] it's good for us to have a relationship.	CCT-Demand	Demand	
	And I'm happy that you're thinking more about		Demand	
	- maybe I'm hearing that you want to keep your friends		Other	

Example of Appropriate Responsivity sequence:

		<i>Sequence</i>	Therapist	Client
C	Well, I guess home since I have two younger siblings, they don't let me have the time to myself.			CCT
	So, I end up doing other things to get my mind off			CCT
	either when doing so some of the ways that you're procrastinating.			Not codable
T	It sounds like maybe your ways that get in the way of your studies [00:01:21] is that you're trying to take your mind off the work you're doing at home with your siblings and all this schoolwork that's going on.	CCT-Support	Support	
	how much time do you think that you're spending procrastinating?		Other	

Example of CCT-Other sequence:

		<i>Sequence</i>	Therapist	Client
C	I don't know. Exams are coming up.			Not codable
	I'm trying to make a schedule.			CT
	Like I have a calendar, upload on this day I will do this and on this day, I will do that...			CT
	but I don't have those times where I could be this is the time where I spend with my [00:17:53] family			CCT
	or this is when I can actually help my siblings.			CCT
	It's more like study, study, study, to try to make up for the time that I lost as i was procrastinating and stuff like that			CCT
T	And do you feel like you need to put in all the time to study in order to be successful in your exams?	CCT-Other	Other	

*Adapted with permission from unpublished supplementary material from Shukla et al. (2021).