USING THIN SLICING TO DETECT CLIENT RESISTANCE IN PSYCHOTHERAPY

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Abstract

Client resistance is a difficult-to-perceive process marker in psychotherapy, the detection of which is essential to improving client outcomes (Hara et al., 2015; Westra & Norouzian, 2018). While complex coding systems exist for resistance detection, their usage requires extensive training, time, and resources. As evidence from the field of social psychology suggests the utility of "thin slice methodology" (Ambady & Rosenthal, 1992, 1993) for rapid detection of a range of often-covert phenomena, the present study examined the merits of this approach for resistance detection. Specifically, the present study investigated (1) whether thin slice ratings by untrained raters on 90-s "thin slice" clips of client behaviour could differentiate resistance from non-resistance, (2) the capacity of thin slice ratings in predicting experts' global coder-ratings of resistance for the full (1-hr) session using a well-validated coding system, and (3) the capacity of these ratings in predicting therapy clients' working alliance ratings for the full (1-hr) session. An exploratory aim of the study was to identify client behavioural rating domains relevant to resistance detection. Forty thin slice clips presenting resistance (n = 20) and non-resistance (n = 20) were derived from previously resistance-coded sessions (Aviram et al., 2016) of 20 therapist-client dyads from a larger RCT (Westra et al., 2016). Seventeen untrained raters viewed the clips in randomized order and rated the featured clients on 10 behavioural domains. Untrained raters' (1) thin slice ratings significantly differentiated resistance from non-resistance, (2) thin slice ratings on resistance (relative to non-resistance) strongly predicted experts' end-of-session global coder-ratings of resistance, and (3) thin slice ratings on resistance (relative to non-resistance) moderately predicted therapy clients' end-of-session working alliance ratings. Key observable client behaviours of "annoyance", "anger", and "frustration" were also identified as correlates of resistance. This study demonstrates the merits of the thin slice paradigm as a novel framework

for investigating resistance detection processes, with the potential to contribute to clinical training, clinician performance, and improvements in therapy process and outcome.

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Within psychotherapy process research, a series of empirically supported markers have recently emerged with respect to common therapy processes that require timely identification and appropriate management to enhance client treatment response (e.g., Constantino et al., 2013; Westra & Norouzian, 2018). Client resistance, or opposition to the clinician's direction (Westra, Aviram, et al., 2009) represents one such marker, increasingly recognized for its strong detrimental impact on therapy process and outcome (Westra & Norouzian, 2018). Often subtle and difficult to detect, resistance marks the departure of the therapeutic process from productive to unproductive trajectories, reliably predicting a range of poor proximal and distal client outcomes (Hara et al., 2015; Westra, 2011; Westra & Norouzian, 2018). For instance, higher resistance has been associated with lower client involvement and engagement in therapy, and poorer client outcomes and symptom-severity even 1-year post-treatment (Aviram & Westra, 2011; Jungbluth & Shirk, 2009; Westra, 2011). The detection of resistance may be the first step toward reducing these adverse effects (Aviram & Westra, 2011) by enabling identification of at-risk clients. However, accurate detection remains challenging given the phenomenon's difficult-to-perceive nature (Binder & Strupp, 1997; Hara et al., 2015).

Existing evidence suggests that intensive training is required for the detection of this marker and its management, coupled with ongoing clinician deliberate practice (e.g., Aviram et al., 2016; Hara et al., 2015; Shukla et al., 2020). However, despite evidence of detection challenges among observers (e.g., Hara et al., 2015), little research has attempted to explore observer cognition during the process of resistance detection. That is, it remains unknown how signals of resistance are evaluated and utilized (or underutilized) during detection, contributing to success or failure in the process. Whether there are distinctive client behaviours that may serve as reliable indicators of resistance also remain unexplored. Moreover, while detection challenges have been investigated at the conscious and deliberate levels of cognition (e.g., Hara et al., 2015), the automatic and nondeliberate levels remain a gap in the literature.

To the extent that resistance is a relational phenomenon (Westra, Aviram, et al., 2009), evidence suggests that the quality of relational processes may be more detectable at the automatic rather than deliberate levels of cognition (e.g., Choi et al., 2005). Further, deliberate cognitions are not only inherently time-consuming, but can contain errors (Kahneman, 2011) that protract the detection process and impact its accuracy. Accordingly, a different paradigm for investigating this phenomenon might hold merit in advancing current knowledge on resistance and its detection. Specifically, the present study borrowed thin slice methodology (Ambady & Rosenthal, 1992, 1993) from the field of social psychology to explore its accuracy and predictive validity for the detection of resistance. As a rapid observational approach, this method permits examination of how client resistance (relative to non-resistance) is perceived on an automatic level of cognition via rapid ratings on “thin slices” of client behaviour in therapy (Ambady & Rosenthal, 1992, 1993). Accordingly, observers’ ratings of client behaviour can be captured on precise moments (thin slices) of resistance, and compared to those made on moments (thin slices) of non-resistance, to examine the automatic perceptions involved in resistance detection and identify key differences in client behaviour that may aid detection. Identifying the client behavioural correlates of resistance has remained a vital gap, despite its potential to provide an observable basis for this difficult-to-perceive phenomenon, to aid early and rapid detection.

To address these gaps, the present study commences with a critical review of the literature on resistance and the associated challenges in its detection. Subsequently, thin slice methodology (Ambady & Rosenthal, 1992, 1993) is introduced as a potential solution to the problem of resistance detection, followed by a statement on the aims of the present study and its hypotheses. Ultimately, if thin slice methodology facilitates resistance detection, then a novel approach for rapid and early detection of this marker becomes possible with which to improve training efforts, clinician performance, and most importantly, client outcomes in therapy.

What is Client Resistance?

Within the domain of psychotherapy and as an empirically supported process, client resistance refers to an interpersonal phenomenon, defined as any client behaviour that impedes the clinicians' direction for treatment (Chamberlain et al., 1984; Westra, Aviram, et al., 2009). Contrary to traditional conceptualizations of the phenomenon which emphasized resistance as a characterological client factor (e.g., defences and personality; Mahrer et al., 1994), researchers have increasingly emphasized the dyadic nature of resistance and opposition. That is, resistance can vary on a moment-to-moment basis and indicates the level of client engagement with the unfolding direction of therapy as facilitated by the therapist (Westra, Aviram, et al., 2009; Westra & Norouzian, 2018). Whether the therapist poses a question or an intervention, it is their facilitation and directivity of the process in combination with the client's engagement with that direction that determines the emergence of resistance (Hara, 2020; Westra, Aviram, et al., 2009).

Residing in a negative therapeutic process (i.e., "negative process"; Binder & Strupp, 1997, p. 121), resistance can deteriorate the major facets of the therapeutic alliance hypothesized by Bordin (1979) to be critical to a positive outcome. For instance, evidence suggests that resistance impedes client-therapist agreement on the goals and tasks of therapy (i.e., reducing homework compliance and task involvement; Aviram & Westra, 2011; Jungbluth & Shirk, 2009) and erodes the therapeutic bond, resulting in negative emotions in both parties (e.g., Coutinho et al., 2011; Najavits et al., 1995; Westra et al., 2012). These findings are also convergent with other research which has demonstrated a strong association between higher levels of resistance and reduced client post-session working alliance ratings (Hara et al., 2015).

In this vein, resistance resembles the construct of alliance ruptures, which involve a client's movement away from the therapist (Eubanks et al., 2015; Safran & Muran, 1996). As described by Safran and Muran (1996), alliance ruptures have two subtypes: confrontation and withdrawal ruptures. In confrontation ruptures, the client moves against the therapist or treatment through expressions of anger and dissatisfaction. In withdrawal ruptures, the client withdraws from their own internal experience or from the therapist (Eubanks et al., 2015; Safran & Muran, 1996). These subtypes, either alone or in combination, can be manifest in moments of resistance whereby the client relationally distances from the therapist by "opposing, diverting, blocking, or impeding" the set direction (Chamberlain et al., 1984; Hara, 2020; Westra, Aviram, et al., 2009, p. 1). Thus, resistance may take many forms (e.g., interruptions and disagreements; Westra, Aviram, et al., 2009) and therapist failure to effectively detect and manage it often engenders poor therapy process and outcome (Westra & Norouzian, 2018).

Resistance as a Predictor of Therapy Outcome

In addition to its detrimental impact on the therapeutic relationship, resistance has been found to be a consistent and reliable predictor of various poor client outcomes (Westra, 2011; Westra & Norouzian, 2018). For example, research has reliably demonstrated that higher resistance in Cognitive Behaviour Therapy (CBT) is associated with short-term consequences ranging from reduced client engagement and lower homework compliance (Aviram & Westra, 2011; Hara et al., 2015; Westra, 2011), to reduced post-session ratings of therapist empathy (Hara et al., 2016) and lower outcome expectations (Mamedova et al., 2020). In the long-term, higher resistance has been reliably associated with poor treatment outcomes and early termination of therapy (Aviram & Westra, 2011; Piper et al., 1999).

Furthermore, in an investigation by Westra (2011), the capacity of observed resistance was compared to that of two self-report measures of motivation in predicting short and long-term client outcomes. Specifically, early resistance in the first session of CBT for anxiety was examined for its capacity to predict homework compliance and 1-year client worry-reduction. The results demonstrated that increased levels of observed resistance in session 1 reliably predicted poorer client outcomes (i.e., lower homework compliance and worry-reduction) at 1-year post-treatment, while the self-report measures showed inconsistent associations with these outcomes. In other words, these findings suggest the significance of rapid resistance detection, and the predictive capacity afforded to the clinician through accurate detection of the phenomenon (Westra, 2011).

Notably, the adverse impact of resistance on client experiences and outcomes has been observed despite the infrequency of the phenomenon relative to moments of therapist-client cooperation. For instance, within the context of CBT for the treatment of anxiety, Hara et al. (2015) reported resistance as relatively rare, occupying only 20% of all segments of a session. Zickgraf et al. (2015) also reported the infrequency of the phenomenon and found that, on average, resistance occupied only 13% of a given session. Moreover, Watson and McMullen (2005) found that total resistance in CBT was low and fell between 12% to 14%. In other words, despite existing in only small and difficult-to-identify therapy segments, resistance can have a far-reaching detrimental impact on client outcomes (Aviram & Westra, 2011; Hara et al., 2015; Westra, 2011; Westra & Norouzian, 2018). For this reason, resistance has been proposed as a *key moment* in therapy, whereby therapist responsiveness is particularly indicated and influential on the trajectory of the process (Aviram et al., 2016; Westra & Norouzian, 2018). Stated differently, the detection of resistance, as a key moment and a predictor of outcome, is vital as this practice offers prognostic information pertaining to client engagement that can be clinically utilized early on to address client concerns and foster better outcomes (Aviram & Westra, 2011; Westra, 2011; Westra & Norouzian, 2018).

The literature on client outcomes also supports the significance of resistance in therapy. Within this literature, Westra (2011) reported that higher early resistance in CBT for anxiety accounted for 32% of the variance in client worry-reduction outcomes at post-treatment, and 23% at 1-year follow-up. Similarly, Aviram and Westra (2011) reported that higher resistance accounted for 32% of the variance in post-CBT client outcomes. Additionally, within CBT for clients managing depressive disorders, Jungbluth and Shirk (2009) reported that higher resistance accounted for 33% of the variance in client involvement in future tasks. Together, these results suggest that the emergence of resistance represents a key moment (Westra & Norouzian, 2018), which, if undetected, can foster an unproductive process trajectory. Accordingly, moments in therapy are not all equally potent or predictive of outcome (Hara et al., 2015; Westra, 2011; Westra & Norouzian, 2018), but resistance, with its strong adverse impact, presents as a defining key moment, which requires timely identification and appropriate management.

Resistance as a Process Marker in Therapy

Given its negative impact on therapy process and outcome, resistance has been identified as a *process marker* in psychotherapy (Hara et al., 2015; Westra, 2011; Westra & Norouzian, 2018). Within the context of therapy, resistance, like other markers, signifies the presence of a key phenomenon and the need for an empirically indicated clinical response toward it to improve client outcomes (Aviram et al., 2016; Constantino et al., 2013; Hara, 2020; Westra & Norouzian, 2018). Hence, the earlier and more rapid the detection of resistance, the sooner an appropriate intervention can be utilized to improve the treatment process and its outcome.

The above view is consistent with the context-responsive psychotherapy integration approach proposed by Constantino et al. (2013) who emphasized the importance of clinician detection of markers of common therapy processes or contexts that negatively impact treatment and the integrative use of empirically indicated interventions uniquely responsive to those contexts (Constantino et al., 2013). For instance, within this framework, Motivational Interviewing (MI) has emerged as an empirically effective and appropriately responsive strategy for the clinical management of the common themes of client resistance and ambivalence (Constantino et al., 2013; Westra & Norouzian, 2018). Specifically, support for the use of this approach comes from several randomized controlled trials, which demonstrated that the addition or integration of MI into more directive models, such as CBT (i.e., MI-CBT), was significantly associated with reduced resistance and improved client outcomes (Aviram & Westra 2011; Constantino et al. 2019; Westra, Arkowitz, et al., 2009; Westra et al., 2016).

Earlier research focusing on the factors involved in the development of resistance also suggest that resistance requires specific therapist behaviours to be alleviated. For instance, Patterson and Forgatch (1985) investigated the impact of “teach” and “confront” versus “facilitate” and “support” therapist behaviours on client noncompliance (a construct related to resistance), demonstrating that directive and confrontational behaviours increased noncompliance, while supportive behaviours decreased it. Similarly, in an experiment by Francis et al. (2005), practitioners were randomly assigned to interview an actor coached to portray client ambivalence about quitting smoking under high or low resistance conditions. The results showed that higher client resistance reliably elicited an increase in confrontational behaviours.

Accordingly, resistance is often perpetuated through therapist directivity, and when resistance occurs, therapists typically respond by increasing rather than decreasing these behaviours (Westra & Norouzian, 2018). Stated differently, there is generally an absence of appropriate therapist responsiveness to client needs that emerge during moments of resistance, which suggests therapist difficulties in detecting and coping with resistance and negative process (Binder & Strupp, 1997; Hara et al., 2015; Westra & Norouzian, 2018).

In a more recent study, Hara (2020) investigated therapist behaviours during client resistance among CBT versus MI-CBT therapist-trainees in treating clients managing Generalized Anxiety Disorder (GAD). MI-CBT therapist-trainees (compared to CBT-alone therapist-trainees) exhibited substantially higher affiliative and lower levels of hostile behaviour when managing resistance. Moreover, higher affiliative behaviour (versus hostility) among the MI-CBT therapists was associated with significant improvements for MI-CBT clients at 1-year post-treatment. In contrast, hostile behaviour among the CBT-alone therapists was associated with negative client outcomes at 1-year follow-up. These findings further support the significance of effective resistance detection and integration of empirically indicated strategies (e.g., MI) to responsively manage relational disconnects and improve client outcomes in CBT for GAD (e.g., Aviram et al., 2016; Westra & Norouzian, 2018).

The above study also provides further evidence that resistance as a process marker requires a clinical shift into an autonomy-granting and relationally supportive stance as instantiated by MI to re-establish unity with the client and resolve experiences of disagreement and resistance (e.g., Aviram et al., 2016; Hara, 2020; Westra & Norouzian, 2018). However, evidence of continued directivity during such moments suggests therapist difficulties in this domain. Specifically, it suggests that shifting from directive to supportive strategies is an important but challenging skill (Westra & Norouzian, 2018) predicated on the successful detection of resistance markers.

Resistance Detection

Resistance detection remains an understudied topic despite its relevance to effective psychotherapy (Binder & Strupp, 1997; Hara et al., 2015). Much research has focused on the development and management of resistance, but detection as a primary step has remained a neglected topic of investigation. According to Binder and Strupp (1997) "conventional psychotherapy training, even systematized with the aid of manuals, does not adequately prepare therapists to cope with this 'negative process'" (p. 123), the detection of which is often impeded by a host of therapist and client factors. For instance, Pekarik and Finney-Owen (1987) found that therapists frequently underestimated client dropout rates and were unlikely to cite client dislike of treatment or the therapist as a reason for termination of treatment. Similarly, Todd et al. (2003) reported that therapists were more likely to attribute termination to client improvement, than to other reasons. As such, research indicates that therapists tend to exhibit self-serving biases (Hara et al., 2015), which limit their awareness of their participation and contributions to negative process (Binder & Strupp, 1997).

Additional difficulties with detection also stem from clients generally not discussing treatment dissatisfactions explicitly with therapists. As discovered by Rennie (1994a, 1994b) in studies of client resistance, client deference toward the therapist often obscures or conceals client dissatisfactions with therapy. Other studies also support this finding by demonstrating the covert processes through which clients subtly express their concerns and dissatisfactions in therapy. For example, Hill et al. (1992) investigated therapist perceptions of client reactions in therapy and found that clients frequently concealed the negative reactions they experienced, and therapists were generally not accurate in detecting negative and covert client reactions. Moreover, when therapists did accurately detect negative client reactions, they were less able to help in therapy (Hill et al., 1992). Altogether, these findings demonstrate that resistance (e.g., covert negative reactions) is often difficult to detect and manage in therapy.

In one of the only studies to have directly assessed therapist awareness of resistance, Hara et al. (2015) compared CBT therapists' post-session ratings of resistance to those of trained resistance experts and offered direct evidence of therapist difficulties in detection. This study captured therapist ratings of resistance via Likert and visual analog scales (VASs), and expert coder-ratings via a well-validated resistance detection process-coding system (Westra, Aviram, et al., 2009). The results revealed some agreement between therapist and expert ratings (Hara et al., 2015). However, neither form of therapist ratings of resistance was reliably related to key client outcomes, such as post-treatment symptom scores (Likert ratings: $\beta = -.25$, $p = .322$; VAS ratings: $\beta = .00$, $p = .986$), while expert process coder-ratings of resistance were strongly predictive of such outcomes ($\beta = .61$, $p < .001$). The authors noted in interpreting these findings that resistance is difficult to perceive as its accurate detection requires perceptual attunement to both transparent signals and the more complex and subtle signals that convey client noncollaboration. Detecting these finer indicators of resistance requires observational skills which the experts (versus therapists) had acquired through training (Hara et al., 2015). As such, this study, along with several others, highlights the importance of training for accurately perceiving and managing resistance (Aviram et al., 2016; Hara et al., 2015; Shukla et al., 2020).

Moreover, as noted in the above study, process-coding systems exist in psychotherapy process research to detect and evaluate resistance and alliance ruptures (e.g., Eubanks et al., 2015; Westra, Aviram, et al., 2009). However, while such systems effectively enable detection and have been vital in advancing process research, they are typically used by expert process research coders. As a result, such systems are typically highly complex and training observers to become process-coders is often difficult and time-consuming (Hara et al., 2015). Generally, the complexity of such systems, coupled with the significant time and resources required for learning, render them less feasible for clinical use and training settings. Thus, the detection of resistance is impeded by the absence of any simpler detection approach, a critical gap that the present study aims to fill via the exploration of thin slicing as a novel approach for the detection of resistance. The following section includes further elaboration on this approach.

What is Thin Slicing?

Contrary to common expectations, accuracy in assessments across a range of behavioural variables has been shown to stem from rapid judgments formed between 2 to 300-s of exposure to a phenomenon (Ambady et al., 2001; Ambady & Rosenthal, 1992, 1993). That is, rather than accuracy being enhanced by more information as is conventionally assumed, accuracy often does not significantly change with greater exposures (Ambady et al., 2000; Ambady & Rosenthal, 1992, 1993). In a seminal meta-analysis that led to the creation of the thin slice research paradigm, Ambady and Rosenthal (1992) examined results from 38 studies and found a mean effect size of $r = .39$ for the accuracy of individuals in predicting various outcomes from observing only brief segments (or thin slices) of behaviour or interaction. Specifically, the authors reported that assessments and predictions from observations of less than 30-s were accurate, and such accuracy did not significantly change when relying on observations of approximately 300-s (Ambady & Rosenthal, 1992).

The above phenomenon was also supported in a subsequent study wherein Ambady and Rosenthal (1993) demonstrated that by observing less than 30-s silent video clips of teachers, untrained strangers could accurately predict evaluations of teacher effectiveness provided by students at the end of the semester ($r = .76$). Moreover, such accuracy did not significantly change when strangers relied on even thinner (6-s) slices for assessment (Ambady & Rosenthal, 1993). As such, rapid and minimal cognitive processing can yield surprising accuracy in the realm of interpersonal perception, and thin slicing facilitates this accuracy through minimal rather than extensive observations (Ambady et al., 2000; Ambady & Rosenthal, 1992, 1993).

According to Ambady et al. (2000), the predictive accuracy of thin slice assessments is comparable to those reported in classical studies that utilized full-length interactions, such as, interviews (pp. 248–249). For instance, from observing a few seconds or minutes of an interaction, raters have accurately detected often-covert variables, such as, individuals' racial attitudes (Richeson & Shelton, 2005), personality traits (Wu et al., 2017), intelligence (Murphy et al., 2003), and psychopathy features (Fowler et al., 2009). Similarly, using thin slices, raters have accurately predicted malpractice claims against surgeons (Ambady et al., 2002), couples' marital outcomes (Carrère & Gottman, 1999), and other social and psychological outcomes (Ambady et al., 2000; see Slepian et al., 2014 for a review). Given its success in enabling detection and prediction accuracy related to various phenomena, this paradigm presents a novel framework for assessing whether the often-covert processes of client resistance in psychotherapy can be accurately detected through thin slicing. The subsequent section elaborates on this methodology as developed for the present study.

Thin Slice Methodology

The central feature of thin slice methodology is its use of thin slices rather than the entirety of interaction or individual behaviour for assessment (Ambady et al., 2000). Within this approach, a thin slice is defined as a 2 to 300-s excerpt of behaviour or interaction extracted from a larger stream of audio or video data (Ambady et al., 2000; Ambady & Rosenthal, 1992, 1993). As such, variables of interest can range from individual-based characteristics (e.g., personality, emotion, mood) to dyad-based ones (e.g., relationship type or quality; Ambady et al., 2000). However, variables suitable for thin slice investigation involve expressive behaviours, that is, behaviours that are observable and affective (Ambady et al., 2000; Ambady & Rosenthal, 1992). In the context of resistance, the observability and affectivity associated with the phenomenon has been documented (e.g., Westra, 2011; Westra et al., 2012), making the phenomenon suitable for thin slice investigation. However, there remains a gap in knowledge on specific, readily observable client behaviours reliably associated with resistance that the present study aims to explore.

Furthermore, an advantage of this methodology is that it requires little to no training of raters on the phenomenon of interest (Ambady et al., 2001). As such, the present study recruited untrained raters, rather than graduate-level therapists, to more precisely isolate and assess the merits of thin slicing as an observational method for the detection of resistance. Therefore, to reduce the possibility of confounds (e.g., experience and training levels), the present study recruited raters with no prior psychotherapy training.

In this approach, raters are presented with thin slice recordings of target individuals or interactions, and subsequently asked to rely only on automatic cognitions to rate a phenomenon of interest (Ambady et al., 2000; Ambady et al., 2001; Ambady & Rosenthal, 1992, 1993). In other words, the ability of untrained raters to detect a phenomenon rapidly and accurately, signifies an evolved detection capacity and a baseline level of sensitivity (Ambady et al., 2001; Krienert et al., 2018). Accordingly, raters provide rapid ratings, predicated entirely on automatic, intuitive cognitions, rather than deliberate rational analyses (Ambady, 2010; Ambady et al., 2000). The distinction between these two forms of thought is best explained by the cognitive dual processing literature that classifies information processing into System 1 and System 2 thinking (e.g., Kahneman, 2011).

As described by Kahneman (2011), System 1 cognitions are fast, intuitive, automatic, and non-conscious, while System 2 cognitions are slow, analytical, deliberate, and conscious. Thin slice judgments are associated with System 1 processing (Carnes, 2015). For this reason, the term automatic cognition was adopted in the present study to encompass the various terms frequently used in thin slice literature, such as, intuition, first impressions, gut feelings, rapid cognition, thin slice judgment, and snap judgments (e.g., Ambady, 2010; Ambady & Rosenthal, 1992; Carney et al., 2007; Dhaliwal, 2011; Gladwell, 2005). As noted by Ambady and Rosenthal (1992), thin slice judgments are snap judgments, formed so rapidly that their accuracy may be partly due to the exclusion of distracting information typically involved in deliberate thinking and reasoning. In other words, while System 2 processing permits verification and analyses of System 1 cognitions, System 2 processing cannot always provide immunity against errors in thought (Kahneman, 2011). Accordingly, thin slice and the related literature (e.g., Ambady & Rosenthal, 1992, 1993; Katsikopoulos et al., 2010) demonstrate the computational accuracy that can emerge from System 1 cognitions.

Ongoing literature within these areas is providing evidence on the types of phenomena and circumstances for which thin slice, System 1 cognitions may be most accurate and useful (e.g., Ambady & Gray, 2002; Ambady et al., 2000). Central to this research is the evaluation of rater accuracy by comparison of thin slice ratings against relevant criterion measures, such as, self-reports, expert ratings, or outcome data (Ambady & Rosenthal, 1992; Slepian et al., 2014). Given the simplicity with which information can be obtained, this observational method is increasingly garnering attention in clinical and psychotherapeutic contexts (Bergman, 2018; Sasso & Strunk, 2013; Slepian et al., 2014).

The Potential of Thin Slicing in Resistance Detection

While thin slice methods have been successfully used in various psychological and physical health settings (Slepian et al., 2014), their application to detect and predict outcomes in psychotherapy treatment trials remains relatively new (Sasso & Strunk, 2013). This section reviews studies relevant to the potential utility of this approach for detecting client resistance. Specifically, relevant studies are separated into those utilizing this method for observational clinical assessments, and those for minimizing coding burdens in research.

With respect to observational assessments, Sasso and Strunk (2013) investigated the predictive validity of thin slice ratings in a trial of cognitive therapy for depression. Within this study, raters provided ratings on brief clips of client intake sessions, rapidly assessing clients' personality and level of interest in therapy. The results showed that thin slice ratings of aspects of the client's personality accurately predicted important client outcomes, such as, dropout and symptom-severity during the treatment trial. Thin slice ratings of client interest in therapy also emerged as predictive of client dropout. Further, such ratings outperformed self-report and diagnostic assessment data in terms of predictive validity. Thus, thin slice ratings as a rapid observational approach enabled identification of predictors of outcome (Sasso & Strunk, 2013). Moreover, given that thin slice ratings of client interest in therapy (a construct related to client engagement and resistance) were predictive of outcome, the findings suggest the potential utility of this method for detecting resistance in therapy.

In a later study by Bergman (2018), the author used the same approach as Sasso and Strunk (2013) to investigate whether thin slice ratings could predict various treatment-related outcomes among clients with post-traumatic stress disorder. The results demonstrated that thin slice ratings of aspects of client personality and treatment interest emerged as predictors of dropout. Moreover, the study demonstrated that complex clinical variables, such as, personality, psychopathology, treatment interest, and alliance could be rapidly and reliably assessed via thin slice ratings by raters with relatively little training (Bergman, 2018). Given these findings, there is further justification for this approach's potential utility in assessing and detecting other process phenomena, such as client resistance in therapy.

Notably, while these prior studies have focused on thin slice ratings of client personality as predictors of client outcome (e.g., Bergman, 2018; Sasso & Strunk, 2013), the present study examined whether thin slice ratings of client behaviour can permit detection and prediction of resistance and its associated proximal outcomes. In other words, part of the novelty of the current study is its application of thin slice ratings that yield predictors of outcome (e.g., Bergman, 2018; Sasso & Strunk, 2013), to a phenomenon, like resistance, that is an empirically supported predictor of outcome in its own right (e.g., Aviram & Westra, 2011; Westra, 2011). Accordingly, while resistance as a predictor offers prognostic information (Aviram & Westra, 2011), implicit in the present study is the idea that this information can potentially be obtained at an even earlier stage of therapy and in even more rapid fashion if detected via thin slicing. Thus, on a mathematical level, discovering predictors of a predictor of outcome (i.e., resistance) may result in exponential increases in the detection speed for this process marker. Moreover, finding reliable client behaviours, predictive of resistance, would provide an observable basis for this difficult-to-perceive phenomenon, potentially permitting detection with greater ease and even less training.

Given that client resistance, like other process phenomena, is currently evaluated via complex process-coding systems (e.g., Westra, Aviram, et al., 2009), another application of thin slicing in psychotherapy has aimed to reduce coding burdens in process and outcome research. For instance, Caperton et al. (2018) investigated whether treatment fidelity among therapists using MI could be captured by process-coding only thin slices of therapist behaviours. The results demonstrated that coding of thin slices approximating one-third (i.e., 9 min) of the larger session adequately captured session-level therapist MI fidelity scores. Similarly, Carcone et al. (2015) developed a thin slice approach to coding clinician-patient interactions in MI and demonstrated that coding accuracy required six thin slices of a 2-min duration. In combination, both studies demonstrate that coding accuracy can be preserved by using an appropriate and representative thin slice sampling strategy.

Empirical support from research outside of the psychotherapeutic context also suggests the potential merits of thin slicing for observational assessments of complex phenomena. For example, Prime et al. (2014) developed the construct of sibling cognitive sensitivity (CS), which refers to the degree to which an individual is aware and attuned to the mind, knowledge, and capabilities of another when working on a shared goal. Moreover, the authors investigated the validity, reliability, and viability of a thin slice versus an interval coding measure for assessing CS in children. While both measures demonstrated strong psychometric properties, the thin slice measure emerged as the preferred approach given its reduced resource requirements (e.g., training time, coding; Prime et al., 2014). In a subsequent study, Prime et al. (2015) developed a thin slice measure of maternal CS, which showed significant association with a gold-standard measure of maternal responsivity. The measure of CS was significantly related to various early risk factors (e.g., maternal depression, socioeconomic status) and later child outcomes (e.g., receptive vocabulary, executive functioning; Prime et al., 2015). In addition to having good psychometric properties, the thin slice measure was more closely associated with the gold-standard than was an index of assessed risk factors, and both measures were useful for predicting outcomes (Prime et al., 2015). Given these findings, the thin slice measure was deemed a potentially useful instrument for rapidly identifying at risk families in contexts such as primary care settings that require psychometrically sound, yet cost-effective approaches to assessment (Prime et al., 2015).

In sum, thin slicing has been used successfully in the detection and prediction of a variety of phenomena both within and outside of the psychotherapeutic context. Whether used as a clinical observational measure or a research coding method, thin slicing appears to offer an accelerated yet effective approach to assessment. Accordingly, as a first test of thin slicing in resistance research, the present study sought to investigate the utility of thin slice methodology a) as a novel observational approach for resistance detection (i.e., use of automatic, rapid, intuitive cognitions; Ambady, 2010; Ambady et al., 2000), and b) for identifying the key observable client behavioural correlates of resistance. In other words, the principal goal of the study was neither to construct a thin slice resistance coding method for reducing coder burden, nor a thin slice resistance measure for post-session usage. Instead, given that resistance requires rapid detection in real-time for effective therapeutic practice (see Westra et al., 2020 for a rapid approach to resistance management in real-time), the present study's two-fold aim presents an initial step in the formulation of a future detection methodology, potentially suitable for rapid, real-time, clinical detection of resistance (see the Exploratory Analyses section for details).

Summary and Present Study Aims

Resistance is increasingly recognized as an empirically supported clinical marker and outcome predictor, with its detection and management vital to fostering better therapy processes and outcomes (Hara et al., 2015; Westra, 2011; Westra & Norouzian, 2018). However, evidence suggests that resistance detection is a challenging practice, and little research has directly investigated resistance detection processes and associated difficulties among observers (Binder & Strupp, 1997; Hara et al., 2015). Specifically, it remains unknown how automatic cognitions inform perception during resistance detection. Moreover, the role of client behaviours in enabling differentiation of moments of resistance from non-resistance also remains unknown. Further contributing to detection challenges is the complexity of existing process-coding systems, which require extensive training and resources (Hara et al., 2015), rendering them less feasible for clinical or training settings.

To address the above empirical gaps, the present study sought to test thin slicing as a novel approach to observing resistance within the context of CBT for GAD (see Westra et al., 2016 for the RCT). Thin slice clips presenting resistance (n = 20) and non-resistance (n = 20) were derived from previously resistance-coded CBT sessions (Aviram et al., 2016) of a larger trial (Westra et al., 2016). Untrained raters viewed the thin slice clips in randomized order and subsequently rated them using a thin slice method. Specifically, raters' intuition-based rapid ratings of client behaviour were captured on 90-s clips of resistance, and these ratings were compared to those made on 90-s clips of non-resistance, to examine whether raters could differentiate resistance from non-resistance. Moreover, the predictive validity of thin slice ratings was examined with respect to two proximal measures of outcome. These included a) experts' end-of-session global coder-ratings of resistance for the full (1-hr) session, using a well-validated resistance coding system (Westra, Aviram, et al., 2009), and b) therapy clients' end-of-session working alliance ratings for the full (1-hr) session, using a well-validated measure of the alliance (Horvath & Greenberg, 1989).

Furthermore, an implicit assumption of the current study was that resistance detection requires attention to key domains of client behaviour, and that empirical deconstruction of resistance into readily observable client behaviours could potentially increase its visibility. Thus, a thin slice measure was developed for the present study with client behavioural domains related to resistance. Ratings on client behavioural domains were then examined as correlates of resistance and its outcomes, to identify key differences in client behaviours during moments of resistance versus non-resistance. In sum, this thin slice research on resistance utilizes a novel framework for studying the importance of perception and use of rapid, automatic, intuition-based cognitions (Ambady, 2010) in the detection of this difficult-to-perceive phenomenon, which typically requires extensive training via complex coding systems (Hara et al., 2015). Thus, such research might hold merit in advancing current research and training on resistance, offering a novel framework for investigating resistance detection processes, and an alternative approach to observation of the phenomenon, potentially conducive to its rapid and early detection.

Accordingly, the primary study objectives were to investigate a) the accuracy of thin slice ratings by untrained raters on 90-s thin slice clips of client behaviour in differentiating resistance from nonresistance, b) the capacity of thin slice ratings in predicting experts' global resistance coder-ratings of the full (1-hr) session, and c) the capacity of these ratings in predicting clients' working alliance ratings on the full (1-hr) session. Additionally, exploratory aims of the study included investigating whether any client behavioural domains reliably associated with resistance and its proximal outcomes. Given the paucity of research on this latter topic, no hypothesis was made regarding the exploratory aims. Hypotheses pertaining to the primary objectives are detailed in the next section.

Hypotheses

1. Thin slice ratings by untrained raters will reliably differentiate resistance from nonresistance.
2. Thin slice ratings on 90-s resistance clips by untrained raters will significantly predict end-of-session global coder-ratings of resistance by trained experts. In contrast, thin slice ratings on 90-s non-resistance clips will be unrelated to experts' end-of-session global coder-ratings of resistance.
3. Thin slice ratings on 90-s resistance clips by untrained raters will significantly predict end-of-session ratings of the working alliance by therapy clients. In contrast, thin slice ratings on 90-s non-resistance clips will be unrelated to therapy clients' end-of-session working alliance ratings.

Method

Participants

Thin Slice Raters

The present study included 17 raters (i.e., eight female and nine male) who viewed and rated 90-s thin slice video clips of therapist-client dyads on client behavioural domains related to resistance. Rater age ranged from 18 to 26 years, with a mean age of 19.65 years (*SD* = 2.00). Raters were recruited via study advertisements placed in York University's Undergraduate Research Participant Pool and were all first-year undergraduate psychology students participating for course credit. Raters were from diverse ethnic backgrounds (3 East Asian, 3 Middle-Eastern, 5 African, 2 South Asian, 4 Unspecified), and all had high-school level education (15 high-school, 1 Ontario Secondary School Diploma, and 1 General Education Diploma). York University's Ethics Review Board approved all measures and procedures of the present study, and participants provided informed consent at the start of the study.

Therapist-Client Dyads

Therapist-client dyads featured in the thin slice clips were video-recorded within the context of a previous allegiance-controlled RCT (Westra et al., 2016), which compared CBT versus MI-CBT's effectiveness for the treatment of GAD. Therapist-client dyads within the CBT-alone arm of the trial were used in the present study, given the higher levels of resistance observed within this group (e.g., Constantino et al., 2015). The larger RCT's (Westra et al., 2016) client sample was recruited via study advertisements placed in the greater Toronto area. All RCT clients met criteria for a principal diagnosis of GAD as assessed with the *Structured Clinical Interview for Axis-I DSM-IV Disorders* (First et al., 1996) and scored in the severe range (i.e., at least 68/80) on the *Penn State Worry Questionnaire (*Meyer et al., 1990). In total, 44 adults were randomly assigned to the CBT-arm of the trial and all received 15 treatment sessions of 1-hr duration. The therapists in the CBT-alone arm of the RCT included 13 females (12 clinical psychology graduate students and one postdoctoral psychologist). The present subsample consisted of 20 clients (19 female and one male), and 12 female CBT therapists. Each therapist had between one to four client cases in the present study. Approval for all RCT study measures and procedures was obtained from York University's Ethics Review Board prior to the commencement of the study, and participants provided informed consent for all procedures of the RCT.

Thin Slice Stimuli

Consistent with thin slice paradigm conventions, a slice length (i.e., between 2 to 300-s; Ambady & Rosenthal, 1992, 1993) had to be selected from the full-length therapy session videos. Given prior research indicating that a) increased exposure time to a clip enhances rater accuracy (e.g., 60-s slices relative to shorter slices optimized accuracy across a wide array of tested constructs; Carney et al., 2007), and b) even longer slices have shown efficacy for capturing dyad-based variables (e.g., James et al., 2012), there was justification for using slice lengths above 60 and below 300-s. As 90-s interactions typically allow for a few exchanges of communicative gestures for each partner of a dyad, it was determined that as a first test of thin slicing in resistance research, 90-s slices may provide sufficient information for assessing the phenomenon.

To create thin slice clips, videotapes from 20 therapist-client dyads were derived from the CBT-arm of the larger completed RCT (Westra et al., 2016), and a 90-s resistance segment and a matching-length non-resistance segment occurring within the same session were selected. The selection of segments of resistance and non-resistance was guided by previously completed expert coder-ratings of resistance on all CBT videotapes from the larger RCT using a well-validated resistance detection system (e.g., Westra, Aviram, et al., 2009; see below for a full description of resistance coding using this system). Specifically, from prior research by Aviram et al. (2016), a list of 30 dyads containing at least one episode of resistant disagreement (varying in length from 1.14 to 34.23 min) was identified. In Aviram et al.'s study, expert ratings of MI-adherence in these episodes were highly predictive of client outcomes. In order to limit the possibility of rater fatigue in the present study, a subsample of 20 dyads was selected from Aviram et al.'s larger set of 30 dyads, and the disagreement (i.e., presence of resistance) and non-resistance (i.e., absence of resistance) segments from these dyads became the basis for selecting the 90-s thin slice clips for the present study.

The senior investigator for the larger RCT identified and extracted all 90-s resistance thin slice clips from the selected videotapes, ensuring that thin slices depicted instances of clear resistance. This action was necessary since the episodes sometimes varied in the degree and presence of resistance in each moment. Additionally, 90-s thin slice clips of non-resistance interactions were selected and excerpted from within the same therapist-client dyads in the same session, at moments when resistance was absent. In total, 40 thin slice video clips were created (n = 20 resistance and n = 20 non-resistance) for the current study.

All selected thin slice clips came from sessions 2–6 to ensure all therapist-client dyads were in the same stage of therapy (i.e., early treatment phase; Hara, 2020). All segments captured a side or three-quarter view of therapist-client interactions. Furthermore, given the goal of contributing to training efforts, all segments were cropped to display only the client in the video. That is, given that in real time, clinicians or therapist-trainees must demonstrate the ability to detect resistance via observation of client behaviours, it was of interest to create slices that would simulate the experience of being the therapist for raters, and only viewing the client.

All thin slice clips were standardized with respect to size, audio, and visual quality. Moreover, the order of resistance and non-resistance clips was randomized, ensuring that no resistance and non-resistance clips of the same dyad occurred back-to-back to reduce raters' exposure time to the same dyad when rating each clip. The randomized order was then copied, and a final master playlist was created for the study.

Measures

Thin Slice Rater Measure

Thin Slice Ratings of Client Behaviour. A thin slice resistance measure was developed for the present study. Consistent with thin slice research conventions, items selected for inclusion on the thin slice measure were derived from a literature review on the phenomenon of interest (see Henry et al., 2017 for a similar approach). Specifically, for the present study, a content analytic review of the literature on resistance, alliance ruptures, and client therapy experiences was conducted to identify common descriptors of the therapist, client, and therapy process during times of resistance. This review yielded a large pool of items narrowed in consultation with a resistance expert and senior investigator of the larger RCT (Westra et al., 2016), resulting in the selection of ten bipolar client behavioural domains reflective of common tensions in resistance. These included the following client behaviours: “Defensive vs. Receptive”, “Opposing vs. Agreeing”, “Reluctant vs. Free”, “Cold vs. Warm”, “Supported vs. Dominated”, “Criticized vs. Understood”, “Calm vs. Annoyed/Angry”, “Content vs. Frustrated”, “Tense vs. Relaxed”, and “Engaged vs. Disengaged”.

Each bipolar behavioural rating domain was featured on a digital visual analog scale (10/100mm long) on a Qualtrics survey and included a movable slider permitting ratings at either end of the pole (i.e., assessing the degree of resistance or non-resistance in therapist-client interactions). While the numeric values of the slider were invisible to the raters, they were visible to the experimenter and were represented on a scale from –10 to + 10. Positive values (0 to + 10) corresponded to client behavioural domains reflecting resistance: “reluctant”, “defensive”, “opposing”, “dominated”, “criticized”, “cold”, “annoyed/angry”, “frustrated”, “tense”, and “disengaged”. Negative values (–10 to 0) corresponded to client behavioural domains reflecting non-resistance: “receptive”, “agreeing”, “supported”, “understood”, “free”, “warm”, “calm”, “content”, “relaxed”, and “engaged”. As such, higher thin slice ratings indicated greater perceived client resistance, while lower ratings indicated better process (or absence of resistance).

Validation Measures

The Adapted Client Resistance Code (adapted CRC; Westra, Aviram, et al., 2009). The adapted CRC is a well-validated observational coding system for detecting and rating client resistance (see Appendix A for the manual). This system defines resistance as client behaviours that oppose or obstruct the therapist’s selected direction for therapy. That is, the system takes a dyadic view of the phenomenon, providing a measure of the quality of the interpersonal context co-created by therapist and client (Westra, Aviram, et al., 2009). As such, client engagement with the process of therapy is assessed through coder-ratings using a 4-point scale with possible codes of 0 to 3 to reflect the absence (code of 0; i.e., non-resistance), presence (code of 1), or higher degrees of resistance (codes of 2 or 3; Westra, Aviram, et al., 2009). Thus, trained coders use the totality of client (nonverbal and verbal) behaviours to decipher the client’s intent to follow or oppose the emerging process as directed by the therapist (Westra, Aviram, et al., 2009).

Prior research has demonstrated good construct and predictive validity, with good face and content validity, for the original CRC system (Bischoff & Tracey, 1995; Chamberlain et al., 1984; Patterson & Forgatch, 1985). The adapted CRC system has also been well-validated (e.g., Aviram & Westra, 2011; Aviram et al., 2016; Constantino et al., 2019; Hara et al., 2015) demonstrating strong predictive validity. For instance, Hara et al. (2015) found that expert coder-ratings of resistance using the adapted CRC system strongly predicted client proximal (e.g., client working alliance ratings) and distal outcomes (e.g., symptom severity).

Working Alliance Inventory – Short Form (WAI-S; Horvath & Greenberg, 1989). The WAI-S is a widely used measure of the working alliance between therapist and client demonstrated to be highly predictive of treatment outcomes (Horvath & Greenberg, 1989). Predicated on Bordin's (1979) theory of the working alliance, the WAI-S assesses therapist-client agreement on therapy goals, tasks, and the quality of the therapeutic bond. The instrument contains 12 items rated on a 7-point scale, with possible scores ranging from 12 to 84 (see Appendix B for the measure). The instrument has shown sound psychometric properties (Horvath & Bedi, 2002), and reliability estimates for the client version of this measure is .93 with subscale estimates ranging from .85 to .88 (Horvath & Greenberg, 1989).

Procedure

The study was conducted individually with each rater over Zoom Healthcare. Each rater was instructed to view 90-s video clips of psychotherapy and rate the featured client on a 10-item measure of client behaviour, asking about their perception of the client's behaviour and feelings toward the therapist during the video clip. A Qualtrics survey link containing the thin slice behavioural rating forms was provided to each rater prior to the start of the study, and raters were informed that each clip could only be played once. Consistent with thin slice research conventions, raters were instructed to rely on "gut feelings" and offer ratings rapidly for all trials. Each trial began with a 5-s "Get Ready!" prompt screen and a count-down from 3 to 0 prior to the presentation of the 90-s video clip. Following the presentation of each clip, another screen appeared to prompt raters to offer rapid ratings, and the prompt remained on the screen until the rater completed the form and informed the experimenter to play the next clip.

Raters began with two practice trials to adjust to the pace and tasks of the study (see Rule et al., 2012, for a similar approach). Once the practice trials were completed, the official study clips were presented using the randomized order of the master playlist, with no clip of the same therapist-client dyad shown back-to-back. Rater response times were not recorded, but a 1-min maximum time limit was placed on completing ratings to facilitate rapid ratings of the clips. No mention was made as to whether a clip depicted resistance or non-resistance interaction, and all raters remained naïve as to the rationale and hypotheses of the study. Upon completing the study, raters were granted course credit.

In the larger RCT from which the videotapes were derived (Westra et al., 2016), multiple diagnostic and assessment measures were administered to monitor client progress and outcomes at various time points during treatment. For the present study, client proximal outcomes as captured on the WAI-S were derived from the trial. Clients completed the WAI-S at the end of each session and indicated their perceived level of the working alliance with their therapist during that session. The WAI-S post-session ratings in the present study corresponded to the therapy session from which the resistance and non-resistance thin slice segments were extracted.

Aviram et al. (2016) coded all selected CBT therapy sessions from the RCT using the adapted CRC (Westra, Aviram, et al., 2009). As such, expert resistance coders rated the quality of the in-session process of therapist-client dyads on a moment-to-moment basis, identifying segments of resistance (i.e., opposition to clinician direction; Westra, Aviram, et al., 2009) and non-resistance (i.e., no opposition). These segments became the basis for selecting the resistance and non-resistance thin slice clips of the present study. Moreover, since resistance coding involved coding the full session, experts' global coder-ratings of the sessions (i.e., total ratings accounting for occurrences of resistance across the session) were derived (Aviram et al., 2016).

Analytic Approach

RStudio software was used to conduct all analyses. First, the dimensionality of the thin slice measure was investigated with an exploratory factor analysis to identify the existence of any sub-dimensions and determine the most parsimonious number of behavioural domains. Furthermore, Cronbach's alpha was used to investigate reliability across domain scores. To assess whether untrained raters could differentiate resistance from non-resistance, Wilcoxon-Pratt signed-rank tests were computed to compare thin slice ratings of client behaviour on resistance versus non-resistance clips. Specifically, thin slice ratings on 90-s resistance and 90-s non-resistance clips of the same therapist-client dyad were paired for each untrained rater to assess whether the two forms of interaction were differentiated. Moreover, as typically utilized in thin slice research, the predictive validity of thin slice ratings was examined via correlation analyses (e.g., Ambady & Rosenthal, 1993; Nguyen & Gatica-Perez, 2015) between the two groups of raters (e.g., untrained raters and expert coders). As such, to investigate whether untrained thin slice ratings on 90-s therapy clips (depicting resistance or non-resistance) could predict experts' global coder-ratings of the full (1-hr) session, Spearman's rank correlations were computed. Similarly, to examine whether untrained thin slice ratings on 90-s therapy clips (depicting resistance or non-resistance) could predict therapy clients' WAI-S ratings for the (1-hr) session, Spearman's rank correlations were computed. For exploratory aims, Spearman's correlation analyses were also performed to identify key client behavioural rating domains predictive of expert and client ratings of the larger sessions.

Furthermore, given that the 40 clips (n = 20 resistance and n = 20 non-resistance) displayed interactions between 20 clients and 12 therapists, nesting of therapists (i.e., the same therapist with numerous clients), along with duplicate displays of each client (i.e., once in resistance and once in non-resistance clips) were considered potentially important covariates in the present study, requiring control. However, given that the clips did not display the therapist (i.e., clips exclusively displayed the client on screen, with the therapist's voice in the background), it is unlikely that raters were able to identify a therapist from one clip to another based on recognizing the voice. Additionally, given the a) randomized presentation order of clips, b) time gap between the display of the same therapist-client dyad, c) rapid nature of thin slice ratings, d) briefness of the clips, and e) lack of any numeric values attached to thin slice ratings, it is unlikely that raters were exposed to recall bias when rating the second clip of a therapist-client dyad. In other words, rater observation of clips can be considered independent of one another, and therefore, adjustments for the nested structure of the therapist-client sample were not warranted.

Results

Assessment of Normality, Outliers, Monotonicity, and Linearity

The normality of the distribution of thin slice ratings was assessed using a Shapiro-Wilk test, and the results showed that the distribution was not normal ($p < .001$). Visual examination of box-whisker and Q-Q plots demonstrated data non-normality and the presence of outliers. Moreover, inspection of scatterplots demonstrated that the relationship between the data were monotonic and potentially nonlinear. Accordingly, as recommended by Liao et al. (2016) nonparametric rank-based tests, given their robustness to outliers and suitability for data nonnormality and potential nonlinearity, were used.

Assessment of Data Dimensionality

An exploratory factor analysis was conducted to examine the dimensionality of the thin slice measure developed for this study. The results are presented in Table 1. This analysis demonstrated that all ten client behavioural domains had large loadings into a single factor (loadings 0.648–0.813), with 55% of the total variance explained by this factor. Furthermore, a scree plot revealed this single factor to be the largest one with the largest eigenvalue (5.99), and all other factors showed eigenvalues below 1. In sum, the measure appeared unidimensional with no subdimensions. Moreover, Cronbach's alpha was calculated to examine the reliability of the ten behavioural domains. There was strong consistency among the 10 domains with Cronbach's $\alpha = .92$ (95% CI .91–.94). Cronbach's alpha scores of above .80 suggest a large degree of consistency between the domains (Kline, 1999). That is, all ten domains exhibited similar scores, and worked well together as an overall measure. Based on the above analysis and the finding of unidimensionality among the client behavioural rating domains, a single composite score was created for each clip, consisting of each rater's average score across the ten domains.

Primary Analyses

Differentiation of Resistance from Non-Resistance via Thin Slice Ratings

Wilcoxon-Pratt signed-rank tests were computed by pairing each raters' thin slice ratings on the resistance and non-resistance clips of the same therapist-client dyad to assess whether the two forms of interaction were differentiated. The results are presented in Table 2. As hypothesized, there was a significant difference between the composite of thin slice ratings of resistance versus non-resistance clips across the overall 10 domains combined, $z = 18.66$, $p < .001$. As shown in the table, thin slice ratings of resistance clips had significantly higher values than those of non-resistance clips, suggesting that untrained raters reliably differentiated the two types of interaction. However, all median values (whether for resistance or non-resistance) were negative. As noted earlier (in the Method section), resistance was assigned to the positive side of the bipolar scale, while non-resistance was assigned to the negative side. Thus, negative median values for both clips indicated that while raters differentiated between the two forms of interaction, they did not categorize resistance clips as poor process or a negative form of interaction. Table 3 presents the means and standard deviations of the ratings on resistance and non-resistance clips.

Prediction of Expert Session Ratings from Untrained Thin Slice Ratings

Resistance Clips. Spearman's rank correlations were calculated to examine whether untrained ratings on 90-s resistance clips were predictive of expert global coder-ratings of resistance for the larger (1-hr) session. The correlations are presented in Table 4. As hypothesized, a positive, statistically significant correlation was found between the composite score of untrained thin slice ratings of resistance clips and expert global resistance coder-ratings of the session, $r_s(18) = .59$, $p = .006$. A large (i.e., $r \geq 0.5$; Cohen, 1988) and positive correlation coefficient suggests that higher untrained thin slice ratings of resistance were significantly associated with higher expert global coder-ratings of resistance for that session.

Non-Resistance Clips. Spearman's correlations were calculated to examine whether untrained ratings on 90-s non-resistance clips were predictive of expert global coder-ratings of resistance for the larger (1-hr) session. The correlations are presented in Table 4. As hypothesized, no statistically significant correlation was found between the composite score of thin slice ratings of non-resistance clips and expert global resistance coder-ratings of the session, $r_s(18) = .05$, $p = .848$. A non-significant correlation coefficient suggests that untrained raters' thin slice ratings of non-resistance clips were unrelated to expert global coder-ratings of resistance for that session.

Prediction of Client Alliance Ratings from Untrained Thin Slice Ratings

Resistance Clips. Spearman's correlations were calculated to examine whether untrained ratings on 90-s resistance clips were predictive of client WAI-S ratings for the larger (1-hr) session. The correlations are presented in Table 5. As hypothesized, a negative, statistically significant association was found between the composite score of thin slice ratings of resistance clips and client post-session WAI-S ratings, $r_s(18) = –.47$, $p = .037$. A medium to large (i.e., r = 0.3 - 0.5; Cohen, 1988) negative correlation coefficient suggests that untrained raters' higher ratings of resistance were associated with lower client post-session WAI-S ratings.

Non-Resistance Clips. Spearman's correlations were calculated to examine whether untrained ratings on 90-s non-resistance clips were predictive of client WAI-S ratings for the larger (1-hr) session. The correlations are presented in Table 5. As hypothesized, no statistically significant correlation was found between the composite score of thin slice ratings of non-resistance clips and client post-session WAI-S ratings, $r_s(18) = .14$, $p = .543$. A non-significant correlation coefficient suggests that untrained raters' thin slice ratings of non-resistance clips were unrelated to client post-session WAI-S ratings.

Exploratory Analyses

Influence of Client Behavioural Rating Domains on Resistance Detection

The factor analysis results were examined to determine which of the ten client behavioural domains were most influential in facilitating resistance detection among untrained raters. As noted earlier, Table 1 presents the relative contribution of each behavioural domain to the composite scores created. As revealed in this analysis, the three most influential client behavioural domains that aided resistance detection were "Agreeing vs. Opposing" (0.813), "Receptive vs. Defensive" (0.796), and "Calm vs. Angry/Annoyed" (0.782).

Client Behavioural Domains Predictive of Expert Session Ratings

Resistance Clips. Spearman's correlations between thin slice ratings of 90-s resistance clips and expert global coder-ratings of resistance for the 1-hr session were explored for each of the ten client behavioural domains. The correlations are presented in Table 4. The behavioural domains of "Calm vs. Angry/Annoyed" (r_s = .64), and "Content vs. Frustrated" (r_s = .62) revealed statistical significance at the p <.005 level. Additionally, the behavioural domains of "Receptive vs. Defensive" (r_s = .54), "Relaxed vs. Tense" (r_s = .48), and "Supported vs. Dominated" (r_s = .46) showed significance at the p < .05 level.

Non-Resistance Clips. Spearman's correlations between thin slice ratings of 90-s non-resistance clips and expert global coder-ratings of resistance for the 1-hr session were explored for each of the ten client behavioural domains. The correlations are presented in Table 4. None of the client behavioural domains on non-resistance clips revealed statistically significant correlations to expert global coder-ratings of resistance for the session.

Client Behavioural Domains Predictive of Client Alliance Ratings

Resistance Clips. Spearman's correlations between thin slice ratings of 90-s resistance clips and client WAI-S ratings for the 1-hr session were explored for each of the ten client behavioural rating domains. The correlations are presented in Table 5. The client behavioural domain of "Relaxed vs. Tense" (r_s = –.58) revealed significance at the p < .01 level. Additionally, the behavioural domains of "Engaged vs. Disengaged" (r_s = –.52), "Free vs. Reluctant" (r_s = –.47), and "Receptive vs. Defensive" (r_s = –.46), showed significance at the p < .05 level.

Non-Resistance Clips. Spearman's correlations between thin slice ratings of 90-s non-resistance clips and client WAI-S ratings for the 1-hr session were explored for each of the ten behavioural domains. The correlations are presented in Table 5. None of the client behavioural domains on non-resistance clips revealed statistically significant correlations to client post-session WAI-S ratings.

Discussion

Given its relative invisibility within psychotherapy (Hara et al., 2015; Westra & Norouzian, 2018), the present study sought to empirically assess the accuracy and predictive validity of thin slice ratings of client behaviour for the detection of client resistance. Specifically, for assessing the accuracy of untrained raters' differentiation of resistance, as well as the predictive validity of thin slice ratings, the same set of therapy session videos and the ratings of the same set of expert coders (Aviram et al., 2016) were utilized. As expected, the results demonstrated that untrained raters rapidly and reliably differentiated client resistance from non-resistance using 90-s thin slice observations of client behaviour. Further, untrained raters' thin slice ratings of resistance (relative to non-resistance) predicted the corresponding larger 1-hr sessions' expert global resistance ratings and client working alliance ratings. These findings demonstrate that untrained raters were able to register differences in client behaviour during moments of resistance and non-resistance, and accurately use those observations to rapidly detect resistance in therapist-client interactions. Moreover, various client behavioural rating domains were examined as correlates of resistance, demonstrating that the thin slice paradigm may offer a simple approach to identifying key observable client behaviours for rapid and early detection of resistance, and prediction of its associated proximal outcomes.

The following discussion first describes each of the primary findings in relation to the larger context of the resistance literature. Subsequently, the exploratory findings are discussed with respect to the key client behaviours that may enable resistance detection and prediction of its proximal outcomes. Implications for training are subsequently outlined, and a discussion is offered on the strengths and limitations of the study, as well as future directions for research.

Primary Analyses

Differentiation of Resistance from Non-Resistance via Thin Slice Ratings

In the present study, untrained raters demonstrated an ability to distinguish resistance from non-resistance clips rapidly and accurately using brief observations of client behaviour. Accordingly, the study's first hypothesis was supported as thin slicing facilitated resistance detection, despite raters' lack of prior resistance or psychotherapy training. This finding is notable as prior process research has often cited the complex and covert nature of the phenomenon and underscored the importance of conscious and deliberate practice for its appropriate detection and management (Hara et al., 2015; Shukla et al., 2020). Extending this literature into the nondeliberate aspects of resistance perception, the present finding suggests the utility of automatic cognitions in perception-formation on resistance. Specifically, this finding demonstrates that relational tensions in psychotherapy (i.e., resistance), although often underrecognized or overlooked consciously (Binder & Strupp, 1997; Hara et al., 2015), appear to register on an automatic, nondeliberate level of cognition, impacting intuition-based judgments.

Notably, analyses of untrained raters' automatic, rapid ratings on the bipolar behavioural domains revealed that, on average, resistance clips were rated as representing a less positive therapy process (i.e., lower levels of client "engagement" and "receptivity") than non-resistance clips. That is, raters accurately inferred the phenomenon's presence and considerably dropped their ratings on resistance clips. However, while rating scales were bipolar to permit raters to evaluate the phenomenon and the associated therapeutic process (therapist-client interaction) as either a positive or negative form of interaction, raters exclusively differentiated resistance from non-resistance on the positive process side of the bipolar scale. In other words, untrained raters accurately detected when the relational process was "off" between a given therapist and client (i.e., depicted resistance), but did not categorize the phenomenon as negative process. Instead, the ratings demonstrate that resistance was viewed as an inherently less positive form of interaction rather than a negative one.

This latter finding reveals an important distinction between detection and classification skills which (to the best of my knowledge) has previously remained undiscussed within process research on resistance. Specifically, it demonstrates the separability of these two forms of skill, suggesting that classification may be a more sophisticated skill with respect to perceiving resistance. That is, observers may be able to detect the phenomenon using thin slicing, but appreciation of its negative nature and detrimental impact on therapy process and outcome (Westra & Norouzian, 2018) requires specialized training. Accordingly, this finding poses the implication that failures to accurately perceive resistance may not always be failures in detection, but in classification. As shown, it is possible to detect resistance but simultaneously hold the misconception that the therapeutic process is positive and healthy.

Such a misconception may be especially possible given that client resistance is often concealed and presented deferentially (Rennie, 1994b) which may detract the observer from fully recognizing client resistance to the process. Furthermore, research findings of the general therapist tendency to minimize and overlook this phenomenon (e.g., Hara et al., 2015), may potentially be due to this misperception of the process as positive, rather than a poor or "negative process" (Binder & Strupp, 1997). Hence, the ability to link resistance to the negative relational processes within which they reside (Binder & Strupp, 1997; Westra, Aviram, et al., 2009) may be an essential area to target in training. Thus, the present finding suggests that while training on resistance is required as noted by previous researchers (e.g., Aviram et al., 2016; Hara et al., 2015; Westra & Norouzian, 2018), it may be particularly crucial for advancing classification skills, which emerged as an area of significant difficulty for novice observers.

Prediction of Expert Session Ratings from Untrained Thin Slice Ratings

In the present study, thin slice ratings by untrained raters on 90-s resistance (relative to non-resistance) clips of a given therapist-client dyad strongly predicted experts' global resistance ratings of the full (1-hr) session of the same dyad. Specifically, support for the second hypothesis emerged from an empirical assessment whereby the two sets of thin slice ratings (on resistance and non-resistance) by untrained raters were correlated to the same set of expert global ratings of resistance for the larger corresponding sessions. The first assessment revealed that thin slice ratings on resistance clips were strongly associated with experts' global resistance ratings of the session. Further supporting this finding, the second assessment demonstrated that thin slice ratings on non-resistance clips revealed no correlation to experts' global ratings of that session.

The above empirical process strengthens the probability that untrained raters and expert coders were indeed both perceiving and evaluating the same phenomenon (i.e., resistance). Further, the strong association between the two groups (i.e., untrained raters and expert coders) suggests that untrained raters recognized nuances in the quality of the therapy process and systematically varied their evaluations of resistance in relative consistency with those of experts. When there was greater resistance, both groups captured this higher level in their ratings, and when there were lower levels, both groups offered ratings reflecting this reduced level. Therefore, although untrained raters did not classify resistance as negative process (Binder & Strupp, 1997), their intuitive sense of the phenomenon as "less positive process", was sufficient in a) enabling accurate detection of resistance in the moment, b) accurate prediction of the overall level of resistance as expressed by the client in the larger session, and c) accurate prediction of experts' end-of-session global resistance ratings of that session.

These are intriguing findings for several reasons. First, prior resistance research has not examined the concordance between untrained and expert observer perspectives on resistance, as conventional wisdom would suggest substantive differences in perceptual capacity between the two groups. As such, relevant studies have often recruited clinicians as the group of investigative interest, whereby expert coder-ratings of resistance were found to be strong predictors of a range of assessed client outcomes, while therapist post-session Likert and VAS ratings of resistance largely were not (Hara et al., 2015). In contrast, the present study utilized thin slice ratings as an alternative approach to observing resistance, removing confounds such as training and experience levels. This approach demonstrated a degree of perceptual convergence between the expert and the novice, which may be unexpected given raters' lack of training and the briefness of the clips from which experts' global session ratings of resistance were predicted.

Secondly, thin slice ratings of resistance (versus non-resistance) clips accurately predicted clients' overall-level of resistance as expressed within the larger session. As such, even a brief dose of resistance (90-s) was demonstrated to be outcome-predictive and rich with information predictive of the full-hour therapy session. Such a finding supports prior conceptualizations of resistance as a strong predictor of outcome (Westra, 2011), and a key moment in therapy (Westra & Norouzian, 2018). This finding also aligns well with prior research demonstrating that occurrences of resistance are typically highly correlated across time (e.g., Button et al., 2015). Thus, while only a preliminary finding and requiring replication, this result suggests that observing only 90-s of client resistance-related behaviour may uniquely permit approximation of the overall resistance level expressed during the 1-hr session.

Finally, it is notable that thin slice ratings, predicated entirely on intuition-based automatic cognitions (Ambady, 2010; Ambady et al., 2000) enabled accurate prediction of experts' end-of-session global ratings of resistance which were based on extensive training and analyses of the 1-hr therapy session. As noted by Hara et al. (2015), process coding for resistance is "highly labor-intensive and time-consuming" (p. 166). Thus, it is notable that thin slicing as a novel observational approach permitted rapid detection of resistance among untrained raters. This finding suggests that anchoring novice observers' perceptual process to key domains of client behaviour may be essential in facilitating rapid detection of this difficult-to-perceive phenomenon (see Exploratory Analyses for details). Accordingly, the present finding extends the literature on resistance detection, and begins to fill a gap in the thin slice literature on the utility of thin slicing not just for detecting positive relational qualities (e.g., Aloni & Bernieri, 2004; Bernier et al., 1996), but also negative ones (e.g., resistance) which remain underexplored.

Prediction of Client Alliance Ratings from Untrained Thin Slice Ratings

In the present study, thin slice ratings by untrained raters on 90-s resistance (relative to non-resistance) clips of a given therapist-client dyad predicted the client's working alliance ratings of the larger (1-hr) session. As such, support for the third hypothesis emerged from an empirical assessment whereby the two sets of thin slice ratings (on resistance and non-resistance) by untrained raters were correlated to the same set of client working alliance ratings on the larger corresponding sessions. Specifically, the first assessment provided support as a moderate inverse association was found between untrained raters' thin slice ratings on resistance clips and clients' post-session working alliance ratings. Further supporting this finding, the second assessment showed no association between thin slice ratings on non-resistance clips and clients' post-session working alliance ratings.

The present finding suggests that untrained raters were able to rate different levels of resistance in a manner that corresponded well with clients' subjective post-session ratings of the working alliance. When there was greater resistance, thin slice ratings on resistance clips effectively predicted clients' reduced ratings of the working alliance, and when there was lower resistance (or no resistance), ratings successfully predicted clients' higher alliance ratings. As such, these findings align well with prior resistance research which has suggested an inverse relationship between resistance and client working alliance ratings (e.g., Hara et al., 2015).

The fact that thin slice ratings demonstrated predictive validity on both objective and subjective measures of resistance (i.e., by experts and therapy clients) suggests a level of rater perceptual attunement to the phenomenon which makes the methodology promising for resistance detection and related research and training. An essential goal in training is to increase therapist-trainees' observational efficacy on critical process phenomena, such as resistance (Aviram et al., 2016; Hara et al., 2015; Westra & Norouzian, 2018) and preliminary evidence from the present study suggests that thin slicing may mobilize such an ability for resistance detection. Altogether, the findings from the primary analyses suggest that perhaps resistance detection might not have to be as challenging as current empirical research suggests. The application of the thin slice paradigm and methodology may offer a novel and simpler approach. Exploratory analyses and the next steps for such an approach are described in the next section.

Exploratory Analyses

As noted by Ambady and Rosenthal (1992), accurate detection and prediction of phenomena via thin slices requires observation of expressive behaviours. Within the context of resistance, identification of such behaviours has remained a neglected aspect of the literature. As such, the exploratory aims of the present study sought to identify key observable behaviours that may have aided resistance detection. Three analyses were conducted for these final aims.

The first assessment entailed a factor analysis to examine the most influential client behavioural domains in facilitating resistance detection. While all behavioural domains had utility in working together as an overall instrument, the behavioural domains of “Agreeing vs. Opposing”, “Receptive vs. Defensive”, and “Calm vs. Angry/Annoyed” emerged as the strongest contributors to raters’ differentiation of resistance from non-resistance. Given the measure’s unidimensionality, this finding suggests that thin slice ratings of client behaviour on these three domains may together offer an even simpler approach to detecting resistance.

The second level of analysis aimed to identify the client behavioural domains predictive of experts’ global session ratings of resistance. Within this analysis, client behavioural domains of “Receptive vs. Defensive”, “Relaxed vs. Tense”, and “Supported vs. Dominated” were significant. Additionally, the domains of “Calm vs. Angry/Annoyed” and “Content vs. Frustrated” were significant at the Bonferroni-corrected significance level. Thus, the present findings suggest that perceptual attunement to these client behavioural domains may be crucial in facilitating “expert-like” perception among untrained observers in resistance detection. That is, observing client emotion and behaviours in relation to feeling “anger”, “annoyance”, or “frustration” may offer simple yet salient observable clues to aid resistance detection.

The final level of analysis concerned the identification of client behavioural domains predictive of client post-session working alliance ratings. The domains of “Relaxed vs. Tense”, “Engaged vs. Disengaged”, “Free vs. Reluctant”, and “Receptive vs. Defensive” were significant. However, none of the domains were significant at the Bonferroni-corrected level. Given these preliminary findings, more research is needed to expand on the current results.

However, these exploratory analyses suggest that client behaviours during resistance may hold predictive capacity, and directly investigating the relationship between resistance behaviours and client outcomes may enable the identification of key behaviours central to resistance and associated therapy outcomes.

In sum, these preliminary findings demonstrate the potential utility that specific client behavioural domains may have in aiding resistance detection. At present, research is underway on a simplified therapist self-observation system that can enable clinicians to self-monitor on key domains of therapist behaviour (Demand versus Support) to responsively manage client resistance in real-time to improve therapeutic practice (Shukla et al., 2020; Westra et al., 2020). Parallel to this line of research, the present findings suggest that the thin slice research paradigm may present a suitable approach with which to rapidly assess a broad range of client behaviours and identify the key client behaviours that clinicians may be able to monitor to rapidly detect resistance. Thus, further research to find such client behavioural predictors, and empirical assessment of their utility within clinical and training settings, might be useful for the development of a simplified client observation system for rapid real-time clinical detection of resistance.

Training Implications

In a seminal work on perception, Gibson (1966) proposed that the process of perceptual attunement entails the "*noticing* of the critical differences with less noticing of irrelevancies" (p. 52) in the detection and differentiation of phenomena. It is the focusing of attention to the more relevant features of a phenomenon (Gibson, 1966, p. 51). As an initial step toward the development of such a training method, the present study brought together the literature on resistance and thin slicing to investigate observers' automatic cognitions on resistance and initiate research on the key relevant client behaviours that may enable its rapid detection. The preliminary finding of the utility of thin slicing in resistance detection has several training implications.

First, thin slice methodology and its efficacy is predicated on evocation of observers' thin slice capacities (Ambady & Rosenthal, 1992, 1993). This means that using automatic, intuition-based judgments (Ambady, 2010; Ambady et al., 2000) may readily convey to observers when the therapeutic process deviates from productive trajectories. For instance, within the present study, raters were able to make use of these automatic, intuition-based, cognitions to rapidly detect resistance despite any training on this phenomenon. This is as an important advantage in utilizing thin slicing to facilitate training on resistance, given that observers can begin from a place of intuitive understanding, with further training delivered to advance this existing ability (see Ambady, 2010; see also Ambady et al., 2001).

Second, as noted previously, the often-covert processes of client resistance render its detection challenging (Hara et al., 2015). However, the embeddedness of the phenomenon within the vast stream of information in the psychotherapeutic encounter further obscures its detectability. Current research underscores the importance of video-based observational training utilizing full-length psychotherapy session videos (e.g., Binder & Strupp, 1997; Hara et al., 2015). Building on this prior recommendation, the present study suggests that thin slice clips of resistance and non-resistance may provide a simple and efficient alternative (to the use of full-length video sessions), with which to facilitate training on the phenomenon.

Third, given the predication of thin slicing on intuition and first impressions (Ambady, 2010; Carney et al., 2007), this method may afford trainees one route to learning to monitor the experience of the self on an ongoing interpersonal basis with the client to better discern relational disharmony. Complex self-monitoring skills have been identified as essential to therapist efficacy in managing resistance and negative process (Binder & Strupp, 1997). In addition, much research on resistance has demonstrated therapists' reliance on directive behaviours during client resistance (Westra & Norouzian, 2018). Thus, a training method that encourages greater therapist attention to intuition and internal experience during client observations, may be the first step toward fostering the self-monitoring skills required to inhibit reactionary responses in favour of more productive ones.

Finally, the present study emphasizes the importance of client observation in the detection of resistance. That is, resistance is accompanied by important observable client behaviours, which despite their subtly or nuance, may present as valuable indicators of resistance. These include behavioural expressions of anger, annoyance, or frustration, which observers and clinicians may be able to utilize as possible signals to detect resistance. In other words, if replicated in future research, such client behaviours may have clinical utility in enabling clinicians to better perceive the emergence of resistance and to use such observations to shift into a contextually-responsive supportive strategy to appropriately manage the phenomenon (e.g., Constantinto et al., 2013; Westra & Norouzian, 2018). Moreover, the ability to observe resistance-related client behaviours and to classify them as a product of negative process (Binder & Strupp, 1997; Hara et al., 2015) will be especially critical in training observers to have a fuller and more accurate perception of the therapeutic process, in order to respond more effectively to client resistance to improve therapy process and outcome.

Strengths, Limitations, and Future Directions

The present study had several strengths pertaining to its design and methodology. First, the thin slices created for the present study were derived from full-length video-taped sessions of an allegiance-controlled RCT in which CBT was provided for GAD (Westra et al., 2016), with therapy sessions investigated in multiple prior studies (e.g., Aviram et al., 2016; Constantino et al., 2019; Hara et al., 2015). As such, therapy sessions were rigorously analyzed for resistance and process-coded by multiple resistance expert coders. Moreover, the selection of resistance and non-resistance clips from the same therapist-client dyad in the same session is another notable strength, as this design permitted the creation of thin slices which differed primarily on whether resistance was present or absent. Thus, the clips in the two conditions were matched on multiple variables, thereby reducing the impact of extraneous variables on thin slice ratings.

Another strength of the current study was its validation of thin slice ratings against strong objective and subjective measures of the criterion variable. Specifically, thin slice ratings were compared against expert resistance coder-ratings using an empirically validated resistance detection system (i.e., adapted CRC; Westra, Aviram, et al., 2009). Moreover, thin slice ratings were compared against client post-session WAI-S ratings (Horvath & Greenberg, 1989). Thus, thin slice ratings were validated using highly reliable and well-validated measures.

The present study also had limitations. Of note were the relatively small sample size of untrained raters (n = 17) and therapy session videos (n = 20) used to capture thin slice ratings. Ideally, a larger sample of video clips (i.e., client-therapist dyads) would have enabled a more robust examination of the predictive validity of thin slice ratings with regards to client outcomes. However, the present study purposely restricted thin slice clips to a sample of 40 (i.e., 20 resistance and 20 nonresistance clips) to reduce the possibility of rater fatigue affecting the thin slice ratings. Thus, replication of results with a larger sample of untrained raters and therapy videos may permit the necessary study power to further explore the predictive validity of thin slice ratings especially regarding distal client outcomes.

Another limitation was that experts and untrained raters used different instruments to assess resistance. For instance, the thin slice measure used by untrained raters permitted evaluations of non-resistance clips on a 10-point scale. In contrast, given that the coding system used by experts was exclusively a resistance detection system, all non-resistance clips were rated with a single coder-rating of '0' to code the absence of resistance (Westra, Aviram et al., 2009). Given these differences in the instruments used, it was not possible to make a direct comparison of expert coders and untrained raters on the thin slice clips directly. For this reason, the experts' global session ratings of resistance were used for comparison, which had the advantage of enabling the examination of the predictive validity of thin slice ratings. Nevertheless, future research should investigate resistance detection processes by directly having experts and untrained raters assess thin slices, using the same measure.

A further potential limitation of the study is that the findings are not generalizable to clinicians. While there is evidence that graduate-level clinicians (like untrained observers) appear not to possess the clinical skills required for detecting and coping with resistance (Binder & Strupp, 1997; Hara et al., 2015), how clinicians may perform compared to untrained raters in the detection of resistance remains an important empirical question. However, as a first test of thin slicing in resistance research, it was of interest to hold as many variables as possible constant to precisely assess the merits of the thin slice approach for resistance detection. As such, recruiting untrained raters with no prior psychotherapy training was advantageous. Nevertheless, given the multitude of demands operating on clinicians within the therapeutic process (e.g., management of transference/countertransference), it would be critical for future research to directly examine the utility of thin slicing for resistance detection among clinicians.

Conclusion

It has been argued that the detection and management of negative process phenomena such as resistance require accurate deciphering of moment-to-moment therapist-client transactions, along with “radical innovations in training” to enable trainees to effectively develop the complex interpersonal and self-monitoring skills required to navigate this process (Binder & Strupp, 1997, p. 135). As an initial step toward developing such a training method, the current study utilized the thin slice paradigm for the study of resistance detection, and found preliminary evidence for the utility of thin slicing in facilitating resistance detection among untrained observers. More promising, thin slice ratings, predicated on automatic cognitions and brief observations (Ambady, 2010; Ambady et al., 2000) of client behaviour, demonstrated predictive validity with respect to session ratings by expert resistance coders and therapy clients.

Importantly, this paradigm and methodology enabled identification of some of the key client behavioural indicators of resistance that may aid rapid detection of the phenomenon. Hence, replicating and further extending such findings may be critical in explicating a readily observable basis for resistance to aid clinician detection and contextually-responsivity to the phenomenon, in efforts to improve therapy process and outcome (Aviram et al., 2016; Constantino et al., 2013; Westra & Norouzian, 2018; Westra et al., 2020). In sum, the thin slice paradigm and methodology may offer a suitable route to generating new empirical insights on resistance, and simple ways to advance training efforts to improve clinician performance, and most importantly, client experience and outcomes in psychotherapy.

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Tables

Table 1

Factor Loadings of the Behavioural Rating Domains using Exploratory Factor Analysis

Behavioural Domains	Rotating Factor Loadings
Agreeing vs. Opposing	0.813
Receptive vs. Defensive	0.796
Calm vs. Angry/Annoyed	0.782
Understood vs. Criticized	0.752
Free vs. Reluctant	0.739
Engaged vs. Disengaged	0.732
Content vs. Frustrated	0.728
Warm vs. Cold	0.726
Supported vs. Dominated	0.724
Relaxed vs. Tense	0.648

Table 2

Wilcoxon-Pratt Signed-Rank Test Comparing Thin Slice Ratings of Resistance Versus Non-Resistance Clips

Behavioural Domains	Resistance		Non-Resistance			Wilcoxon-Pratt Signed-Rank Test P-Value
	Mdn	*IQR*	*Mdn*	*IQR*	*Z*	
Free vs. Reluctant	–2.55	7.28	–4.30	5.16	7.33****	$p < .001$
Receptive vs. Defensive	–2.48	6.02	–3.79	4.49	6.32****	$p < .001$
Agreeing vs. Opposing	–2.52	7.24	–3.62	4.91	6.20****	$p < .001$
Warm vs. Cold	–1.96	6.06	–3.21	5.22	5.24****	$p < .001$
Supported vs. Dominated	–2.25	6.16	–3.38	4.92	5.20****	$p < .001$
Understood vs. Criticized	–2.44	6.11	–4.52	5.23	7.21****	$p < .001$
Calm vs. Angry & Annoyed	–2.24	6.60	–3.44	5.62	4.77****	$p < .001$
Content vs. Frustrated	–0.78	7.03	–2.60	6.35	5.06****	$p < .001$
Relaxed vs. Tense	0.29	7.06	–2.41	7.85	5.36****	$p < .001$
Engaged vs. Disengaged	–4.30	6.39	–5.70	5.73	6.19****	$p < .001$
Overall (10 domains)	–2.24	6.91	–3.64	5.50	18.66****	$p < .001$

Note. Each domain consisted of 20 paired ratings (i.e., ratings on the resistance and non-resistance clips of the same therapist-client dyad) obtained from 17 raters.

Mdn = Median. IQR = Interquartile Range.

* $p < .05$. ** $p < .01$.*** $p < .005$. **** $p < .001$.

Table 3

Means and Standard Deviations for Thin Slice Ratings on Resistance and Non-Resistance Clips

Behavioural Domains	Resistance		Non-Resistance	
	M	*SD*	*M*	*SD*
Free vs. Reluctant	–2.02	4.66	–4.13	3.90
Receptive vs. Defensive	–2.21	4.18	–3.78	3.33
Agreeing vs. Opposing	–2.16	4.53	–3.88	3.22
Warm vs. Cold	–2.01	4.15	–3.47	3.41
Supported vs. Dominated	–2.04	4.45	–3.41	3.91
Understood vs. Criticized	–2.67	4.23	–4.48	3.37
Calm vs. Angry & Annoyed	–2.45	4.58	–3.88	3.69
Content vs. Frustrated	–1.17	4.78	–2.70	4.14
Relaxed vs. Tense	–0.33	5.00	–2.02	4.73
Engaged vs. Disengaged	–3.83	4.56	–5.49	3.42
Overall (10 domains)	–2.09	4.60	–3.72	3.84

Note. Thin slice ratings on each bipolar domain were captured on a scale of –10 to +10. Positive values (0 to +10) were assigned to resistance/negative process indicators (e.g., “defensive”, “reluctant”, “disengaged”), and negative values (–10 to 0) were assigned to non-resistance/positive process indicators (e.g., “receptive”, “engaged”, “calm”). Note that as resistance and non-resistance clips were both rated on the positive process side of the scale, larger values (e.g., –2.09) indicate lower levels of perceived positive process and smaller values (e.g., –3.72) indicate higher perceived positive process.

Table 4

Spearman's Correlations between Thin Slice Ratings and Expert Session Ratings

Behavioural Domains	Resistance		Non-Resistance	
	r_s	p	r_s	p
Free vs. Reluctant	.36	.124	.11	.642
Receptive vs. Defensive	.54*	.014	.09	.717
Agreeing vs. Opposing	.44	.053	.05	.818
Warm vs. Cold	.40	.084	.09	.695
Supported vs. Dominated	.46*	.041	.23	.340
Understood vs. Criticized	.41	.073	.31	.184
Calm vs. Angry & Annoyed	.64***	.002	–.13	.597
Content vs. Frustrated	.62***	.003	–.25	.285
Relaxed vs. Tense	.48*	.032	.05	.828
Engaged vs. Disengaged	.44	.052	.01	.952
Overall (10 domains)	.59**	.006	.05	.848

Note. Mean scores on individual domains across n = 20 resistance and n = 20 non-resistance clips from 20 therapist-client dyads from the larger RCT (Westra et al., 2016) obtained from 17 raters.

* $p < .05$. ** $p < .01$. *** $p < .005$.

Table 5

Spearman's Correlations between Thin Slice Ratings and Client Alliance Ratings

Behavioural Domains	Resistance		Non-Resistance	
	r_s	p	r_s	p
Free vs. Reluctant	–.47*	.035	–.04	.882
Receptive vs. Defensive	–.46*	.040	.03	.897
Agreeing vs. Opposing	–.28	.234	.04	.880
Warm vs. Cold	–.31	.181	.04	.855
Supported vs. Dominated	–.39	.086	–.04	.872
Understood vs. Criticized	–.37	.110	–.02	.945
Calm vs. Angry & Annoyed	–.26	.267	.25	.278
Content vs. Frustrated	–.25	.298	.27	.258
Relaxed vs. Tense	–.58**	.007	.38	.101
Engaged vs. Disengaged	–.52*	.018	.00	.990
Overall (10 domains)	–.47*	.037	.14	.543

Note. Mean scores on individual domains across $n = 20$ resistance and $n = 20$ non-resistance clips from 20 therapist-client dyads from the larger RCT (Westra et al., 2016) obtained from 17 raters.

* $p < .05$. ** $p < .01$. *** $p < .005$.

Appendix A

MANUAL FOR RATING INTERPERSONAL RESISTANCE

Henny A. Westra, Aviram, A., Kertes, A., Ahmed, M., & Connors, L. (2009)

Key Coding Principles/Concepts

Definition of Resistance is "going against, opposing, diverting, blocking, or impeding the direction set by the therapist." This is the core definition and every code counted as resistance must meet this definition.

This system is meant to capture *both* resistance to the therapist, as well as resistance to treatment/therapy (i.e., resistance to being in this treatment/changing). The gestalt concept that the system is meant to capture is *talk and/or process* that reflects pessimism/contrariness/skepticism (e.g., “I don’t buy this,” “this won't work,” “I can't/won't change,” “I won't go along with this,” “I don't agree with you.”)

In a typical therapy session, the therapist is nearly always setting a direction (e.g., asking a question, making a reflection or suggestion), and inviting or asking the client to comply with this direction (i.e., by answering the question, responding to the reflection or suggestion). Therefore, you can nearly always determine 'where the therapist is going.' Client responses can then be coded as to whether or not they 'go along' with the therapist's invitation or request to follow OR go against/block this direction.

Central to coding using this system is that coders continually ask themselves: “*Is this behavior meant to cooperate with the therapist - to go where the therapist is going - or to go against the therapist?*”

This is a process coding system and thus content is secondary. Coders should rely less on the words used, and centrally decipher and rely on what is being communicated beyond the words. That is, coders need to ask: “What is the intention of this client/therapist behavior?” irrespective of the words used. Often, the very same client words can communicate cooperation or resistance. In coding, one is trying to *capture the underlying interpersonal message*. That is, is the client's communication (in its totality) meant to say: “Go ahead; keep going; I'm with you,” or is it meant to say: “Back off; I don't agree; I'm not on board with where you're going.” For example, a client statement of “I don't know” may very well be cooperative (non-resistant) if the client has considered the therapist's question and then seems to genuinely be indicating that they don't know (and the overall tone is one of cooperation). However, these same words (“I don't know”), if stated quickly, carelessly, or with an irritated tone would be communicating resistance. It is also possible for the same response, “I don’t know,” to be coded as both resistance and non-resistance at different time points within the same session. For example, if the therapist repeatedly presses the client for a response, you would want to closely keep an eye on the client’s response because that same response, “I don’t know” - which earlier could have been cooperative (depending on the context), could shift to communicate resistance (i.e., “stop asking me that!”)

Client statements do NOT automatically get coded as resistance. This includes any `counter-change` statement, statement of hopelessness, difficulty completing therapy tasks, or any statement of the problem. These statements can seem to automatically communicate resistance (e.g., "I can`t change," "The homework didn`t work for me," "What you are suggesting seems hard," "I have a lot of problems"), but as mentioned earlier, whether or not these client statements communicate resistance depends on the context. That is, whether or not resistance can be inferred from client responses in such situations *depends on the process with which - and the context in which* - they express their reservations (i.e., how it came about and what it is communicating). Stated differently, a client can articulate all kinds of problems, lack of progress, or even concerns with the therapist or the therapy, but this is not necessarily (and certainly not automatically) coded as resistance - it is not about the content but the interpersonal context - the intent of the client to oppose or block the therapist OR to go along.

To illustrate, if the therapist proposes an experiment and asks the client how they feel about it, to which the client responds that they are afraid and unsure if they can do it – this is NOT coded as resistance because the therapist had asked the client about their feelings, thus giving the client autonomy to express their reservations. Here, the client is actually cooperating with the therapist by responding to their question truthfully. For example, the therapist might say: "I bet this sounds pretty scary. What are your thoughts about this exercise?" to which the client responds with reluctance or reservations. This would NOT be coded as resistance because in process, the client is actually following the therapist`s lead. However, if the therapist either in their initial question or subsequent statements somehow communicates that the client is not free to have reservations, e.g., "Yes, but you`re supposed to feel anxious," and the client continues to articulate their doubts or concerns e.g., "Well, I don`t know about this. It sounds pretty hard," this would be coded as resistance because the client is not going along with the therapist's direction that they should warm up to the proposed task.

Another contextual clue would be *unsolicited* statements of "I can't," "This won't work," "That is hard," etc. That is, if such statements come out of nowhere (i.e., are not elicited by the therapist asking or clearly inviting such responses), then they would likely be expressing objection or resistance to where the therapist is going.

Again, rely less on the content than the interpersonal context. Ask yourself: "What is really going on here interpersonally?" "What is the client`s statement/behavior meant to communicate to the therapist - beyond the words they use?"

To take another example, if the therapist is in the middle of proposing a homework assignment, and the client jumps in to indicate that they don't think they can do it (i.e., the client's message is not meant to help the therapist adjust the homework to the client's preferences, but to abandon the homework altogether, thus taking control away from the therapist), this will be coded as resistance.

In other instances, a therapist may be asking the question while preserving the client`s freedom to answer in whatever way they choose. However, the client's response may still be coded as resistance IF the tone or content makes it clear that they are intending to oppose e.g., "Well, I'm not feeling any better if that`s what you're asking," or "I know you want me to feel better by now, but I really don't." Importantly, although the therapist did not have an agenda when asking this question, the client is responding as if they did, and their intent is clearly meant to oppose the therapist.

Develop an interpersonal paraphrase. This can really help in determining whether a client's response is resistance. Ask yourself: "*What is this client really saying to the therapist on a process or interpersonal level*?" For example, an interpersonal paraphrase for the client statement: "Well, it`s not quite so extreme as what you are saying" might be "Wait a minute, slow down, don`t jump to the conclusions you are jumping to."

Ask yourself: "What is the therapist's intention?" It is also very useful to constantly ask yourself what the therapist wants the client to do. For example, if a therapist asks the client whether something is helpful or unhelpful, and the client responds honestly that they find a given technique unhelpful - this is NOT resistance. The therapist had invited the client to respond truthfully and with autonomy; therefore, although the client may not be on board with a certain technique the therapist had suggested, at this moment they are cooperating *interpersonally* with the therapist by answering them truthfully. If that same therapist question is leading, however (i.e., it is clear from the context that the therapist wants the client to respond that they are feeling better), then the same response: "No, this is not helpful," would be coded as resistance (i.e., opposing the direction of the therapist). Always ask yourself: "Where is the therapist going? What does the therapist want?" Then the client`s response can be assessed for whether or not it complies with this direction.

Trust your gut/Rely on the gestalt. Often, you can `feel` that resistance is present in the interaction, but have difficulty putting this into words right away. What also often occurs during coding is that you `think` or reason through a response so much that you lose the `gestalt` of the response. Always rely on the gestalt. It's important to take a step back and ask yourself: "Is there something wrong/off here?" "*If I were the therapist, would I feel this client is challenging/doubting/questioning/going against/not cooperating with me or the therapy*?" If the answer is "yes, this feels off," then it is likely resistance. Always walk your code through the `final clinical test` (i.e., does it 'feel' like resistance?) Then, make sure you can explain or justify your code.

Ask yourself: "How could this response be turned into something else?" It is also very helpful to ask yourself (when you cannot decide about the form of resistance): "How could this response be turned into something else?" For example, "I think this response is a 1 but how could this be turned into a 0? What would need to be there for this to be a 0?" or "I think this response is a 2, but how would it have to look like in order for it to be a 1?" In other words, considering how the client's response would have to be different in order for it to be something other than the code you think it is (i.e., playing with different versions of it) is helpful when trying to arrive at more confidence in your final code.

A note on the adaptation of the manual. In this adapted coding system, the focus is on interpersonal process (i.e., as opposed to content or client verbalizations). In the original coding system, the focus was on content and process, thus relying more on verbal content and statements than the present system does. Stated differently, in this system, client statements can *never* be coded in isolation of the interpersonal context and message (i.e., of opposition or cooperation) that is being communicated. Interpersonal resistance is nearly always captured in the tone, gestures, speed of response, and other nonverbal aspects of or the 'totality' of the response. The specific words are of course relevant, but are always secondary to the interpersonal message being communicated. Thus, as already noted, the exact same words ("I can't do this" or "This is not working") can be coded as resistance or not resistance, depending on the interpersonal context and the interpersonal message they are communicating (i.e., "I am with you" or "I am going against you"). Therefore, even when considering the examples below of client statements displaying the different types of interpersonal resistance, these must always be considered in terms of the interpersonal context in order to be validly coded (i.e., the message they send to the therapist regarding cooperation or opposition).

Types of Interpersonal Resistance

There are several main types of interpersonal resistance:

- Disagree, Confront, Challenge, Doubt
- Own Agenda / Sidetrack / Interrupting
- Ignoring / Not responding / Not answering
- Questions about treatment

Disagree, Confront, Challenge, Doubt (I won't… I don't agree). Client responses in this category indicate dissatisfaction with the therapy and/or the therapist, disagreements with the therapist, or skepticism about the treatment/therapy/therapist. This category also includes client failure to comply with a session directive or homework, as well as responses indicating that the client does not think the therapist can help the client, complaints about the therapist, disagreements with the therapist's statements or suggestions including "Yes, but..." statements.

Other responses here include any complaints, negativity, skepticism about treatment/change e.g., "You're okay but I don't think this treatment will work for me," or "I really don't have a lot of hope that this will work."

This category also includes remarks of an "I can't" nature. Here, the remarks can be in reference to either change or treatment/therapy e.g., "I can't do thought records," "I can't do that homework," "I couldn't do the homework," "I tried to change my thinking but I can't," "I know it's an unnatural worry but there's nothing I can do that is able to control it." This can also include hopelessness, defeated, self-blaming statements in relation to the treatment/therapist/therapy; i.e., statements indicating an inability of the client to engage with therapy/treatment or change, as well as statements of prolonged, repetitive, defeatist or negative conditions regarding therapy.

<u>VERY IMPORTANTLY</u> (as noted under Key Principles), such statements do NOT automatically get coded as resistance. They must be resistance in process (i.e., they must communicate opposition interpersonally - not just verbally). Stated differently, *it must be clear from the interpersonal context (rather than simply through the words used) that the statement or behavior is meant to oppose, disagree, or challenge the therapist/therapy*.

For example, the statement: “I really don't have a lot of hope that this will work” may not be coded as resistance if the therapist had just asked the client about their thoughts about the utility of treatment. It could be coded as resistance, however, if this statement was unsolicited, came out of nowhere (i.e., the message interpersonally is to oppose), or was in response to a therapist discussing the benefits of treatment (e.g., when presenting the treatment rationale), thus opposing the direction of the therapist.
Responses in this category could also include 'polite' agreement, where the tone or the lack of enthusiasm clearly indicates that the client is not totally on board (e.g., polite or dismissive “yes,” “sure,” “okay,” “sounds good/fine”). There may also be an absence of head nods or non-verbal gestures communicating agreement, which may indicate that the client is not in agreement/not buying what the therapist is saying. This may also include highly impoverished responses, with little to no elaboration (i.e., interpersonally, the client is saying I do not agree). A dismissive or sarcastic tone could also indicate resistance (e.g., "well" or "sure" said sarcastically, or client tone that clearly indicates skepticism/disagreement). Non-verbal behaviour indicating the client has doubts (e.g., sighs or dismissive gestures such as looking away/clearly not paying attention) could also indicate resistance.

It is important to pick up on leading questions made by the therapist. Often these will be obvious from the content of the question itself e.g., “Are you feeling *better* this week?” “Is that the *only* way things could turn out?” Always try to gage what the therapist is really intending (i.e., is there clearly a `right` answer or response to the question or statement?) Then, try to gage whether the client complies with, or provides the response the therapist is expecting or trying to elicit. There may also be instances when leading questions will not be obvious from the question itself, but may be inferred as leading from the context (e.g., the therapist clearly has an agenda for the client to say or see something). Additionally, you will sometimes see the therapist asking what seems like a neutral, autonomy granting, or open question, which is clearly leading e.g., “Did you get a chance to do that thought record?” “Could it turn out differently than you think?”

Note as well that when the disagreement has to do with the client correcting the therapist on some factual matter, but the client and therapist are generally cooperating (i.e., the client’s correction is meant to help the therapist move in the direction they are heading rather than to oppose the therapist’s direction), this will NOT be coded as resistance. Client corrections that are meant to block the therapist, however, will be coded as resistance, even if these are factual. Importantly, this differentiation should not be inferred from the content of the client’s correction (i.e., what is the disagreement about – whether factual or not), but from the timing and the spirit with which the client corrects the therapist. In general, always try to gage whether the client’s disagreement/correction was done to help the therapist move things along in the direction set by the therapist, or if the correction was done to halt/block the therapist. Is the client’s intention to help or block the therapist? For example:

> T: “So you have panic attacks daily”
> C: (friendly tone) “Actually no, not everyday” or “Well, I would not say daily” (NOT resistance)
> (the interpersonal message here is - please continue)

T: “So you have panic attacks daily”
C: “No! (stated firmly) Not everyday” or “I didn’t say everyday. (stated firmly) I said every other day” (Resistance)
(the interpersonal message here might be – “you don’t know what you are doing”)

Own Agenda, Sidetrack, Interruptions. (You won’t, because I won’t let you talk about what you want to). This category includes own agenda responses indicating the client wants to discuss an issue different from the current direction set by the therapist, or instances in which the client persists in discussing tangentially related issues, thus not allowing the therapist to talk. While it is valid for a client to bring up other areas of concern, such responses would be coded as resistant if they indicate that the client is *not attending to the therapist* by bringing up a new topic (i.e., the therapist is trying to set a direction and the client is not going along). This often has the quality of the therapist feeling invisible; i.e., the client acts as if the therapist is not there.

Interrupting. There are two steps in coding interruptions:

1) First determine whether an interruption is resistance or not. *Interruptions are NOT automatically coded as resistance* (i.e., not every interruption sends a negative interpersonal message about control). There are positive and negative interruptions. The context is key in determining which kind of an interruption it is. If the interruption represents friendly talkover (i.e., the client is engaged/cooperating, and thus talks over the therapist, but the context is one of helping/going along/facilitating the direction of the therapist), this is not resistance. However, if the context and intent of the client is to block the therapist (i.e., talk over in order to oppose), then it is coded as resistance. That is, in order for an interruption to be coded as resistance it must occur in an opposing or negative interpersonal context. Ask yourself: “If I were the therapist, would this come across as friendly/helpful or would it come across as blocking me?”

2) Once you have determined that an interruption is resistance, you will need to ensure that it meets the definition of an interruption as follows: If the client begins to talk while the therapist is talking, *but then* quickly relents before saying anything substantive (concedes the floor to the therapist), this would NOT be coded as an interruption because the client considered interrupting, but has chosen to 'follow' the direction of the therapist. Additionally, if the therapist has communicated ‘enough’ of their thought and then begins to trail off (either spontaneously or as the client begins to talk; i.e., the therapist’s new direction is “go ahead and talk”) then this would also NOT be coded as an interruption (e.g., “So you're being somewhat perfectionistic and...” trails off or client starts talking). However, if the therapist raises their voice (i.e., does not trail off but is clearly communicating “I want to continue to have the floor,” “I am not finished yet”), and the client continues to talk, then this is coded as an interruption. As always, in identifying whether an interruption has occurred, the central concept you should pay attention to is whether the client is following the direction set by the therapist (i.e., if the therapist clearly indicates “I want to say something” and the client does not concede, this will be considered an interruption).

In some instances you may see the therapist interrupting the client. Here, the therapist is taking the floor from the client, thus setting a new direction (i.e., "I want to say something"). The key question for coding is: "Does the client stop what they are doing, and follow the new therapist direction (cooperating), or does the client not respond to/take in the information interjected by the therapist (resistance)?" Sometimes, you may see that the client concedes to the therapist's talkover (makes room for the therapist to take the floor), but then does not respond to what the therapist interjected. This would be considered ignoring (see below).

Ignoring and Not Responding. This category includes client responses indicating that they are ignoring the therapist, either by not responding or by going in a different direction (i.e., Own Agenda/Sidetrack). Client responses in this category often have a feel *as if the therapist has not said anything*. Ignoring is coded as resistance because the client is not following the therapist's direction. This is true even if the therapist's statement is a simple reflection or a 'minimal encourager.' That is, it doesn't matter what the therapist is doing – whether they are asking a question, making a reflection, etc. The therapist is always trying to influence the client to follow, and in these instances the client is choosing not to follow (i.e., to ignore or refuse to be influenced by the therapist). Some acknowledgement of therapist responses (even minimal encouragers) would be expected (head nods, "yes," "un-huh," or clear integration or expansion upon what the therapist had said). If the client does not acknowledge or integrate what the therapist has said (i.e., ignoring, going their own way, acting as if the therapist has not said anything), this is resistance.

For example, if the client is telling their story and not responding to the therapist at all although the therapist tries to interject (if only just to track the client's story), or if they don't allow the therapist interject/completely ignore the interjection – this would be considered resistance. Another example of this is if the therapist does manage to interject something, and the client seems to not have heard the therapist at all/acts as if the therapist did not say/ask anything. For example:

> T: "What time would be best for you to do this?"
> C: "What should we do about my husband?" (ignoring – resistance)
> Versus
> "I think evening would be best." (Cooperating – not resistance)
>
> C: "So my daughter was saying that she thought I was too harsh."
> T: "And you`re wondering whether she might be right."
> C: "And then she said I didn`t listen to her and..." (ignoring - resistance)

***Not Responding/Not Answering (You can't… because I won't give you information, or I'll give you inconsistent/wrong information*).** This category includes client responses indicating that they are withholding information by not responding to a question for two seconds or more. Note that *the client's intent must be clearly resistant* (i.e., not just taking time to ponder or think about their response). This category includes not answering, or avoiding answering a direct question. That is, all therapist questions must be answered. Always check to make sure the client's answer is relevant to the therapist's question (i.e., is not ignoring). Examples of client responses to a direct question that are considered resistance include instances in which the client is being evasive, non-direct, or leaves the statement open-ended. In addition, short, curt, highly abbreviated responses may fall here (i.e., one-two word answers in response to the therapist, or clearly resistant, non-cooperative, brief, or 'polite' responses such as “sure,” “ok,” “whatever,” where the client’s tone is clearly resistant). By providing such abbreviated or clipped responses, the client is sending an interpersonal message that they are not going along.

Note, that often what follows a client pause can signal resistance as well (e.g., (pause)... “well...”)

Also, note that “I don`t know” can often signal not answering. Sometimes clients genuinely do not know something, but this should be obvious from the context (e.g., the client pauses before saying I don`t know in order to genuinely consider the therapist’s question). In other instances, “I don`t know” is an opposing response (i.e., “I`m not going to follow you by thinking about this,” “I’m not going to respond to this”).

> T: “How often does he do this sort of thing?”
> C: “I’m not sure.” (said immediately and without further amplification) – Resistance.
>
> T: “If you did nothing, in six months would everything be hunky-dory?”
> C: “It could be, it could not.” – Resistance, because the client is responding to the therapist’s direct question by being evasive (tone must clearly indicate the client is meaning to oppose the therapist by not responding truthfully or taking time to consider the therapist’s question).
>
> T: “What are you expecting to happen in these sessions?”
> C: (laughs) “I don't know.” – Resistance, because client tone is dismissive (i.e., laughter) and client is not going along with therapist direction to discuss their expectations regarding therapy.

A note on coding exposure exercises. In CBT the therapist will at times do exposures in session or assign them for homework between sessions. Clients often experience distress in conducting such exposures (in fact, experiencing distress is a requirement of a 'good' exposure exercise). The client's distress and/or protest at the difficulty of the task is NOT coded as resistance in these situations. For example, one can often see the client 'complaining' that “this is difficult,” “I can't stand it,” “I don't want to do this,” etc. This is not coded as resistance, since it typically does not represent *interpersonal* resistance to the therapist/therapist’s direction, but rather represents *intrapersonal* resistance to anxiety/experience, or may represent descriptions of their experience. In other words, such statements typically do not carry the key message of interpersonal protest directed at the therapist (which is the central construct captured in this system).

However, during such exposures, the therapist will typically continue to engage and dialogue with the client (e.g., “Where is your anxiety rating now?” “What are your thoughts now?” “Take a deep breath”). Such interactions CAN be coded for resistance. That is, the client should still be expected to interact with the therapist when the therapist requests this (e.g., by asking a question, making a reflection, giving a direction). If the client ignores the therapist's questions or other attempts to interact (set a direction), this would be coded as resistance. For example, during an exposure:

C: “Oh, I hate this!” (NOT resistance – expressions of distress, resistance to the client’s inner experience/anxiety)
C: “This is too hard” (NOT resistance - because not in response to the therapist)

T: “Where is your anxiety right now on a scale of 1 to 10?”
C: “It's high” (Not resistance – the client is going along with the therapist’s direction by responding to their question)
T: “Give me a number on the scale of 1 to 10.”
C: “I don't know exactly, but it's up there (Resistance – in response to a direct question, the client is giving an open-ended, evasive response)
T: “What are your thoughts?”
C: “I don't like this. I think I'm going to pass out.” (Not resistance – the client is responding to the therapist’s question)
T: “And where is your anxiety right now?”
C: “Oh, My hands are so clammy.” (Resistance – the client is ignoring the therapist’s question)
T: “Stick with it, you're doing well”
C: (looking distressed) “I'm not doing well!” (Resistance – client disagrees with the therapist)
T: “Let's stick with it until the anxiety starts to go down”
C: Nods. (Not resistance – although not responding verbally, client indicates agreement non-verbally)

Questions about the Treatment/Therapist. Sometimes the client doesn't necessarily come out and state their doubts (e.g., “I don't think this will help”), but rather they may ask questions stemming from underlying skepticism/doubt. These questions are often meant to doubt/challenge the therapist/therapy. These are not questions that are asked in order to get more information, but rather have the interpersonal message that ‘I don’t' know about/don't like this’ (e.g., “How effective is this therapy?” “How many people have you seen?” “Have you read my file?”) Underlying such questions is a skepticism (i.e., “I don't know about this/about you,” “I don't trust this therapy/you”).

Questions in this category can also include doubting/challenging the requirements of the therapy, or questioning treatment procedures (e.g., confidentiality, filling out questionnaires). That is, the client is resisting participating in the treatment process. Again, tone and intent is very important; if it is simply a question for the purpose of clarifying (e.g., “So, I fill out questionnaires after each session?” “No one else will see these tapes?”), then it is NOT resistance. However, if the tone is clearly questioning or resisting the treatment (e.g., in negative tone, “So, are you *sure* everything is confidential?” “Do we *have* to videotape?”), then it would be coded as resistance. It is important to note where the question is coming from (i.e., is it really a question/attempt to clarify, or is it coming from a place that says “I don't want to do this/not sure about this”).

Importantly, *it is ONLY resistance if the question(s) have not been prompted by the therapist*. For example, if the therapist says: “It sounds like you have some questions about the therapy,” or “Do you have any questions about this?” then the client is cooperating with the direction set by the therapist and it would not be coded as resistance. Questions that 'come out of the blue' (i.e., are not prompted by the therapist) and/or are clearly highly skeptical (even if prompted by the therapist e.g., “So what's the point of doing this then?”) count as resistance.

These *questions can often carry with them a 'role reversal'* - i.e., a sense that the client is 'taking over' control of the session. The underlying message is: “I want you to answer to me now,” “I'm acting on you,” “You answer to me.” This can be coded as resistance because the client is opposing the general rules of therapy, which are that the therapist acts on the client. Ask yourself: “Who is in control now?” In these exchanges, clients often put the therapist in the position of convincing, arguing, reflecting on their own self as a therapist with an accompanying loss of power/control. These questions have a 'taking the bait' quality, where the therapist is 'on their heels,' defending themselves, responding to the client by answering their questions, and 'letting go' of their role of being in control of the session and encouraging the client to self-reflect (e.g., “I did read your file,” “I am qualified,” “CBT does work”).

When coding such interchanges, CONTINUE to code it as resistance while the therapist is in responding or 'taking the bait' mode, and the client is patiently listening/nodding/providing minimal encouragers such as “okay.” Resistance is coded UNTIL the interaction shifts or the roles have flipped back, and the therapist resumes their role, or the client makes a genuinely cooperative response. This can happen if the client switches topics to something else (thus ending the resistant interchange) or if the therapist manages to reassume their role within the interchange, stops being defensive, or resumes their role of encouraging client self-reflection (e.g., “It sounds like you have concerns about the therapy/me,” “People often have a lot of concerns about treatment. Tell me more”). Here, the therapist has stepped out of being in a defensive/self-reflective mode, and resumed their role of exploring/encouraging/leading the client to reflect on their concerns/doubts, etc.

Assigning Resistance Codes (to Time Bins)

Each session is divided into 30 sec time bins. We have found that this is long enough to capture most forms of resistance, while being short enough for valid coding.

Once you have decided that resistance is present, you then rate the quality of resistance using the following scale:

0 – Absence of resistance
1 – Minimal, qualified resistance
2 – Clear, unqualified resistance
3 – Hostile, confrontational resistance

*Note that these codes are NOT mutually exclusive. That is, *for each time bin, you may assign more than one code*. For example, a given time bin can contain both a code 1 and a 2, or it may contain a code 2 and a 3, or it may contain a 1, 2, and a 3. However, *each code may only be assigned once within the same time bin*. In other words, the coder should note the *presence* of each quality of resistance within any given time bin (i.e., does the time bin contain qualified, clear, AND/OR hostile resistance?) Once the coder has decided that a given time bin has in it a certain form of resistance (1, 2, or 3), that code is only assigned once within that particular time bin. For example, if a time bin contains a 1, 2, 2, 3, 1, and 3 – it will be coded 1, 2, 3.

* Note that the above coding rule applies for all codes with the exception of code 0. That is, code 0 is mutually exclusive. Once a coder has decided that a given time bin contains an instance of resistance (1, 2, and/or 3), that time bin cannot be coded a 0. Stated differently, code 0 is reserved for time bins in which there is an *absence of resistance*.

0 – Absence of resistance. The client is going along with the therapist.

1 – Toned down, gentle, tentative, or qualified resistance. Client responses in this category reflect nice, polite, or gentle resistance. The client is not 'going along' and/or is being skeptical/expressing concern, BUT the context is generally one of cooperativeness. In other words, the client is simultaneously communicating "I want to try,” “Please don't abandon me,” “I want to work with you,” “I do have some hope/belief in this,” BUT or AND “I don't know about this,” “I have some reservations/questions/doubts.”

Client responses reflecting this code may also be construed as assertiveness. Hostility and firm confrontation are *absent* in these resistant responses. Clear resistance is also absent in these responses (i.e., the client is *not* sending a unilateral or clear interpersonal message that he/she is going against the therapist). Rather, *these responses are sending a mixed interpersonal message of opposition with a simultaneous intent or wish to cooperate with the therapist*.

1 codes are often expressed as qualified, tentative, toned down, apologetic-like statements or behaviours with a softer, gentler tone. The message is: “I want to work with you - want to get along - I don't want to alienate you, BUT I have some concerns - I don't agree - I can't do that - I am not quite on board.” Other instances of this code may include a 'non-response' to the therapist (e.g., silence or absence of head nodding that indicate that the client is not on board, but the response is passive or gentle, rather than being clearly or overtly oppositional/confrontative/hostile). That is, the client is preserving the therapeutic relationship by cooperating with the therapist and is not overtly communicating that they are in opposition.

Ambivalent (“yes, but”) responses may often reflect qualified resistance, although this is not always the case. To determine whether these responses are qualified resistance, the key is to gage the interpersonal message they communicate. Specifically, the "Yes, but...”part of a statement may be a throw-away response (especially if said quickly), while the overall response is really communicating disagreement (e.g., “Yes, but I can't do it”), and would therefore be considered clear resistance (code 2). A paraphrase here might be: “That is all fine for you, but I`m not on board.” You need to consider the gestalt or interpersonal message communicated by the response. In contrast, “Yes, but...” responses that reflect qualified rather than clear resistance are typically more elaborated e.g., “I want to try this, but I'm not sure,” “I do the breathing and it helps, but it doesn't fix it.” Again, these responses communicate a *simultaneous* message of cooperation, with some reservations or disagreements. Even a response that sounds overtly resistant e.g., “I'm just not sure,” but is expressed in a soft, humble, non-aggressive tone, would be coded as a 1. The interpersonal message is “I'm conflicted – I want to go along; please stay on my team... BUT I have some concerns.”

When in doubt, refer to the Key Principles and Definitions in making this judgment. 1codes have a quality of appeasing or clearly sending a message to the therapist to “hang in there with me,” while in 2 codes this quality is absent.

Other useful questions to ask yourself when deciding whether an ambivalent response is qualified or clear resistance are: (i) Can you easily replace the “Yes” with a “No” *without altering the response* (e.g., “Yes, but I can`t do it” may easily be translated into “No, I can`t do it,” and still be consistent with the intention/interpersonal message of the response). In this case, it would be considered clear resistance (code 2). If, however, replacing the “Yes” with a “No” changes the message in the response, it is likely qualified resistance. (ii) What happens to the meaning or interpersonal message of the response when you replace the “But” with an “And?” (i.e., “Yes, and I can`t do it”). If the client’s statement retains its original meaning, it is likely qualified resistance. That is, the person meant the “Yes” part of the response.

Questions about therapy are usually considered 1 codes, because they are by definition not clear resistance (i.e., the client is not coming out directly/straightforwardly in stating their skepticism; rather, they are putting it in the safer form of a question). This is generally true unless the question is clearly highly doubtful (e.g., “What is your success rate?” “Does this therapy work?”) That is, client questions that would likely put the therapist on edge or make the therapist uncomfortable, or questions that are stated in an aggressive or clearly highly skeptical tone are NOT coded as qualified resistance.

A 1 code also includes instances in which the client’s intention is not to stop the therapist altogether (i.e., the client is not sending a clear stop message, but sending a “slow down” message). Here, the client is not trying to block the therapist from doing what they are doing, but is asking them interpersonally (or verbally), to put the brakes on a bit.

> C: “Well, I wouldn`t quite say that” (palm up to signal the therapist to slow down) – Qualified resistance, because the client is not completely disagreeing with/opposing the therapist
> C: “Well, I definitely wouldn`t say that” – Clear resistance, because the client clearly meant to stop the therapist.

2 – Clear, unequivocal resistance - either in process (e.g., sidetrack, talking over, ignoring) and/or in content (i.e., clearly and unequivocally expressed doubts that are intended to block the therapist from the direction they are going in). Code 2 includes instances in which the client does not qualify or soften their response, but clearly, firmly, straight-forwardly and overtly states their disagreement/doubts or challenges/questions the therapist (when not invited to), and/or in process clearly runs over the therapist, clearly and without pretense goes against the therapist. Examples include: “No. I do not agree,” “I'm not doing that,” “I don't believe this is going to work,” “Does CBT *really* work?”

Clear resistance also includes any non-verbal responses (e.g., vocal tone, behavioural gestures) that clearly indicate or send the message “I don't agree,” “I don’t buy this," such as the client shaking their head, rolling their eyes, or deliberately/obviously looking away from the therapist. The underlying message here would be: “I don't hear you.” Pure, non-verbal responses (i.e., client gestures without a verbal message) are typically considered clear resistance since when these are intended to communicate resistance they send a clear message to the therapist. That is, it is very difficult to imagine a `toned down` or qualified eye roll or head shake.

Additionally, when an interruption is meant to communicate resistance, it is always coded as clear resistance because such interruptions always send a clear blocking interpersonal message to the therapist.

3 – Hostile, confrontational resistance. The client's tone is critical in these responses, and needs to be clearly hostile, combative, or discrediting the therapist. Responses in this category would often make the therapist feel uncomfortable, since they can have an edge of a personal attack/ critique of the therapist. They can often be responses to the person of the therapist or directly address the therapist (i.e., a shift in focus from what is being discussed/the treatment to the person of the therapist). A good question to ask yourself is: "If I were the therapist, how would this response make me feel?" Hostile, combative responses often feel unsettling to therapists since they seem to be sending a personal, negative message (e.g., questioning the therapist's competence, criticizing them, putting them down). Note that such responses are usually very rare (so they typically require some significant pondering or strong consideration before assigning the code).

For example, at the end of a long session, the client says: "They didn't tell me about all these questionnaires. If they had, I wouldn't have come." (i.e., discounting any benefit from their contact with the therapist).
Another example may be: "Well. You've got your work cut out for you with me!"

Hostile resistance in process includes client responses that are clearly overly firm or emphatic. Examples include:

C: "No! I didn't say that! I said..."
C: "*You* didn't hear what I said..." (i.e., overtly stating or clearly implicating a fault of the therapist/therapy; the paraphrase here might be: "You have no idea what you`re doing," "I already told you that!" "You are not listening").
C: "Well, Dr. X (said sarcastically), I didn't mean that, I meant..." (Note here that the use of therapist's name is also a good clue that a message is being sent directly to the therapist).
T: "What kinds of things help with the worry?"
C: "Nothing, nothing, nothing at all helps!" (Quick, dismissive, not softened)
OR
C: "No one has been able to help me at all because nothing helps!" (global and clearly implying that this therapist will not be able to help either).

Again, tone and non-verbals (e.g., heavy sighs, eye rolling) that clearly indicate that the client is unhappy with the therapist or the therapist's direction are critical. Hostile resistance responses are often sarcastic, caustic, highly clipped, demeaning, or imply disgust or clear unhappiness with the therapist.

In distinguishing between clear and hostile resistance, it can be helpful to 'put yourself' in the therapist's shoes. A code 3 is usually a statement or reaction on the part of the client that would make the therapist very uneasy (e.g., a clear, firm, repeated, emphasized statement that “this won't work,” “this is useless,” and certainly would include any direct or highly implied challenge to the therapist/therapy, such as 'grilling' about the therapy/therapist). A code 3 response may also be a clearly passive-aggressive non-verbal client behaviour that sends the interpersonal message: “I don’t want to be here” or “I don’t care about what you have to say.” This would include behaviors such as answering/searching through a cell phone during the session *with no justification/apology*, deliberately looking away from/ignoring the therapist when they are talking to the client, etc.

Other Procedural Notes

Required Materials. Transcripts are not used in coding using this system. The coder must have at least an audiotape (but preferably a videotape) to code using this system because the way in which things are expressed (i.e., timing, intonation, tone, volume) is absolutely key for valid coding. We recommend coding directly from the video or audio file. Transcripts are not necessary or even useful, because they can encourage coders to rely too much on the words, thus reducing their attention from the gestalt, and undermining the validity of the coding (given that this is a process coding system).

Whatever mode you chose (video or audio), you should be consistent. For example, when using video, you should be consistent in the video capture of the information (e.g., camera in the same position for each dyad – preferably able to capture the client fully) in order to ensure consistency in the stimulus used for coding. Also, if you use only audio, note that at times, you will miss some codable information. We find that the majority of information relevant to coding using this system can be picked up from audio (e.g., tone, speed of responding), but at times visual observation can provide additional codable information (e.g., eye roll, client looking away, physically withdrawing from the therapist) or be very helpful in the coding of a verbal response.

Note that we do not code explicitly for the type of resistance. Rather, this coding system is designed to capture the quality of resistance (as defined by the 0 to 3 scoring system). In other words, we are not interested in the specific type of resistance (e.g., ignoring versus disagreeing). Rather, we are interested in the presence of resistance and whether it is qualified, clear, or hostile. However, the type of resistance is important when noting the reason for your numeric code assignment (e.g., “I coded this as a 2 because it is an interruption/clear disagreement”).

The DEFAULT code is always 0 – absence of resistance. That is, if the response can be interpreted as cooperative (there is a competing argument or interpretation that can be made that the client is actually being cooperative), then you must code it as cooperative. That is, the response must be unambiguously resistant to get a resistance code. In cases of ambiguity, always default to cooperation.

Unintelligible responses are coded as 0.

Always note in the comments column of the coding template the basis for your response (e.g., ignoring, disagreeing). In other words, it is not only important to get the correct code, BUT it is also important to ensure that you are right for the right reason. Therefore, you should briefly explain your reason for each resistance code that you give.

You must code from the beginning to the end of the session in sequence in order to appreciate the context of the session. For example, sometimes a client will disagree with something either repeatedly (based on something the therapist had said earlier in the session) or a few time bins after the therapist has made their point. In other instances, the previous context clearly makes a subsequent response resistance. For instance, the client has spent 10 minutes outlining the problems worry causes for them at work and then later when the therapist asks: “So is this a problem for you at work?” the client responds with “Yes, it definitely is!” (sounding exasperated). While this response may seem cooperative because the client is answering the question, it is actually resistant because of the previous context (i.e., is intended to criticize the therapist for not listening/understanding the client’s earlier statements).

Carry over. If the client’s resistance continues into the next time bin, then the next time bin would also be coded as resistance. For example, the client continues to elaborate their disagreement or objection (e.g., provides elaboration or examples to further underscore how the therapist is wrong). *Carry overs always continue to be coded at their initial form/quality of resistance* (e.g., a 2 continues to be coded as a 2 carry over and would only come down to a 1 if the client explicitly throws in a partial agreement or somehow softens their resistance). For example,

> T: “I know you think you are incompetent, but do other people really notice it all that much?”
> C: “Yes, they do.” (2) “The other day my boss sat me down and told me I was delegating too much ...” (continuation 2).
>
> Note that if the client then says (in the next time bin or at the end of this time bin): “I know that I tend to think, *wrongly*, that everyone notices, but...” (i.e., I partially agree with you), then the carry over code would reduce to a 1 – qualified resistance.

Similarly, if the client firmly disagrees with the therapist in a confrontational manner (thus receiving a hostile resistance code), and then goes on to clearly elaborate their disagreement, the carryover code may be reduced to 2 if the tone is no longer hostile, combative, and the message is not personally directed at the therapist.

Do NOT code expressed doubts about PREVIOUS therapy (i.e., a client may have had bad experiences before but still feel hopeful/non-resistant to this therapy/therapist). Thus, you should only be coding client resistance to *the current* therapy/therapist. Previous treatment/therapist is relevant only in so far as these are linked to the current therapy/therapist or it's clearly implied that the comments are also directed toward/relevant to the current therapy/therapist (e.g., the therapy is clearly CBT and the client says: “I thought doing thought records was a waste of time,” “The relaxation exercises don't help me at all”).

DO NOT give the client a 'pass' because you like him/her, or otherwise 'excuse' their resistance for another reason (e.g., “they are just anxious/shy,” “that's just their personality style”). Code what is there, regardless of the reason for it.

*Adapted from the Client Resistance Code; Kavanagh, K., Gabrielson, P., & Chamberlain, P. (1982). *Manual for coding client resistance*. Unpublished instrument, Eugene, Oregon.

Appendix B

Working Alliance Inventory – Short Form (WAI-S; Horvath & Greenberg, 1989)

Instructions: Below is a list of statements about experiences people might have with their therapy or therapist. Some items refer directly to your therapist with an underlined space as you read the sentences, mentally insert the name of your therapist in place of ___________ in the text. Think about your experience in therapy, and decide which category best describes your experience.

1. As a result of these sessions I am clearer as to how I might be able to change.

☐	☐	☐	☐	☐
Seldom	**Sometimes**	**Fairly Often**	**Very Often**	**Always**

2. What I am doing in therapy gives me new ways of looking at my problem.

☐	☐	☐	☐	☐
Seldom	**Sometimes**	**Fairly Often**	**Very Often**	**Always**

3. I believe _____ likes me.

☐	☐	☐	☐	☐
Always	**Very Often**	**Fairly Often**	**Sometimes**	**Seldom**

4. _____ and I collaborate on setting goals for my therapy.

☐	☐	☐	☐	☐
Seldom	**Sometimes**	**Fairly Often**	**Very Often**	**Always**

5. _____ and I respect each other.

☐	☐	☐	☐	☐
Always	**Very Often**	**Fairly Often**	**Sometimes**	**Seldom**

6. _____ and I are working towards mutually agreed upon goals.

☐	☐	☐	☐	☐
Always	**Very Often**	**Fairly Often**	**Sometimes**	**Seldom**

7. I feel that **____** appreciates me.

□	□	□	□	□
Always	**Very Often**	**Fairly Often**	**Sometimes**	**Seldom**

8. _____ and I agree on what is important for me to work on.

□	□	□	□	□
Seldom	**Sometimes**	**Fairly Often**	**Very Often**	**Always**

9. I feel **_____** cares about me even when I do things that he/she does not approve of.

□	□	□	□	□
Always	**Very Often**	**Fairly Often**	**Sometimes**	**Seldom**

10. I feel that the things I do in therapy will help me to accomplish the changes that I want.

□	□	□	□	□
Seldom	**Sometimes**	**Fairly Often**	**Very Often**	**Always**

11. _____ and I have established a good understanding of the kind of changes that would be good for me.

□	□	□	□	□
Always	**Very Often**	**Fairly Often**	**Sometimes**	**Seldom**

12. I believe the way we are working with my problem is correct.

□	□	□	□	□
Always	**Very Often**	**Fairly Often**	**Sometimes**	**Seldom**