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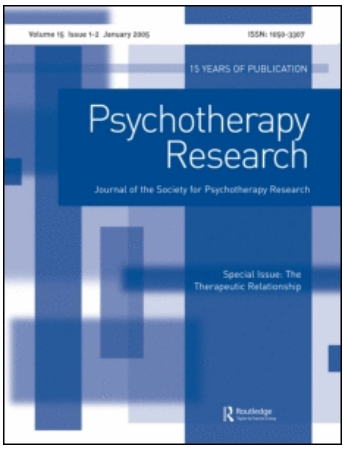

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The Multitheoretical List of Therapeutic Interventions (MULTI): Initial report

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The Multitheoretical List of Therapeutic Interventions (MULTI): Initial report

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Abstract

The Multitheoretical List of Therapeutic Interventions (MULTI) assesses interventions from eight different psychotherapy orientations (behavioral, cognitive, dialectical–behavioral, interpersonal, person centered, psychodynamic, process-experiential, and common factors) and from the perspective of clients, therapists, and observers. The internal consistency for the subscales was moderate to high. Split-half reliability was moderate for clients and low to moderate for therapists and untrained observers. Interrater reliability for the subscales was low for untrained raters but moderate for psychotherapy-knowledgeable raters. A model of the MULTI subscales representing different psychotherapy orientations fit the data adequately but not parsimoniously in a confirmatory factor analysis. MULTI subscale levels successfully predicted sessions of different psychotherapy orientations. The MULTI seems to be a promising tool to investigate the interventions that occur in different psychotherapies.

Keywords: alliance; aptitude–treatment interaction research; brief psychotherapy; cognitive–behavioral therapy; long-term psychotherapy; outcome research; philosophical/theoretical issues in therapy research; process research

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Many psychotherapy researchers, practitioners, and theorists presume that the actions of the therapist are what bring about change in therapy (e.g., Beck, Rush, Shaw, & Emery, 1979; Foa & Kozak, 1986; Greenberg, 2002; Linehan, 1987; Luborsky, 1984; Rogers, 1951; Strupp & Binder, 1984; Weissman, Markowitz, & Klerman, 2000). Highly structured therapies, like behavioral therapy or cognitive therapy, have well-defined interventions, like exposure or seeking alternate explanations for an event. Less directive therapies, like person centered therapy, consist of facilitative actions of the therapist, like reflection or displaying positive regard. Even those researchers who disagree that the efficacy of psychotherapy is due to specific interventions recognize the role of nonspecific or common factors interventions, such as acting in a consistent manner and demonstrating a belief that the treatment will be helpful (Frank, 1973; Wampold, 2001). Studies of therapy process and outcome concentrate heavily on therapists' delivery of certain treatment interventions. Many studies examine whether treatments using various theoretical orientations differ in the interventions therapists use (e.g., Barber, Foltz, Crits-Christoph, & Chittams, 2004; Dimidjian et al., 2006; Greenberg & Watson, 1998; Hill, O'Grady, & Elkin, 1992) and whether specific therapist actions relate to change in the therapy process and outcome (e.g., Barber et al., 2006; Feeley, DeRubeis, & Gelfand, 1999; Paivio & Greenberg, 1995; for comprehensive reviews, see Beutler et al., 2004; Orlinsky, Rønnestad, & Willutzki, 2004).

Due to the importance of therapeutic interventions, many survey instruments have been developed to assess the interventions delivered in a therapy session. Most measures require outside observers to rate tapes or transcripts of sessions for the presence or absence of specific interventions (e.g., Ablon & Jones, 2002; Barber & Crits-Christoph, 1996; Barber et al., 2004; Carroll et al., 2000; Goldfried, Newman, & Hayes, 1989; Hilsenroth, Blagys, Ackerman, Bonge, & Blais, 2005; Hollon, Evans, Elkin, & Lowery, 1984; Ogrodniczuk, Piper, Joyce, & McCallum, 1999; Orlinsky & Howard, 1966; Trijsburg et al., 2002; Watson & Greenberg, 2001). In others, therapists directly report which interventions they delivered to the client (e.g., Beck & Butler, 2000; Bøgwald, 2001; Hilsrenroth et al., 2005; McNeilly & Howard, 1991; Ogrodniczuk, Piper,

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Joyce, & McCallum, 2000; Orlinsky & Howard, 1966; Trijsburg et al., 2002). A smaller number of measures call on clients to give their perceptions of the interventions in therapy (Bøgwald, 2001; R. Elliott, 1999; Hilsrenroth et al., 2005; Ogrodniczuk et al., 2000; Orlinsky & Howard, 1966; Silove, Parker, & Manicavasagar, 1990; Steketee et al., 1997).

There are several reasons why collecting clients', therapists', and observers' perceptions of the interventions conducted in the same session could be advantageous. First, clients' perceptions are largely overlooked in favor of more "objective" and "informative" therapist and observer ratings (M. Elliott & Williams, 2003). We know little about what clients believe their therapists are doing in therapy despite the fact that the services provided are for their benefit (M. Elliott & Williams, 2003; Henkelman & Paulson, 2006). Second, the three perspectives might each have unique relations to therapy process and outcome (Kaschak, 1978; Llewelyn & Hume, 1979) or might moderate (or be moderated by) the relation of another perspective to process and outcome (cf. Tyron, Blackwell, & Hammel, 2007). Collecting only one perspective in such instances might cause us to neglect some potentially important relations. Therefore, a measure that can capture clients', therapists', and observers' perspectives of the intervention in the same session is needed.

In addition, current intervention assessment tools generally measure interventions from only one (e.g., Barber & Crits-Christoph, 1996) or a small number of (e.g., Bøgwald, 2001; Hilsenroth et al., 2005; Silove et al., 1990) orientations. However, by using only one or a limited number of orientations to identify techniques, interventions not included in the particular orientations but potentially related to process and outcome could be overlooked (Ablon & Jones, 2002; Barber et al., 2008). Additionally, many therapists declare their orientation to be eclectic or integrative (Norcross, Hedges, & Castle, 2002; Worthington & Dillon, 2003), and tools assessing interventions from only a limited number of orientations may not describe fully what is happening in these therapies. An instrument that has been developed to measure interventions from multiple therapeutic orientations would present a welcome advantage.

Developing a measure that gathers all three perspectives on interventions from a range of different orientations presents several challenges. First, each perspective needs to use the same set of items to describe the interventions in a session. Second, respondents (especially clients) will not be expert in each of the therapy orientations represented in the measure. Descriptions of interventions must then be free of technical jargon and focus on the therapist's behavior (and not the goal or intent) using language that is as clear and as close to experience as possible. Indeed, having knowledge or training in a particular theoretical orientation might bias the respondent's interpretations of what the therapist is doing in a session. Finally, a measure would need to be as short as possible in order not to tax survey completers unnecessarily but also include as many of the key interventions from commonly practiced and researched psychotherapies as possible.

No one instrument has been developed specifically to assess clients', therapists', and observers' perceptions of interventions from a range of theoretical orientations. Some notable measures collect the three perspectives but only on inventions from one or a limited number of orientations (Hilsenroth et al., 2005; Ogrodniczuk et al., 2000; Orlinsky & Howard, 1966; Silove et al., 1990). Others are able to capture many different orientations, but not from all three perspectives (Bøgwald, 2001; Trijsburg et al., 2002). In summary, there remains a need for a measure of psychotherapy interventions that is able to assess the three perspectives on the therapy process using a similar format and content, while including interventions from the most widely practiced and researched therapy systems. In this article, we introduce a new measure of psychotherapy interventions, the Multitheoretical List of Therapeutic Interventions (MULTI), that was developed specifically for both these purposes. We tested the utility and the psychometric properties of this measure in three studies involving clients, therapists, and observers. Our general hypotheses for the studies are as follows:

1. Each MULTI subscale representing different therapy systems will display moderate internal consistency in data from each of the three perspectives.
2. Adequate reliability for MULTI subscales will exist among raters: Clients, therapists, and observers will exhibit good split-half reliability; untrained observers viewing the same therapy session will exhibit moderate interrater reliability.
3. A model of the MULTI subscales will fit the client, therapist, and observer data adequately in a confirmatory factor analysis.
4. The MULTI will distinguish among sessions of different orientations in data from each of the three perspectives.

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Measure Development

The initial MULTI was developed by consulting treatment manuals, therapy books, adherence measures, theoretical and review articles, and experts from a wide range of therapy orientations and generating a list of the most salient interventions from each orientation.[1] Next, item statements were written for each intervention. In order to be easily usable by all individuals and to require no training to use, items were initially worded at a Flesch-Kincaid fifth-grade reading level. Additionally, item statements were crafted to be behaviorally anchored and without technical jargon to reduce any theoretical bias survey completers might have. A 4-point Likert scale was developed to assess how well each intervention represented the session being rated. This initial version of the MULTI included 71 items that were grouped into one of six subscales representing different theoretical orientations (i.e., cognitive, behavioral, process-experiential, person centered, psychodynamic, and common factors).

To evaluate the content validity of these subscales, we contacted 36 experts from the six theoretical orientations to review the items in the subscale representing their orientation. At least one expert in five of the orientations replied (we could not successfully contact any "common factors" experts). These experts believed the items were comprehensive of their therapy system and could not identify unique interventions that were not represented (some experts suggested very specific interventions, e.g., assigning thought records, that were included within a more general item statement, e.g., assigning homework). Four clinical psychology faculty and five advanced graduate students then rated each item for its interpretability and its representativeness to its orientation. All of these raters had training and practical experience in different systems of psychotherapy (range = 1–20 years). If an item was judged to be difficult to interpret, it was rewritten until all raters were satisfied. If an item was believed not to belong to the orientation in which we grouped it, the item was eliminated from the subscale representing that particular orientation. Last, the grammatical structure of the items was changed to create analogous versions for clients, therapists, and observers.

The initial MULTI was revised using the data from three unpublished pilot studies collected to validate the measure. In the first study, 25 clients and 13 therapists (self-identified as either psychodynamic or cognitive) both rated one of their sessions; in the other two studies, 49 observers rated videotapes of psychodynamic, cognitive, process-experiential, person centered, and behavioral psychotherapy sessions. Twenty-two items were deleted because in at least two samples they were highly correlated ($r > .40$) with items from other subscales, did not correlate highly with the subscale score of their orientation (item–total $r < .40$), or did not show significant differences in level among sessions, which we assumed were multiple from different orientations.[2] To increase the number of orientations included in the MULTI, items and subscales representing interpersonal psychotherapy and dialectical–behavioral therapy were added for the present version of the scale. Two experts in interpersonal psychotherapy and one in dialectical–behavioral therapy reviewed the items describing the interventions for representativeness and completeness. Five new items were added to the MULTI for the Interpersonal Therapy (IPT) subscale and three new items for the Dialectical–Behavioral Therapy (DBT) subscale. Last, to increase the range of scores, a 5-point rating scale asking how typical each intervention was of the session was created. The Flesch-Kincaid reading level for the revised MULTI increased to seventh-grade level as a result of the combination of item statements, lengthening of sentences, and inclusion of examples.

The current MULTI consists of 60 items and eight subscales: Behavioral Therapy (BT), Cognitive Therapy (CT), DBT, IPT, Person Centered (PC), Psychodynamic (PD), Process-Experiential (PE), and Common Factors (CF). Subscale scores were calculated by averaging the items included in that subscale. Most of the items were specified uniquely to one subscale; however, 14 items appear in two subscales and five items appear in three subscales (e.g., in the CT and BT subscales, "My therapist set an agenda or established specific goals for the therapy session"; in the PC and PE subscales, "My therapist encouraged me to focus on my moment-to-moment experience").[3] Item overlap creates intercorrelation between subscales, which might weaken the psychometric properties of the measure (Hsu, 1992, 1994). For instance, it might cause structural equation coefficients to be less reliable when the same item has loadings on two latent factors, much like collinearity of two predictors in a regression might reduce the stability of the estimates of their effects on a criterion. Furthermore, discriminations between the subscale levels of theoretically distinct constructs might be more difficult to obtain as a result of item overlap. Although item overlap is present in other measures (e.g., the Minnesota Multiphasic Personality Inventory), we would still want to have greater certainty that the item overlap in the MULTI reflected the organization of interventions resulting from theory and that the items included in multiple subscales were necessary to accurately represent each orientation. We reviewed

each of the items that occurred in more than one subscale and concluded, on the face of it, that those items were accurately categorized as belonging to multiple orientations. Additionally, experts in each orientation had previously judged the MULTI subscale representing their modality to contain the most essential interventions to their orientation. Therefore, removing these items would seriously reduce the content validity of the measure. A copy of the client version of the measure and a list of the items included in each subscale appears in the Appendix.

Study 1

Method

Participants. Included in Study 1 were 280 clients receiving therapy at one of four sites: a university counseling center ($n = 221$), a training clinic ($n = 30$), a clinic specializing in behavioral treatment for obsessive–compulsive disorder ([OCD] $n = 13$), and two community mental health centers ($n = 16$). Data from four sites were used to maximize the number of different theoretical orientations represented. Demographic data were not available for the training clinic site. Seventy-five percent ($n = 188$) of clients were women. Mean age of clients was 25 years ($SD = 6.90$, range = 18–52). Seven percent ($n = 17$) of clients identified their primary ethnicity as Asian American, 14% ($n = 35$) as African American, 68% ($n = 171$) as Caucasian American, 3% ($n = 8$) as Latino/a, 4% ($n = 10$) as East Indian, and 4% ($n = 9$) as another ethnicity; 4% ($n = 10$) did not respond.

A total of 47 therapists provided therapy across the four sites. All therapists had at least a master's degree in psychology or social work, and several possessed their doctorate in psychology or psychiatry. Orientation was known for the sessions of 120 clients. For the counseling center, orientation was determined by two judges familiar with each therapist's work (agreement = 100%). For the training clinic, nine therapists were selected because they scored the highest among a pool of therapists on the psychodynamic, cognitive, or person centered orientation items from the Development of Psychotherapists Common Core Questionnaire (Orlinsky & Rønnestad, 2005) and were receiving supervision in psychodynamic, cognitive, or person centered therapy, respectively. Ten sessions were randomly sampled from each of these three orientations (each therapist provided more than one session). The OCD clinic used a manualized behavioral treatment (Foa, Ledley, Huppert, & Franklin, 1999), and all therapists received supervision in this protocol. We did not know the orientation for any of the sessions from the community mental health centers but included their data for analyses not requiring this information. Of the 120 sessions for which we had orientation data, 11% ($n = 13$) were identified as behavioral, 15% ($n = 18$) as cognitive, 52% ($n = 62$) as interpersonal, 14% ($n = 17$) as person centered, and 8% ($n = 10$) as psychodynamic.

Procedure. Clients completed the MULTI after a therapy session. Sessions were sampled cross-sectionally (i.e., from any point during the treatment at the time of data collection), but the session number was not collected. Participants completed the MULTI and an informed consent form as part of a battery of measures given to them after their session by an administrator or research assistant. Institutional review board (IRB) approval was obtained for this study.

Results

Internal consistency. We first examined the internal consistency of each of the eight MULTI subscales. Column 2 of Table I displays the internal consistency estimates for each subscale. All subscales displayed at least moderate ($\alpha > .70$; Shrout, 1995) or excellent ($\alpha > .90$) internal consistency.

Table I. Studies 1, 2, and 3: MULTI Subscale Internal Consistency Estimates

Subscale/no. items	Clients ($N = 280$)	Therapists ($N = 175$)	Observers ($N = 489$)
BT (15)	.89	.89	.80
CF (7)	.87	.75	.77
CT (16)	.91	.88	.83
DBT (8)	.84	.76	.66
IPT (7)	.84	.80	.81
PC (7)	.81	.68	.72
PD (12)	.77	.88	.78
PE (9)	.87	.75	.66

Note. MULTI = Multitheoretical List of Therapeutic Interventions; N = total number of observations used in calculating the Cronbach's α coefficients; BT = behavioral therapy; CF = common factors; CT = cognitive therapy; DBT = dialectical–behavioral therapy; IPT = interpersonal therapy; PC = person centered therapy; PD = psychodynamic therapy; PE = process-experiential therapy.

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Split-half reliability. Next, we estimated the split-half reliability for the MULTI subscales. For each subscale, we put the items in numerical order (as given in the Appendix) and computed each client's mean score for every other item in the subscale. We then computed the mean score for the remaining items in the subscale and created a dummy-coded variable to index the two halves. A three-way random-effects model was used to estimate variance components for therapist, client (nested within therapist), the dummy code variable for subscale half, and error. We calculated an intraclass correlation coefficient (ICC) for each subscale by entering these variance components into a ratio with therapist- and client-related variance in the numerator and the total variance of the model in the denominator. This ICC has a comparable interpretation to the ICC (A, 1), Case 2A, of McGraw and Wong (1996); namely, it represents the reproducibility of a single randomly selected client's ratings for a subscale. Table II displays these coefficients by MULTI subscale. Moderate ($\rho_I > .70$; Shrout, 1995) reliability was found for five of the subscales, and two of the remaining three subscales were close to criterion (for the IPT and PD subscales, $\rho_I = .68$).

Factor structure. We tested the fit of a model representing the eight MULTI subscales using confirmatory factor analysis. Pathways were specified from each item to the subscale or subscales to which it was hypothesized to belong. Some clients were treated by the same therapist, which could lead the ratings of their sessions to be more correlated than with the sessions of clients seeing other therapists due to the differences in the therapists' style or activity level. To control for potential therapist effects, we regressed MULTI item scores on therapist and used the residuals for this analysis. Model fit was assessed according to two indexes. Root mean square error of approximation (RMSEA) assesses the discrepancy between the model and the data per degree of freedom (Browne & Cudeck, 1993; Steiger, 1990). RMSEA values of .05 or less suggest a good fit of the model to the data and values of .08 or less suggest an adequate fit (Browne & Cudeck, 1993). Comparative fit index (CFI) assesses how much better the model fits compared with a model in which all of the items are independent. CFI values of .90 or greater are considered to represent a good fit to the data (Hu & Bentler, 1999). The model fit the data adequately (RMSEA = .07) but was not a very parsimonious way to explain the relations among the items (CFI = .74).[4] The low CFI value is likely due to the high intercorrelation among MULTI subscales (Table III).

Criterion validity. Last, we assessed the criterion validity of the MULTI as its ability to successfully classify the 120 sessions of different theoretical orientations. Descriptive statistics by theoretical orientation are given in Table IV. We conducted a predictive discriminant analysis in which we first derived linear combinations that maximally distinguished sessions of different theoretical orientations based on their scores for each of the MULTI subscales (after having residualized for therapist to control for potential therapist effects). We used the within-group covariance matrices and the sample probabilities of theoretical orientation (11% behavioral, 15% cognitive, 52% interpersonal, 14% person centered, 8% psychodynamic) to calculate the classification functions. We then applied the classification functions to the data to reclassify each session into a predicted theoretical orientation (i.e., the session is classified into the orientation to which it has the smallest mathematical distance based on the classification functions). All behavioral therapy ($n = 13$) and psychodynamic therapy

Table II. Studies 1, 2, and 3: Split-Half Reliability Estimates by Subscale

			Observers		
Subscale	Clients ($N = 280$)	Therapists ($N = 140$)	Full sample ($N = 60$)	Experts ($n = 3$)	Nonexperts ($n = 57$)
BT	.88	.86	.72	.85	.74
CF	.81	.73	.56	.59	.58
CT	.83	.83	.80	.92	.81
DBT	.74	.66	.58	.48	.53
IPT	.68	.70	.74	.76	.71
PC	.70	.38	.53	.88	.55
PD	.68	.79	.57	.76	.53
PE	.57	.42	.50	.74	.50

Note. Column values are intraclass correlation coefficients representing the reproducibility of the ratings for a single, randomly selected respondent. N = number of observers in each sample; BT = behavioral therapy; CF = common factors; CT = cognitive therapy; DBT = dialectical–behavioral therapy; IPT = interpersonal therapy; PC = person centered therapy; PD = psychodynamic therapy; PE = process-experiential therapy.

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Table III. Studies 1, 2, and 3: MULTI Subscale Intercorrelation

	Clients ($N = 280$)								Therapists ($N = 175$)								Observers ($N = 489$)							
Scale	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
1. BT	—								—								—							
2. CF	.69	—							.69	—							.52	—						
3. CT	.91	.70	—						.88	.68	—						.80	.45	—					
4. DBT	.88	.69	.87	—					.87	.66	.83	—					.84	.53	.76	—				
5. IPT	.52	.55	.58	.64	—				.23	.36	.33	.39	—				.22	.15	.34	.31	—			
6. PC	.66	.72	.76	.70	.63	—			.07	.29	.22	.25	.48	—			−.01	.32	.16	.14	.29	—		
7. PD	.61	.58	.72	.70	.77	.82	—		−.10	.01	.07	.11	.56	.73	—		−.08	.04	.14	.11	.54	.73	—	
8. PE	.76	.62	.86	.77	.65	.84	.86	—	.29	.30	.41	.46	.54	.82	.74	—	.15	.18	.26	.26	.33	.75	.69	—

Note. *N* values for clients and therapists refer to the total number of sessions rated; *N* values for observers refer to the total number of MULTI forms completed. BT = behavioral therapy; CF = common factors; CT = cognitive therapy; DBT = dialectical–behavioral therapy; IPT = interpersonal therapy; PC = person centered therapy; PD = psychodynamic therapy; PE = process/experiential therapy.

Table IV. Study 1: Descriptive Statistics for Clients by Session Orientation

	Orientation					
Subscale	Behavioral ($n=13$)	Cognitive ($n=18$)	Interpersonal ($n=62$)	Person centered ($n=17$)	Psychodynamic ($n=10$)	Unknown ($n=160$)
BT	3.99 (0.73)	3.21 (0.43)	2.99 (0.71)	2.95 (0.69)	2.84 (1.06)	2.97 (0.81)
CF	4.71 (0.38)	4.01 (0.86)	3.98 (0.82)	4.13 (0.62)	3.96 (0.51)	3.93 (0.84)
CT	4.07 (0.81)	3.47 (0.51)	3.07 (0.75)	3.13 (0.68)	3.11 (0.89)	3.06 (0.85)
DBT	3.91 (0.90)	3.39 (0.50)	3.23 (0.92)	3.17 (0.83)	2.97 (0.99)	3.26 (0.94)
IPT	2.52 (0.86)	3.35 (0.66)	3.27 (0.94)	3.29 (0.85)	3.04 (0.99)	3.15 (0.98)
PC	3.70 (0.86)	3.48 (0.78)	3.53 (0.71)	3.78 (0.74)	3.59 (0.75)	3.40 (0.89)
PD	2.86 (0.92)	3.22 (0.75)	3.02 (0.83)	3.27 (0.67)	3.30 (0.98)	2.97 (0.88)
PE	3.44 (0.97)	3.30 (0.67)	2.88 (0.77)	3.22 (0.70)	3.27 (0.76)	2.82 (0.87)

Note. *n* values represent the number of sessions in each sample. Column values are mean subscale scores; column values in parentheses are standard deviations. BT = behavioral therapy; CF = common factors; CT = cognitive therapy; DBT = dialectical–behavioral therapy; IPT = interpersonal therapy; PC = person centered therapy; PD = psychodynamic therapy; PE = process-experiential therapy.

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($n=10$) sessions were correctly classified. For the 18 cognitive therapy sessions, 17 (94%) were identified as cognitive and 1 (6%) as person centered. For the 62 interpersonal therapy sessions, 55 (88%) were reclassified as interpersonal, one (2%) as behavioral, two (3%) as cognitive, three (5%) as person centered, and one (2%) as psychodynamic. For the 17 person centered therapy sessions, 11 (65%) were predicted to be person centered, one (6%) as cognitive, four (24%) as interpersonal, and one (6%) as psychodynamic. Overall, the apparent error rate for classification was 12%. Simple resubstitution into the same data set from which the classification functions were derived always yields an optimistic error rate. Another less biased method of determining error rate is the maximum posterior probability estimator (MPP; Huberty, Wisenbaker, & Smith, 1987). The classification functions also assign each session posterior probabilities of membership in each of the five orientations (summing to one for each session). MPP is determined as the mean of every session's highest posterior probability, weighted for group size. For this sample, the MPP error rate was slightly higher at 16%, suggesting that clients using the MULTI were able to distinguish among sessions of different orientations in a way consistent with the orientations of the therapists.

Study 2

Method

Participants. Participants were 146 therapists recruited either through personal contact with the authors or through listservs associated with the Society for Psychotherapy Research and Divisions 12 and 29 of the American Psychological Association. Fifty percent ($n=73$) of the therapists were female, 43% ($n=63$) were male, and 7% ($n=10$) did not report their sex. One and one-half percent ($n=2$) of therapists described themselves primarily of African descent, 1.5% ($n=2$) of Asian descent, 86% ($n=125$) of Caucasian descent, 2% ($n=3$) of Latino/a descent, and 9% ($n=14$) of another or unknown descent. Forty therapists (27%) held a master's degree in psychology or allied fields (M.A., M.S., M.S.W., M.Ed.), 86 (59%) held a doctorate in psychology or allied fields (Ph.D., Psy.D., D.S.W.), 13 (9%) held a doctorate in medicine, and 7 (5%) did not report their degree. The average number of years of clinical experience (including training prior to receiving their degree) was 16.92 (*SD*=12.85).

Procedure. Therapists were asked to complete the MULTI and a short demographic questionnaire for the most recent session they conducted. Therapists could fill out the questionnaires for more than one client. In total, 175 sessions were rated, and the modal number of sessions a therapist rated was 1 (range=1 to 16). Therapists selected the theoretical orientation from list of 9 theoretical orientations that they felt best described the session being rated. Fifteen percent ($n=26$) of sessions were described by the therapist as behavioral; 15% ($n=26$) as cognitive; 5% ($n=8$) as dialectical-behavioral; 8% ($n=14$) as interpersonal; 7% ($n=13$) as person-centered; 5% ($n=8$) as psychoanalytic; 25% ($n=44$) as psychodynamic; and 3% ($n=5$) as process/experiential; and 17% ($n=31$) as other or unknown. IRB approval was obtained for this study.

Results

Internal consistency. Column 3 of Table I displays the full-sample internal consistency estimates

(Cronbach's α) for each MULTI subscale. Except for the Person Centered subscale (α = .68), all subscales had moderate to excellent internal consistency.

Split-half reliability. We estimated scores for the separate halves of the MULTI subscales using the same procedure as outlined in Study 1. Additionally, we used the same model to estimate ICCs representing the reproducibility of a single randomly selected therapist's ratings for a subscale. Column 3 of Table II gives the ICCs by subscale. Six of the MULTI subscales exhibited moderate reliability or were reasonably close to criterion. The remaining two subscales displayed poor reliability (for PC, $\rho_I = .38$; for PE, $\rho_I = .42$), which might be due to the small number of items in each of the subscale halves.

Factor structure. We tested the fit of the eight MULTI subscales model in the therapist data using confirmatory factor analysis. Some therapists rated more than one session, and so we statistically removed therapist effects by residualizing MULTI item scores for therapist. The model fit the data adequately (RMSEA = .08) but was not a very parsimonious way to explain the data (CFI = .64). Again, the low CFI value might be due to the relatively high intercorrelation of the MULTI subscales when completed by the therapists (see Table III).

Criterion validity. Descriptive statistics for the MULTI subscales by therapists' orientation are given in Table V. We conducted a predictive discriminant analysis to evaluate the MULTI's ability to correctly classify sessions into a theoretical orientation based on their relative levels of MULTI subscales. This analysis was conducted on MULTI subscale scores again residualized for therapist. We again used the within-group covariance matrices and the sample probabilities of theoretical orientation to calculate the classification functions. All of the 8 dialectical-behavioral, 5 process-experiential, and 8 psychoanalytic sessions were correctly classified. Of the 26 behavioral sessions, 21 (81%) were predicted to be behavioral, 3 (11%) as cognitive, 1 (4%) as interpersonal, and 1 (4%) as person-centered. Of the 26 cognitive therapy sessions, 24 (92%) were correctly classified as cognitive and 2 (8%) were incorrectly classified as behavioral. Of the 14 interpersonal sessions, 10 (72%) were classified as interpersonal, 2 (14%) as psychodynamic, 1 (7%) as person-centered, and 1 (7%) as cognitive. Of the 13 person-centered sessions, 11 (85%) were classified as person-centered and 2 (15%) were classified as psychodynamic. Of the 44 psychodynamic sessions, 42 (95%) were correctly identified as psychodynamic and 2 (5%) were identified as interpersonal. The apparent error rate for classification was 10%, and the MPP error rate was 13%; suggesting that the MULTI subscales successfully distinguished among the theoretical orientations.

Study 3

Method

Participants. Sixty participants (57 undergraduate students and three instructors) in three systems of psychotherapy courses completed the MULTI to help facilitate discussion of class material. Seventy-two percent ($n = 43$) of participants were women.

Materials. Twenty videotapes of psychotherapy were used in this study. Nine tapes were commercially produced videotapes of master therapists or actors conducting a typical session in their modality with a patient-actor. Theoretical orientation for these tapes was determined by the published materials accompanying the tapes. Eleven tapes were sessions of highly experienced therapists conducting therapy with actual clients. Theoretical orientation for these tapes was determined as the stated orientation of the therapist depicted in the tape (who was, in most cases, also a guest lecturer for the class). Of the 20 tapes viewed, six were considered behavioral, six cognitive, one interpersonal, one person centered, four psychodynamic, and two process-experiential. Tapes ran for the typical length of a session, or 30 to 50 min (Turner, Valtierra, Talken, Miller, & DeAnda, 1996). Tapes used in Study 3 are cited with an asterisk in the Reference section.

Procedure. At the beginning of the courses, participants voluntarily signed forms to ensure confidentiality of any case material presented in class. Each lecture covered the mechanisms of change in a particular theoretical orientation. After the lecture, a videotape of the treatment was shown to illustrate the therapy in practice. Participants were, therefore, not blind to the orientation of the tape. Participants individually completed the MULTI after viewing the tape with the purpose of helping them to think about and discuss what occurred in the sessions they had just watched. In the final meeting of both courses, students were presented with their data to show how they rated each of the different therapies. Some tapes were rated by more than one of the classes. Additionally, not every student completed a MULTI

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Table V. Study 2: Descriptive Statistics for Therapists' Sessions by Theoretical Orientation

	Orientation								
Subscale	Behavioral ($n=26$)	Cognitive ($n=26$)	Dialectical–behavioral ($n=8$)	Interpersonal ($n=14$)	Person centered ($n=13$)	Psychoanalytic ($n=8$)	Psychodynamic ($n=44$)	Process-experiential ($n=5$)	Other/unknown ($n=31$)
BT	3.71 (0.51)	3.36 (0.63)	4.05 (0.38)	2.89 (0.71)	2.71 (0.59)	2.18 (0.54)	2.20 (0.54)	2.56 (0.77)	3.09 (0.78)
CF	4.18 (0.62)	4.25 (0.47)	4.41 (0.46)	4.24 (0.54)	4.21 (0.40)	3.37 (0.83)	3.61 (0.49)	3.49 (0.50)	4.13 (0.73)
CT	3.41 (0.57)	3.70 (0.64)	3.81 (0.63)	3.12 (0.83)	2.86 (0.69)	2.56 (0.61)	2.48 (0.62)	2.43 (0.60)	3.31 (0.73)
DBT	3.42 (0.63)	3.26 (0.75)	4.38 (0.41)	3.10 (0.74)	2.99 (0.77)	2.46 (0.60)	2.56 (0.65)	2.55 (0.58)	3.22 (0.82)
IPT	2.18 (0.80)	2.75 (0.85)	3.43 (0.54)	3.67 (0.97)	3.15 (0.75)	2.57 (1.04)	2.91 (0.78)	2.26 (0.77)	3.02 (1.03)
PC	2.78 (0.86)	3.21 (0.57)	3.73 (0.54)	3.64 (0.70)	3.76 (0.82)	3.82 (0.49)	3.56 (0.62)	3.91 (0.70)	3.52 (0.68)
PD	2.04 (0.78)	2.32 (0.65)	3.07 (0.68)	3.01 (0.73)	2.98 (0.84)	3.87 (0.47)	3.33 (0.87)	3.22 (0.70)	3.08 (0.74)
PE	2.42 (0.81)	2.78 (0.59)	3.61 (0.58)	3.24 (0.67)	2.97 (0.80)	3.29 (0.47)	2.97 (0.68)	3.56 (0.68)	3.19 (0.70)

Note. *n* values represent the number of sessions belonging to that orientation (as declared by therapists). Column values are mean subscale scores; column values in parentheses are standard deviations. BT = behavioral therapy; CF = common factors; CT = cognitive therapy; DBT = dialectical–behavioral therapy; IPT = interpersonal therapy; PC = person-centered; PD = psychodynamic therapy; PE = process-experiential therapy.

for every tape because they did not always attend every class. In total, participants completed 489 MULTI forms (119 for behavioral tapes, 165 for cognitive, 20 for interpersonal, 13 for person centered, 106 for dynamic, and 66 for process-experiential). These data were originally collected for educational use, and therefore IRB approval was obtained after the courses to report these data in publication.

Results

Internal consistency. Column 4 of Table I displays the full-sample Cronbach's α coefficients for each of the MULTI subscales. Moderate ($\alpha > .70$) consistency was found for each subscale, with the exception of the DBT and PE subscales ($\alpha = .66$ for each).

Split-half reliability. As in Studies 1 and 2, we created scores for the subscale halves by first ordering each subscale by item number, averaging the score for every other item in the subscale, and then averaging the scores for the remaining items. We used a three-way random-effects model to estimate variance components for student, tape, student × tape interaction, subscale half, and residual error. ICCs were computed for each subscale as the ratio of the variance as a result of student, tape, and student × tape interaction over the total variance in the model. These ICCs represent the reproducibility of the MULTI subscale ratings for a single, randomly selected observer untrained in the use of the measure. Column 4 of Table II displays these coefficients for the entire observer sample. Moderate reliability was found for the BT, CT, and IPT subscales; the other five subscales exhibited low but acceptable reliability ($\rho_I > .50$; Shrout, 1995).

Although no one in the sample had training in the use of the MULTI, the three instructors had prior knowledge of psychotherapy systems. We recalculated the split-half reliability estimates using the ratings from these three participants ("experts"; see column 5 of Table II) and from the remainder of the untrained, psychotherapy-naïve participants ("nonexperts"; see Table II, column 6) on 12 tapes. For the experts, moderate to excellent reliability was exhibited for all subscales except CF ($\rho_I = .59$) and DBT ($\rho_I = .48$). For the nonexperts, there was little difference in the estimates.

Interrater reliability. Because multiple participants had watched each videotape, we were able to estimate their interrater reliability. We used a two-way random-effects model (ICC (A, 2), Case 2; McGraw & Wong, 1996) to calculate ICCs for each subscale. ICCs computed in this way represent the degree to which the average ratings of two randomly selected untrained judges for any randomly selected tape will be reproduced exactly by the average ratings of two other randomly selected judges. We first estimated ICCs using the entire sample. These are displayed in Table VI, column 2. Interrater reliability was moderate for the BT subscale, low but acceptable for most of the subscales, and poor for the PE subscale. Using the Spearman-Brown prophecy formula (on the ICCs for a single judge), we estimated the ratings of three untrained, psychotherapy-naïve raters would be needed to obtain moderate reliability for most of the subscales.

We again computed separate ICCs for experts and nonexperts, displayed in Table VI, columns 3 and 4. The experts generally exhibited moderate interrater reliability, and those subscales that did not were reasonably close to that criterion (CF, $\rho_I = .68$; DBT, $\rho_I = .64$). Notably, reliability for the PE subscale, which was poor for the entire sample, was moderate for the experts ($\rho_I = .78$). Interrater reliability for the nonexpert sample was similar to the reliability estimates for the full sample.

Factor structure. We tested the fit of the eight MULTI subscales model using confirmatory factor analysis. These data contained repeated measurements for tapes and students (i.e., each tape was rated by multiple students and each student rated multiple tapes). To control for the dependency in the data resulting from repeated measurements, MULTI item scores were residualized for tape and student. The model fit the data adequately (RMSEA > .08) but was not among the most parsimonious factor organization for the data (CFI < .81). Again, the relatively poor CFI value was most likely due to the intercorrelation between subscales (see Table III).

Table VI. Study 3: Interrater Reliability Estimates for Observers

Subscale	Full sample ($N = 60$)	Experts ($n = 3$)	Nonexperts ($n = 57$)
BT	.70	.83	.72
CF	.64	.68	.64
CT	.60	.89	.65
DBT	.56	.64	.52
IPT	.66	.83	.59
PC	.53	.70	.56
PD	.58	.79	.53
PE	.40	.78	.46

Note. *N* values represent the number of observers in each sample. Column values represent intraclass correlation coefficients indicating the reproducibility of the averaged ratings for two randomly selected observers. BT = behavioral therapy; CF = common factors; CT = cognitive therapy; DBT = dialectical–behavioral therapy; IPT = interpersonal therapy; PC = person centered therapy; PD = psychodynamic therapy; PE = process-experiential therapy.

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Criterion validity. Table VII displays the descriptive statistics for the MULTI subscales by orientation of the tapes. We again evaluated the ability of the MULTI to correctly predict the theoretical orientation of the different tapes using predictive discriminant analysis. We used the MULTI subscale scores residualized for tape and student to control for dependency in the data. We again used the individual within-group covariance matrices and the sample probabilities of theoretical orientation to calculate the discriminant functions. Of the 119 MULTI forms completed for the behavioral tapes, 91 (76%) correctly classified the tapes as behavioral, and 27 (23%) classified them as cognitive and one (1%) as psychodynamic. Of the 165 MULTI forms for the cognitive tapes, 137 (83%) correctly identified the tapes as cognitive, and 20 (12%) classified them as behavioral, one (1%) as interpersonal, five (3%) as psychodynamic, and two (1%) as process-experiential. Of the 20 MULTI forms for the interpersonal tape, 19 (95%) classified the tape as interpersonal and one (5%) as cognitive. Of the 13 MULTI forms completed for the person centered tape, nine (69%) identified the tape as person centered, one (8%) as cognitive, two (15%) as psychodynamic, and one (8%) as process experiential. Of the 106 MULTI forms completed for the psychodynamic tapes, 94 (88%) classified the tapes as psychodynamic, one (1%) classified them as behavioral, four (4%) as cognitive, one (1%) as interpersonal, and six (6%) as process-experiential. Finally, of the 66 MULTI forms for the process-experiential tapes, 58 (88%) correctly identified the tapes as process-experiential, one (1.5%) as behavioral, one (1.5%) as cognitive, and six (9%) as psychodynamic. Overall, the apparent error rate for classification was 17%, and the MPP error rate was 14%.

When the analyses were rerun using the expert ratings of 12 tapes (two behavioral, five cognitive, one person-centered, two psychodynamic, and two process-experiential), the apparent and MPP error rates were 0%. For the nonexpert observers rating the same tapes, the overall error rate was 12% and the MPP error rate was 11%.

DISCUSSION

The results of these studies provide initial support for the adequate psychometric properties of the MULTI and its potential utility. In samples of clients, therapists, and observers, moderate to excellent internal consistency was found for each MULTI subscale. Split-half reliability for clients was moderate but was low to moderate for therapists and untrained, psychotherapy-naïve observers. Low to moderate interrater reliability was found for untrained, psychotherapy-naïve observers untrained in the use of the measure. Better split-half and interrater reliability was found for untrained but psychotherapy-knowledgeable observers. The a priori model of MULTI subscales fit the data reasonably but not parsimoniously in confirmatory factor analyses. Finally, the levels of the MULTI subscales differentiated sessions based on the therapists' orientations. Overall, the MULTI appears to be a promising new instrument to measure interventions from multiple orientations from the perspectives of clients, therapists, and observers.

All of the MULTI subscales exhibited at least moderate internal consistency, meaning that when one intervention from a certain theoretical orientation was perceived, other interventions from that orientation were likely to be perceived as well. Additionally, sessions of different orientations could be discriminated by their levels of relevant interventions. These findings provide partial support for the

Table VII. Study 3: Descriptive Statistics for Observers by Tapes of Each Theoretical Orientation

	Orientation					
Subscale	Behavioral ($n=85$)	Cognitive ($n=114$)	Interpersonal ($n=20$)	Person centered ($n=13$)	Psychodynamic ($n=69$)	Process-experiential ($n=47$)
BT	3.48 (0.51)	3.24 (0.52)	3.31 (0.52)	1.88 (0.59)	2.40 (0.51)	2.42 (0.49)
CF	4.02 (0.52)	3.85 (0.76)	4.28 (0.39)	3.64 (0.61)	3.29 (0.72)	3.00 (0.87)
CT	3.20 (0.61)	3.55 (0.51)	2.93 (0.48)	2.20 (0.65)	2.64 (0.58)	2.46 (0.59)
DBT	3.25 (0.55)	3.10 (0.64)	2.88 (0.72)	2.11 (0.64)	2.51 (0.63)	2.37 (0.68)
IPT	2.13 (0.80)	2.84 (0.90)	4.07 (0.61)	2.38 (0.68)	3.13 (0.62)	2.05 (0.84)
PC	2.49 (0.82)	2.94 (0.79)	3.22 (0.53)	3.58 (0.38)	3.20 (0.65)	3.37 (0.83)
PD	2.04 (0.61)	2.36 (0.63)	2.51 (0.37)	2.60 (0.60)	3.01 (0.51)	2.80 (0.58)
PE	2.37 (0.72)	2.64 (0.65)	2.94 (0.47)	2.64 (0.52)	2.69 (0.56)	3.45 (0.58)

Note. *n* values represent the total number of observations made for tapes of each orientation. Column values are mean subscale scores; column values in parentheses are standard deviations. BT = behavioral therapy; CF = common factors; CT = cognitive therapy; DBT = dialectical–behavioral therapy; IPT = interpersonal therapy; PC = person centered therapy; PD = psychodynamic therapy; PE = process-experiential therapy.

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assumption that the different therapy orientations are indeed "packages" in which theoretically linked interventions are administered together. It is possible that both high internal consistency and good discrimination among therapies could also have been the result of raters with knowledge of psychotherapy systems interpreting therapists' actions based on what theory suggests therapists should be doing (e.g., a behavioral therapist should perform both exposure and role-play but should not discuss early experiences). The therapists in our studies, but not the clients or observers, had previous knowledge of psychotherapy. High internal consistency and good discrimination among therapies were found for all three perspectives, making this type of bias seem less likely.

Split-half reliability was better for our clients and therapists than for our observers. This finding is especially interesting because socioeconomic and educational background was more variable for our clients compared with our observers, who were all college students. One factor that might contribute to the differences in reliability estimates might be experience with psychotherapy, which our clients and therapists had but not our observers. Additionally, clients and therapists both directly experienced the interventions they were rating. They may have attended better to or have been more motivated to report what happened in the session than might have our observers. Some subscales, however, did not evidence good reliability with any perspective, most likely because of the reduction in the stability of the subscale estimates from dividing the items into halves. Other measures of single-rater reliability, like test–retest reliability and comparisons of ratings across different sessions, can complement these initial analyses.

We obtained relatively low interrater reliability for independent observers. The sample of observers used in this study was unique in that they had no prior knowledge of psychotherapy (they were undergraduate students participating in a class to learn about the topic) and they were untrained in the use of the measure. Additionally, they were not blind to the orientation of the tapes, although they did not know which MULTI items loaded on to each subscale. These reliability estimates might then be lower than what might be expected from other users of the MULTI. Indeed, we found moderate interrater reliability for three observers who had knowledge of psychotherapy systems but no training in the use of the measure. Presumably greater interrater reliability would be found for a sample of observers who were psychotherapy knowledgeable and trained in the MULTI. A future study might investigate whether observers can be trained to a standard criterion for reliability and what the psychometric properties of the MULTI are for those raters. In addition to training in the MULTI and knowledge of psychotherapy, it would be interesting to explore other sources of variability in the ratings of interventions, like the emotional reaction of the perceiver. The students in the course often had very strong positive or negative reactions to the videotapes. We gave the students the MULTI to help them to critically examine the actions of the therapist and to think about the mechanisms of change the therapist was hoping to initiate as opposed to students simply judging the session based on their like or dislike of the therapy orientation or style. Similarly, clients might benefit from using the MULTI to understand what occurred in one of their sessions.

We created the MULTI subscales by grouping together items describing interventions we believed were representative of a particular theoretical orientation, based on our review of the psychotherapy literature and the opinions of experts we contacted. Although this theory-driven model of MULTI subscales adequately explained the variation in our data (i.e., low RMSEA values), it was not among the simplest ways possible to reduce the data (i.e., low CFI values). This pattern of results suggests that there might be more overlap in intervention use among therapists belonging to different orientations. Competing factor models that organize interventions into fewer subscales might explain the relations among interventions more parsimoniously than the model we suggested. We evaluated other factor models (unidimensional, bidimensional, and hierarchical), but they did a poorer job explaining the data than our model. A larger data set with more sessions per orientation might better allow us to test other ways of organizing the interventions than what theory might specify. Our results could also suggest that therapists, even those who declare a specific orientation, are relatively eclectic in their delivery of therapeutic interventions. The MULTI might be well suited to pick up this overlap in technique use. Therapists and researchers, especially those interested in psychotherapy integration, might be able to use the MULTI to investigate the complexity and commonalities in interventions among different therapies in practice.

In general, the levels of common factors use reported by clients, therapists, and observers were highly similar across different therapies and were uniformly the highest rated. Other investigations have also shown the facilitating conditions to be highest rated across a number of different psychotherapies (Hill et al., 1992; Trijsburg et al., 2002). These converging findings highlight the

central place that relationship factors have in all of the different psychotherapeutic orientations. This is consistent with the fact that many theorists (e.g., Frank, 1973; Wampold, 2001) have emphasized the role of the common factors over the role of specific interventions. Future research might also look at the extent to which the relative levels of common factors and specific interventions from different orientations predict process and outcome in psychotherapy.

Future study of the MULTI will help in establishing its convergent validity. Convergent validity will be examined by correlating clients', therapists', and observers' ratings of the same session. High correlations among the different perspectives suggest good convergent validity (cf. Mintz, Auerbach, Luborsky, & Johnson, 1973). However, low correspondence among perspectives could also be potentially informative about the psychotherapy process and about the relevance of interventions for clients, therapists, and observers. For example, a therapist may think an interpretation was particularly salient in a session while his or her client may consider the same intervention as indicating understanding and caring rather than imparting insight. A second way to find evidence for convergent validity would be to correlate the MULTI with other measures of therapeutic techniques. High correspondence between the MULTI and other rating scales might suggest not only that they measure similar constructs but also that the jargon-free approach of the MULTI might provide a degree of incremental validity over more technical instruments. Additionally, we would want to see how the molar-level ratings on the MULTI (i.e., global impressions of the interventions in a session) compare with more molecular-level assessments (i.e., interventions occurring in talking turns). We would expect to see covariance between the levels of interventions reported on the MULTI and the frequency of interventions uncovered by molecular measures, although a lack of a relation could suggest that raters are using a different type of decision rule than summation or averaging on the MULTI (e.g., Connolly, Crits-Christoph, Shappell, Barber, & Luborsky, 1998; Heaton, Hill, & Edwards, 1995).

Several limitations of the present studies need to be noted. First, the psychometric properties of some of the MULTI subscales might have been less stable or indeterminable because our samples did not always include all eight therapies the MULTI was designed to rate (e.g., DBT tapes were not used in Study 3). Further studies will need to investigate the psychometric properties of the MULTI across large samples of all eight therapies that the MULTI was designed to measure. Second, we used relatively crude measures to assess theoretical orientation. Our measures were categorical, whereas orientation might be better represented more dimensionally (Orlinsky & Rønnestad, 2005). Third, although we recruited participants from different practice settings (counseling centers, community mental health centers, private practices, academic research centers), we were not able to compare the performance of the MULTI across settings. Therapies of the same orientation may be conducted differently depending on practice setting (cf. Malik, Beutler, Alimohamed, Gallagher-Thompson, & Thompson, 2003), and it would be worthwhile knowing whether the MULTI can detect the essence of the specific therapies across different settings. The MULTI was designed to be easy to use and require no training, and it might be used in future studies to investigate the patterns of technique use in different practice settings. Fourth, our studies measured the psychometric soundness of the MULTI for clients, therapists, and observers separately. One of the unique features of this measure is that it makes it possible to simultaneously measure the perceptions of clients, therapists, and observers of a single session. Future studies might collect and compare the ratings from each perspective and how they relate to process and outcome. Finally, we did not collect data on the phase of treatment in which we sampled. Intervention use might vary by how long the client and therapist have been working together. For example, earlier sessions might contain more person centered techniques to establish a good relationship and explore the meaning of the events in the client's history. Later sessions might exhibit more interventions that challenge the client on problematic aspects of personality. Using the MULTI to explicitly sample different periods in the therapy might tell us more about the progression of therapy.

In conclusion, the MULTI shows some evidence of reliability and validity in clients', therapists', and observers' perspectives of the psychotherapeutic interventions that occurred in a session. Although examination of the psychometric properties of the MULTI in different samples and further refinement of the questionnaire are desirable, many interesting applications of the MULTI are already possible. Future research with the MULTI may help us open up and examine what goes on and what brings about change in psychotherapy.

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1. We thank Robert DeRubeis for his contribution to an earlier version on the MULTI.

Notes

[1] References are available from the authors on request.

[2] Seventeen items were removed from the MULTI completely during revision. Five items were from the Behavioral Therapy subscale, six from the Cognitive Therapy subscale, two from the Psychodynamic subscale, one from both the Person Centered and the Psychodynamic subscales, one from both the Psychodynamic and the Process-Experiential subscales; one from both the Cognitive Therapy and the Behavioral Therapy subscales; and one from the Person Centered, Psychodynamic, and Process-Experiential subscales. Five items were merged with other MULTI items because they were highly correlated and conceptually similar. These items included three that were exclusively from the Psychodynamic subscale, one repeated in both the Psychodynamic and the Process-Experiential subscales, and one repeated in both the Cognitive Therapy and the Behavioral Therapy subscales.

[3] In the BT subscale, six items were shared with the CT subscale, two with the DBT subscale, three with both the CT and the DBT subscales, and one with the PE subscale. In the CT subscale, six were shared with the BT subscale, three with both the BT and the DBT subscales, one with both the PC and the PD subscales, and one with the PE subscale. In the DBT subscale, two items were shared with the BT subscale and three items with both the BT and the CT subscales. In the IPT subscale, one item was shared with the PD subscale. In the PC subscale, one item overlapped with both the CT and the PD subscales, one with the PD subscale,,one with the PE subscale, and one with both the PD and the PE subscales. In the PD subscale, one item was shared with both the CT and the PC subscales, one with the IPT subscale, one with the PC subscale, one with the PE subscale, and one with both the PC and the PE subscales. In the PE subscale, one item overlapped with the BT subscale, one with the CT subscale, one with the PC subscale, one with both the PC and the PD subscales, and one with the PD subscale.

[4] For brevity, tables of structural equation coefficients are not included here. They are available from the corresponding author on request.

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Appendix A

Appendix

MULTITHEORETICAL LIST OF THERAPEUTIC INTERVENTIONS (MULTI): CLIENT VERSION

Instructions: The following items represent actions that may or may not have occurred in the session in which you just took part. Please rate each item using the scale provided. There are no right or wrong answers.

1: Not at all typical of the session	2: Slightly typical of the session	3: Somewhat typical of the session	4: Typical of the session	5: Very typical of the session

1. My therapist set an agenda or established specific goals for the therapy session.	1 2 3 4 5
2. My therapist made connections between my current situation and my past.	1 2 3 4 5
3. My therapist focused on identifying parts of my personality that were in conflict, like one part that wanted to be close to others and another part that did not.	1 2 3 4 5
4. My therapist asked me to visualize specific scenes or situations in detail.	1 2 3 4 5
5. My therapist encouraged me to identify specific situations or events that tended to precede my problematic behavior.	1 2 3 4 5
6. My therapist often focused on my recent experiences.	1 2 3 4 5
7. My therapist worked to give me hope or encouragement.	1 2 3 4 5
8. My therapist seemed convinced of the effectiveness of the methods he/she is using to help me.	1 2 3 4 5
9. My therapist and I discussed a plan for me to try to control (increase or decrease) specific behaviors, like:	1 2 3 4 5
a. Smoking.	
b. Eating.	
c. Exercising.	
d. Checking something repeatedly.	
e. Saying or thinking certain things.	
f. Hurting myself.	
10. My therapist repeated back to me (paraphrased) the meaning of what I was saying.	1 2 3 4 5
11. My therapist encouraged me to identify or label feelings that I had in or outside of the session.	1 2 3 4 5
12. My therapist encouraged me to talk about feelings I had previously avoided or never expressed.	1 2 3 4 5
13. My therapist pointed out times when my behavior seemed inconsistent with what I was saying, like when I:	1 2 3 4 5
a. Suddenly shifted my moods or topics.	
b. Was silent a long time.	
c. Laughed, smiled, looked away, or was uncomfortable.	
d. Avoided talking about specific topics or people.	
14. My therapist encouraged me to talk about whatever came to my mind.	1 2 3 4 5
15. My therapist taught me specific new skills or behaviors, like how to:	1 2 3 4 5
a. Relax my muscles.	
b. Control my emotions.	

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c. Be assertive with others.
d. Act in social situations.

16. My therapist encouraged me to think about, view, or touch things that I am afraid of. 1 2 3 4 5
17. My therapist reviewed or assigned homework exercises, like: 1 2 3 4 5
a. Writing down certain thoughts or feelings outside the session.
b. Practicing certain behaviors.
18. My therapist was warm, sympathetic, and accepting. 1 2 3 4 5
19. My therapist pointed out recurring themes or problems in my relationships. 1 2 3 4 5
20. My therapist talked about the function or purpose that my problem might have, like how it: 1 2 3 4 5
a. Lets me avoid responsibility.
b. Keeps others away from me.
21. My therapist encouraged me to explore explanations for events or behaviors other than those that first came to my mind. 1 2 3 4 5
22. My therapist made connections between the way I act or feel toward my therapist and the way that I act or feel in my other relationships. 1 2 3 4 5
23. My therapist encouraged me to see the choices I have in my life. 1 2 3 4 5
24. My therapist and I discussed my dreams, fantasies, or wishes. 1 2 3 4 5
25. My therapist encouraged me to consider the positive and negative consequences of acting in a new way. 1 2 3 4 5
26. My therapist made the session a place where I could get better or solve my problems. 1 2 3 4 5
27. My therapist tried to help me identify the consequences (positive or negative) of my behavior. 1 2 3 4 5
28. My therapist and I worked together as a team. 1 2 3 4 5
29. My therapist gave me advice or suggested practical solutions for my problem. 1 2 3 4 5
30. My therapist shared personal information with me. 1 2 3 4 5
31. My therapist listened carefully to what I was saying. 1 2 3 4 5
32. My therapist often explained what he/she was trying to do. 1 2 3 4 5
33. My therapist led the discussion most of the time. 1 2 3 4 5
34. My therapist focused on how disagreements between certain parts of my personality have caused my problems. 1 2 3 4 5
35. My therapist encouraged me to change specific behaviors. 1 2 3 4 5
36. My therapist focused on the ways I cope with my problems. 1 2 3 4 5
37. My therapist encouraged me to look for evidence in support of or against one of my beliefs or assumptions. 1 2 3 4 5
38. My therapist explored my feelings about therapy. 1 2 3 4 5
39. My therapist encouraged me to view my problem from a different perspective. 1 2 3 4 5
40. My therapist encouraged me to explore the personal meaning of an event or a feeling. 1 2 3 4 5
41. My therapist often focused on my childhood experiences. 1 2 3 4 5
42. My therapist focused on improving my ability to solve my own problems. 1 2 3 4 5
43. My therapist encouraged me to list the advantages and disadvantages of a belief or general rule that I follow. 1 2 3 4 5
44. My therapist had me role-play (act out or rehearse) certain scenes or situations. 1 2 3 4 5
45. My therapist tried to help me better understand how I relate to others, how this style of relating developed, and how it causes my problems. 1 2 3 4 5
46. My therapist seemed interested in trying to understand what I was experiencing. 1 2 3 4 5
47. My therapist encouraged me to focus on my moment-to-moment experience. 1 2 3 4 5
48. My therapist tried to help me better understand how my problem was due to certain beliefs or rules that I follow. 1 2 3 4 5
49. My therapist encouraged me to question my beliefs or to discover flaws in my reasoning. 1 2 3 4 5
50. My therapist focused on a specific concern in my relationships, like: 1 2 3 4 5
a. Disagreements or conflicts.
b. Major changes.
c. Loss of a loved one.
d. Loneliness.
51. My therapist encouraged me to explore ways in which I could make changes in my relationships, like ways to: 1 2 3 4 5
a. Resolve a conflict in a relationship.
b. Fulfill a need.
c. Establish new relationships or contact old friends.
d. Avoid problems I had experienced in previous relationships.
52. My therapist reviewed the gains I had made while in therapy. 1 2 3 4 5
53. My therapist reviewed the difficulties that I was currently experiencing. 1 2 3 4 5
54. My therapist encouraged me to examine my relationships with others, like: 1 2 3 4 5
a. Positive and negative aspects of my relationships.
b. What I want and others want from me.
c. The way I act in relationships.
55. My therapist encouraged me to think about ways in which I might prepare for major upcoming changes in my relationships, like: 1 2 3 4 5
a. Learning new skills.
b. Finding new friends.
56. My therapist both accepted me for who I am and encouraged me to change. 1 2 3 4 5
57. My therapist encouraged me to identify situations in which my feelings were invalidated, like: 1 2 3 4 5
a. Times when a significant other told me my feelings were incorrect.
b. Situations in which I had strong feelings that seemed inappropriate.
58. My therapist encouraged me to think about or be aware of things in my life without judging them. 1 2 3 4 5

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59. My therapist made it clear that my problem was a treatable medical condition. 1 2 3 4 5
60. My therapist tried to help me better understand how my problems were due to difficulties in my social relationships. 1 2 3 4 5

Note. Subscale items: Behavioral: 1, 4, 5, 6, 9, 15, 16, 17, 25, 27, 29, 33, 35, 36, 44; Common Factors: 7, 8, 18, 26, 28, 31, 42; Cognitive: 1, 5, 6, 17, 21, 25, 27, 33, 35, 36, 37, 39, 40, 43, 48, 49; Dialectical–Behavioral: 5, 9, 15, 35, 36, 56, 57, 58; Interpersonal: 19, 50, 51, 54, 55, 59, 60; Person Centered: 10, 12, 14, 23, 40, 46, 47; Psychodynamic: 2, 12, 13, 14, 19, 20, 22, 24, 38, 40, 41, 45; Process-Experiential: 3, 11, 12, 13, 23, 34, 39, 44, 47.

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