

# Evaluation and Description of Psychotherapy Sessions by Clients Using the Session Evaluation Questionnaire and the Session Impacts Scale

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Clients' evaluations of their sessions were prominent in factor-based indexes of session impact derived from the Session Evaluation Questionnaire (SEQ) and the Session Impacts Scale (SIS) in a large sample ( $N = 2,414$  sessions with 218 clients). One or both of the SEQ's independent session evaluation indexes, Depth and Smoothness, were highly correlated with SEQ's postsession Positivity and Good Therapist indexes and with the SIS's Understanding, Problem Solving, and Relationship indexes, as well as with single-item global evaluation scales, Good–Bad and Helpful–Hindering. Only the SEQ's postsession Arousal index and the SIS's single-item Unwanted Thoughts index appeared to be primarily descriptive rather than evaluative. The SIS's Hindering Impacts index's items were endorsed infrequently but might usefully flag problematic sessions.

*Impact* refers to a session's immediate subjective effects, including clients' evaluations of the session, their assessments of the session's specific character, and their postsession affective state (Stiles, 1980). Measures of impact are concerned with clients' internal reactions to sessions, which, logically, must intervene between in-session events and the long-term effects of treatment. An empirical understanding of these internal mediating processes depends on the kinds of information that are obtained from clients by the measures used. This study investigated the structure of two session impact measures, the Session Evaluation Questionnaire (SEQ; Stiles, 1980; Stiles & Snow, 1984a, 1984b) and the Session Impacts Scale (SIS; Elliott, 1986; Elliott & Wexler, 1994), in a large British sample, and it assessed the concurrent validity of scales derived from each measure by examining the scales' relations with each other and with single-item global measures of session goodness and helpfulness. We were particularly interested in the extent to

which the scales measured evaluative or descriptive aspects of the sessions.

## Evaluation and Session Impact

Theorists from Allport (1946) to Zajonc (1980) and from Skinner (1953) to Rogers (1951, 1959) have agreed that evaluation—that is, people's assigning of some degree of positive or negative valence to events—is adaptive, automatic, and universal. It is not surprising that evaluations are prominent in clients' impact ratings (e.g., whether the session seemed good or bad or whether they felt good or bad afterward). However, global evaluation alone seems a simplistic basis to understand how clients translate therapy process into outcome. The methodological challenge is to assess whether and how clients discriminate among their sessions in more differentiated, descriptive ways.

Of interest, as a first step, psychotherapy sessions are simultaneously judged as good or bad in at least two distinct ways: (a) as deep (powerful, effective) or shallow (weak, worthless) and (b) as smooth (relaxed, comfortable) or rough (tense, distressing). Depth and smoothness vary independently. Sessions may be perceived as deep and smooth (described as "smooth sailing" in Orlinsky & Howard's, 1977, nautical metaphor), as deep and rough ("heavy going"), as shallow and smooth ("coasting"), or as shallow and rough ("foundering"). Impact research involving the SEQ or the Therapy Session Report (Orlinsky & Howard, 1975) has shown that these two evaluative dimensions are prominent and orthogonal in both clients' and therapists' ratings (Mintz, Luborsky, & Auerbach, 1971; Orlinsky & Howard, 1975, 1977, 1986; Stiles & Snow, 1984b) and are associated in a variety of distinct ways with psychotherapy's antecedents (e.g., client personality traits or counselor training; Kivlighan, 1989; Kivlighan & Angelone, 1991; Nocita & Stiles, 1986), overt processes (Hill, Helms, Tichenor et al., 1988; Stiles, 1984; Stiles, Shapiro, & Firth-Cozens, 1988), covert processes (Fuller & Hill, 1985; Hill, Helms, Spiegel,

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& Tichenor, 1988; Regan & Hill, 1992), supervision (Friedlander, Siegel, & Brenock, 1989), and outcomes (Mallinckrodt, 1993; Stiles, Shapiro, & Firth-Cozens, 1990; Tryon, 1990).

Composed of bipolar adjective scales, the SEQ was designed through several iterations (Stiles, 1980; Stiles & Snow, 1984b; Stiles, Tupler, & Carpenter, 1982) to measure two session evaluation dimensions, depth and smoothness. In addition, the SEQ measures two dimensions of participants' postsession mood, positivity and arousal (Stiles & Snow, 1984b). These are widely considered as basic dimensions of mood ratings and account for most of the rating variance on a wide variety of mood measures in a wide variety of circumstances (Russell, 1978, 1979).

### SIS: Beyond Global Evaluation?

In comparison with the SEQ, the SIS (Elliott, 1986; Elliott & Wexler, 1994) seems to have been designed to assess a more differentiated set of session impacts. Starting from content and cluster analyses of clients' open-ended descriptions of significant events within sessions, Elliott and colleagues (Elliott, 1985; Elliott, James, Reimschuessel, Cisló, & Sack, 1985) devised a taxonomy of 16 impacts. The 16 SIS items ask clients to indicate the extent to which each of the event-derived specific impacts was experienced within a session. In contrast to the brief, bipolar adjective format of the SEQ items, each SIS item includes a phrase and a short paragraph describing the specific impact. For example, the following is the text of Item 1:

*Realized something new about myself.* As a result of the session, I now have new insight about myself or have understood something new about me; I see a new connection or see why I did or felt something. (Note: There must be a sense of "newness" as a result of something which happened during the session.) (Elliott & Wexler, 1994, p. 173)

See Elliott and Wexler (1994) for the text of all 16 SIS items.

A more differentiated impact measure is both plausible and attractive. Clinical impressions suggest that sessions seem to differ in many ways, depending on theoretical approach, stage of treatment, personality of the participants, topics dealt with, and so forth. Direct measures of the psychotherapeutic process yield a huge variety of dimensions (Greenberg & Pinsof, 1986), so that one might expect a similarly varied range of impacts. Measuring these impacts could contribute to an understanding of psychotherapy's evidently complex effects by a quantification of specific internal aspects of the change process. On the other hand, in moving from clients' open-ended descriptions of significant events to its numerical ratings of whole sessions, the SIS may have lost some of the differentiation that was present in Elliott et al.'s (1985) taxonomy of significant events and become more simply evaluative.

In factor analyses based on a sample of process-experiential therapy sessions, Elliott and Wexler (1994) grouped the SIS items into only two, obviously evaluative factors: (a) a Helpful Impacts factor and (b) a Hindering Impacts

factor. Thus, despite the detailed descriptions of each impact, clients may have responded mainly in terms of the items' evaluative connotations. In further analyses, Elliott and Wexler divided the Helpful Impacts factor into two, more descriptive parts, called *task impacts* and *relationship impacts*.

### Goals of This Study

The present study had two goals. First, we sought to identify an optimum set of dimensions that underlay clients' responses on the SEQ and on the SIS, balancing psychometric considerations (e.g., factor eigenvalues) and conceptual considerations (e.g., a maximizing of each instrument's ability to provide differentiated descriptions of session impact). Second, we sought to characterize the interrelationships and the concurrent validity of indexes of the identified dimensions. Special attention was paid to the extent to which each index reflected global evaluations. More specifically, we tested the hypothesis that nominally descriptive dimensions were highly correlated with relatively established evaluative indexes. In each of these respects, this study was designed to replicate and extend previous findings in a new, larger, and British (rather than American) sample of clients.

### Method

#### *Design and Participants*

Clients rated 2,414 psychotherapy sessions within the second Sheffield Psychotherapy Project, which involved a comparison of two time-limited treatments (psychodynamic-interpersonal and cognitive-behavioral) of two durations (8 sessions or 16 sessions), with clients stratified for the severity of their presenting depression (Shapiro, Barkham, Hardy, & Morrison, 1990; Shapiro et al., in press). The 218 clients who contributed session ratings were professional, managerial, or other white-collar workers in Sheffield, England, who were self-referred or referred by general practitioners or occupational health service workers for treatment of depression. Their average age at intake was 39 years (range = 22–61). Of the participants, 52% were men, 60% had a university education or professional qualification, and 62% were married or cohabiting, while the remainder were single, separated, divorced, or widowed. They included 117 project clients, who were included in the main study (Shapiro et al., in press), and 101 pilot clients, who were also assigned to one of the four treatment-by-duration conditions but who were seen during the development of the treatment protocols or as training cases for project therapists, or who withdrew before completing treatment. The clients were distributed among eight therapists, five of whom participated in seeing project cases. All therapists used each treatment approach and duration, using only one approach throughout the treatment of each client.

Before and after treatment, clients were given a battery of assessment measures. As reported elsewhere (Shapiro et al., in press), most clients in all cells of the project design improved substantially, which suggests that the impact of these sessions mediated long-term beneficial effects.

## Impact Measures

**SEQ.** The SEQ (Version 4) includes twenty-seven 7-point bipolar adjective scales, on which respondents are instructed to "please circle the appropriate number to show how you feel about this session." The items are divided into three sections: session evaluation, postsession mood, and therapist evaluation. The stem "This session was" preceded the first 12 items (session evaluation): bad–good, safe–dangerous, difficult–easy, valuable–worthless, shallow–deep, relaxed–tense, unpleasant–pleasant, full–empty, weak–powerful, special–ordinary, rough–smooth, and comfortable–uncomfortable. The stem "Right now I feel" preceded the second 12 items (postsession mood): happy–sad, angry–pleased, moving–still, uncertain–definite, calm–exciting, confident–afraid, wakeful–sleepy, friendly–unfriendly, slow–fast, energetic–peaceful, involved–detached, and quiet–aroused. The final group of three items was added to the SEQ in this study to assess the client's evaluation of the therapist—a central component of the therapeutic relationship in the session. The stem "Today I feel my therapist was" preceded these items: skillful–unskillful, cold–warm, and trustworthy–untrustworthy. The adjective scales within each section were selected to represent major evaluative and affective dimensions and to avoid skew in the distribution of ratings (Stiles, 1980; Stiles & Snow, 1984b).

Although previous studies (cited earlier) have found evidence of reliability and validity of some of the SEQ's dimensions (notably depth and smoothness), this study sought to assess the SEQ's dimensionality afresh in this British sample. The combining of SEQ items into indexes was based on new factor analyses, reported later. Other analyses, also reported later, assessed the indexes' reliability and concurrent validity in this sample.

**SIS.** The SIS (Version 1; Elliott & Wexler, 1994) includes 16 items that characterize impacts. Each item includes a label and a short paragraph description. The labels are 1. realized something new about myself, 2. realized something new about someone else, 3. more aware of or clearer about feelings, experiences, 4. definitions of problems for me to work on, 5. progress toward knowing what to do about problems, 6. feel my therapist understands me, 7. feel supported or encouraged, 8. feel relieved, more comfortable, 9. feel more involved in therapy or inclined to work harder, 10. feel closer to my therapist, 11. more bothered by unpleasant thoughts or more likely to push them away, 12. too much pressure or not enough directions from therapist, 13. feel my therapist doesn't understand me, 14. feel attacked or that my therapist doesn't care, 15. confused or distracted, and 16. impatient or doubting value of therapy. The text that accompanies these labels is presented in Elliott and Wexler, 1994, pp. 173–174. Each item is rated on a 5-point scale—anchored with *not at all* (1), *slightly* (2), *somewhat* (3), *pretty much* (4), and *very much* (5)—in which clients match their experience of the session with the characterization. A 17th item, other important impacts, is open-ended and was not dealt with in this study.

**Helpfulness item.** In addition to completing the SEQ and the SIS, clients were asked "Please rate how helpful or hindering to you this session was overall" on a fully anchored 9-point scale ranging from *extremely hindering* (1) to *neither helpful nor hindering*; *neutral* (5) to *extremely helpful* (9).

## Procedure

Immediately after each session, all of the clients were asked to complete the SEQ and the global evaluation items, and 159 of the 218 clients were asked to complete the SIS. (Half of the project clients completed a different, open-ended postsession question-

naire instead of the SIS.) All forms were returned to the clinic administrator before the client left the clinic. Clients were informed that their therapist would not see their ratings until after therapy was completed to prevent the impact measures from becoming a channel for client–therapist communication.

## Results

We conducted analyses in steps. After adjusting clients' ratings to permit for separate examination of session-level and client-level variation, we assessed each measure's dimensional structure through factor analysis. Then, we constructed indexes of each of the factors (means of the high-loading items) and examined the relations among the impact indexes.

### Session-Level and Client-Level Deviation Scores

Analyses of raw session ratings would fail to discriminate among several distinct sources of variation: (a) differences among therapists, (b) differences among clients of each therapist, and (c) differences among sessions of each client (Dill-Standiford, Stiles, & Rorer, 1988; Stiles & Snow, 1984a). The correlations of items with each other or with other variables could conceivably be different at different levels. To prevent this confounding, we conducted analyses on two sets of deviation scores (equivalent to residuals after the removal of main effects): Session-level deviation scores were the raw ratings with between-case variance removed, that is, the deviations of raw item ratings from the mean for that client; and client-level deviation scores were clients' mean ratings with between-therapist variance removed, that is, the deviations of each client's mean rating on that item from the mean for all clients of that therapist. Thus, the session-level results were unaffected by mean differences among clients, therapists, or client–therapist pairings; and the client-level results were unaffected by mean differences among therapists. Variables at these different levels have different interpretations and can have different relations with each other (Dill-Standiford et al., 1988; Norman, 1967).

In calculating client-level means, we excluded clients who completed fewer than four of the relevant forms (the SEQ or the SIS) to avoid unstable estimates (cf. Stiles & Snow, 1984a).

### Dimensional Structure of the SEQ and the SIS

At each level (i.e., session-level deviation scores and client-level deviation scores), we conducted factor analyses using principal-components extraction followed by varimax rotation for clients' responses to four sets of items—three sets for subdivisions of the SEQ, which measured distinct aspects of session impact (evaluation of the session itself, feelings after the session, and evaluation of the therapist), and one set for the SIS, which had no subdivisions—or eight factor analyses in all. We used unconstrained factor analyses rather than confirmatory factor analyses because

we were interested in each scale's actual loadings in this British sample rather than only whether they approximated previous results. As Tinsley and Tinsley (1987) pointed out, even when a particular factor structure is hypothesized, "Hypothesis testing using a confirmatory procedure . . . constitutes a less stringent test of the hypothesized factor structure than does performing an exploratory analysis and then relating those results to a hypothesis" (p. 419). Parallel analyses of data from each of the second Sheffield Psychotherapy Project's treatment approaches and durations separately produced essentially the same factor patterns, so we report only results for the whole data set.

Table 1 contains six factor patterns: three analyses of the SEQ at both session and client levels, including (a) the 12 items of the session evaluation section ("This session was"), (b) the 12 items of the postsession mood section ("Right now I feel"), and (c) the 3 items of the therapist evaluation section ("Today I feel my therapist was"). At both session and client levels, the session evaluation section of the SEQ yielded Depth and Smoothness factors (Table 1, first section), which replicates previous results with American samples (Stiles, 1980; Stiles & Snow, 1984b). The postsession mood section of the SEQ yielded distinct Positivity and Arousal factors (Table 1, middle section), which again replicates the previous results. In the analyses of the 3-item therapist evaluation section of the SEQ, one factor emerged, which we called *Good Therapist* (Table 1, last section). In each of these six analyses of the SEQ, eigenvalues of extracted (unrotated) factors were higher than 1 (all except two of these eigenvalues were higher than 3), and no other eigenvalues approached 1. After rotation, eigenvalues of all factors were greater than 2, and all but two factors were greater than 3 (Table 1).

In the factor analyses of the SIS (Table 2), only two or three of the unrotated factors had eigenvalues greater than 1; however, after examining several alternative solutions, we extracted five factors from the SIS at each level. We did this to maximize potential specificity, mindful that the SIS's construction aimed it toward a more differentiated, descriptive measurement of impact. After varimax rotation, all of the five factors in the session-level analysis and four of the five in the client-level analysis had eigenvalues greater than 1 (Table 2). Oblique (promax) rotations gave the same groupings of items. The five SIS dimensions, which were the same at both session and client levels (Table 2), included three helpful impacts factors, which we called Understanding (Factor 3), Problem Solving (Factor 4), and Relationship (Factor 1), and two negatively tinged factors, which we called Unwanted Thoughts (Factor 5) and Hindering Impacts (Factor 2).

The proportion of the total variance explained by each rotated factor is equal to the final eigenvalue divided by the number of items in the analysis, whereas the item communalities indicate how well each item's meaning is represented in this set of factors. The total variance explained in each analysis is the sum of the factor eigenvalues, which is also the sum of the communalities (see the row Variance explained and the column Communality in Tables 1 and 2).

### *Indexes of Impact Dimensions*

*SEQ indexes.* Indexes of impact dimensions measured by the SEQ were constructed on the basis of the factor-analytic results. Each index was calculated as the mean of the items designated in Table 1. We constructed the indexes as means of high-loading items rather than as factor scores because the former were conceptually simpler and less tied to this particular sample. Two SEQ items in the session evaluation section (good-bad and safe-dangerous) and two in the postsession mood section (wakeful-sleepy and excited-calm) were not used in composing the five-item indexes because the loadings were weak or split between the factors, or because previous research had suggested that therapists and clients use the items differently (Stiles, 1980; Stiles & Snow, 1984b). Though not included in the composite indexes, the good-bad item was investigated as a single-item global evaluation index. We included excited-calm in the Arousal index, despite its relatively strong negative loading on the Positivity factor, to help balance the positive loadings of fast-slow and energetic-peaceful (see Table 1). This made the Arousal index more independent of Positivity, albeit at some cost to its internal consistency.

*SIS indexes.* Indexes of the five impact dimensions measured by the SIS were based on the factor-analytic results and calculated as the means of the items designated in Table 2.

*Global evaluation indexes.* We used the 9-point helpful-hindering item and the SEQ's good-bad item as separate, single-item indexes of clients' global evaluation of their sessions.

*Index means, standard deviations, and internal consistency.* Table 3 presents the means, standard deviations, and internal consistency reliability (coefficient alpha, for multiple-item indexes only) of the SEQ and the SIS indexes and the two single-item global indexes on the basis of all sessions in the sample. Indexes were treated as missing if any constituent item was missing. In most cases, the means were near or somewhat above the midpoint of each scale (midpoints were 4.0 for the SEQ indexes, 3.0 for the SIS indexes, and 5.0 for the Helpful-Hindering index). Standard deviations clustered around 1.0. The most extreme exception was the Hindering Impacts index ( $M = 1.17$ ,  $SD = 0.37$ ), which was very near its floor of 1.0. Most clients rated most sessions as *not at all* on the hindering impacts items (Items 12-16; see Elliott & Wexler, 1994, for item content). Internal consistency was adequate to good for all multiple-item indexes (coefficient  $\alpha = .77$  to  $.92$ ), which was not surprising insofar as all were constructed from coherent factors. Single-item indexes do not have a measurable internal consistency, of course, and, presumably, they were less stable than were the multiple-item indexes.

### *Components of Variance Analysis*

To assess the relative contributions of therapist differences, client differences, and session differences to variance on the impact indexes, we conducted two sets of one-way

Table 1  
*Session Evaluation Questionnaire (SEQ) Varimax-Rotated Factor Patterns for Client Responses at Session Level (With Between-Cases Variance Removed) and Client Level (With Between-Therapists Variance Removed)*

Index/item	Session level			Client level		
	Factor		Communality	Factor		Communality
	1	2		1	2	
Session evaluation factors						
Depth						
Deep-shallow	-.13	.80	.66	-.04	.91	.82
Powerful-weak	-.10	.82	.68	.09	.90	.82
Full-empty	.07	.79	.63	.19	.90	.86
Special-ordinary	.02	.79	.62	.13	.86	.76
Valuable-worthless	.18	.73	.57	.27	.85	.80
Smoothness						
Smooth-rough	.85	-.04	.72	.90	.13	.83
Comfortable-uncomfortable	.85	.07	.73	.92	.14	.87
Relaxed-tense	.82	.05	.67	.90	.13	.84
Pleasant-unpleasant	.83	.13	.70	.88	.32	.88
Easy-difficult	.80	-.02	.64	.87	-.09	.77
Other items						
Good-bad	.50	.59	.59	.49	.70	.73
Safe-dangerous	.74	-.01	.55	.77	.26	.66
Variance explained <sup>a</sup>	4.29	3.46	7.75	4.98	4.66	9.65
Postsession mood factors						
Positivity						
Confident-afraid	.84	.01	.70	.93	.02	.86
Happy-sad	.83	.08	.70	.87	.15	.78
Pleased-angry	.81	.00	.66	.89	-.03	.79
Definite-uncertain	.79	.07	.64	.86	.02	.74
Friendly-unfriendly	.77	.05	.59	.84	-.04	.70
Arousal						
Aroused-quiet	-.01	.79	.62	.00	.87	.75
Energetic-peaceful	.12	.75	.57	.26	.77	.67
Fast-slow	.27	.72	.59	.34	.78	.73
Moving-still	.02	.66	.44	.05	.78	.62
Excited-calm	-.30	.65	.51	-.40	.71	.66
Other items						
Involved-detached	.49	.41	.41	.57	.38	.47
Wakeful-sleepy	.39	.49	.39	.68	.40	.61
Variance explained <sup>a</sup>	3.85	2.98	6.83	4.97	3.41	8.38
Therapist evaluation factors						
Good Therapist						
Skillful-unskillful	.80		.64	.94		.88
Trustworthy-untrustworthy	.77		.59	.94		.89
Warm-cold	.69		.48	.77		.60
Variance explained <sup>a</sup>	1.71		1.71	2.37		2.37

Note.  $n = 2,360$  to  $2,397$  sessions for session-level analyses;  $n = 210$  clients for client-level analyses. The session-level analyses were based on the deviations of session ratings from the mean for that client-therapist pair. The client-level analyses were based on the deviations of client mean ratings from the mean for that therapist and included only clients who completed four or more SEQ forms. Items have been reordered and directionality has been reversed in some cases to highlight factors.

<sup>a</sup> Final eigenvalue.

analyses of variance: one set with therapists as levels and one set with client-therapist dyads as levels. Table 3 contains the proportions of variance accounted for by (a) therapists, (b) dyads within therapists (the dyad proportion minus the therapist proportion), and (c) sessions within

dyads (the residual variance not explained by therapists or clients). On most of the indexes, variance was attributable to client-therapist dyads and to sessions in approximately equal proportions. This division justified separate investigation of the session-level and client-level components.

Table 2

*Session Impacts Scale (SIS) Varimax-Rotated Factor Patterns at Session Level (With Between-Cases Variance Removed) and Client Level (With Between-Therapists Variance Removed)*

Index/item	Session level						Client level					
	Factor					Communality	Factor					Communality
	1	2	3	4	5		1	2	3	4	5	
Understanding												
1. News about self	.26	-.06	.77	.13	.02	.68	.44	.02	.80	.10	.05	.84
2. News about others	.12	-.08	.76	.09	-.16	.64	.32	.01	.82	.18	.08	.80
3. Clearer awareness	.30	-.06	.64	.20	.12	.56	.59	-.03	.67	.19	.08	.83
Problem Solving												
4. Defined problems	.33	-.06	.32	.69	.01	.69	.57	-.15	.32	.68	.01	.91
5. Know what to do	.39	-.05	.21	.72	-.08	.71	.46	-.09	.23	.81	.04	.93
Relationship												
6. Therapist understands	.74	-.17	.26	.03	.06	.65	.88	-.18	.21	.12	.00	.86
7. Feel supported	.75	-.19	.13	.26	-.09	.69	.85	-.18	.16	.27	-.02	.85
8. Feel relieved	.69	-.15	.07	.28	-.14	.61	.81	-.01	.30	.20	.01	.78
9. Feel involved	.70	-.11	.24	.18	-.01	.59	.88	-.02	.26	.20	.02	.88
10. Closer to therapist	.76	-.17	.21	.10	-.03	.66	.89	-.08	.26	.07	.09	.87
Unwanted Thoughts												
11. Bothered by thoughts	-.09	.08	-.04	-.05	.95	.92	.07	.39	.12	.05	.89	.97
Hindering Impacts												
12. Too much pressure	-.10	.73	-.07	-.03	.09	.56	.01	.89	-.04	-.01	.06	.81
13. Feel misunderstood	-.17	.71	-.11	.08	-.06	.55	-.05	.89	.05	-.02	.11	.81
14. Feel attacked	-.20	.69	.00	.13	.05	.53	-.13	.89	-.05	.06	-.02	.84
15. Confused, distracted	-.12	.61	.00	-.35	.21	.55	-.03	.73	.10	-.24	.32	.70
16. Impatient, doubting	-.06	.67	-.07	-.31	-.08	.56	-.18	.82	-.06	-.10	.10	.74
Variance explained <sup>a</sup>	3.19	2.48	1.93	1.49	1.05	10.15	4.93	3.84	2.25	1.45	0.95	13.42

*Note.*  $n = 1,642$  sessions for session-level analysis;  $n = 146$  clients for client-level analysis. The session-level analysis was based on the deviations of session ratings from the mean for that client-therapist pair. The client-level analysis was based on the deviations of client mean ratings from the mean for that therapist and included only clients who completed four or more SIS forms. See Elliott and Wexler (1994) for the text of the items.

<sup>a</sup> Final eigenvalue.

(Note that client-level variation encompasses effects of the client-therapist pairing.) Much smaller proportions were attributable to stable therapist differences.

The Arousal index and the three single-item indexes—Unwanted Thoughts, Good-Bad, and Helpful-Hindering—showed relatively larger proportions of variance due to sessions and correspondingly smaller proportions due to therapists and to dyads (Table 3). This pattern may reflect the greater session-to-session lability of these dimensions or, especially in the case of the single-item indexes, the lower reliability of the measurement (Anastasi, 1988). The Good Therapist index was distinctively stable across sessions, with a large proportion of variance attributable to dyads. This result suggested that clients' evaluations of their therapists remained relatively stable despite fluctuations in their judgments about other aspects of the sessions.

### *Relationships Among Impact Indexes*

We computed correlations among all 12 impact indexes (5 SEQ indexes, 5 SIS indexes, and 2 single-item global evaluation indexes) at both the session level and the client level. Session-level analyses (conducted on deviation scores from each dyad's mean scores) are shown below the diagonal in Table 4. Session-level correlations concern covaria-

tion across a typical dyad's sessions. For example, do sessions characterized by relatively more depth also contain relatively more understanding impacts? Client-level analyses (conducted on deviations of each clients' mean scores from the means of all clients of that therapist) are shown above the diagonal in Table 4. Client-level correlations concern covariation across a typical therapist's clients. For example, do clients who report relatively deeper sessions overall also report relatively more understanding impacts overall?

The correlations that were significant at the  $p < .05$  level are indicated in Table 4. The correlations with the SEQ session evaluation indexes Depth and Smoothness (and, arguably, correlations with the global evaluation indexes Good-Bad and Helpful-Hindering) test the study's specific hypothesis that all of the SEQ and SIS dimensions reflect clients' evaluations of their sessions. For correlations not testing a specific hypothesis, a Bonferroni correction for the 66 correlations in each half of the table (session level and client level) would require a nominal alpha of .0007 to achieve a corrected alpha of .05; this is approximated by the nominal  $p < .001$  significance level indicated in Table 4. Because of the large sample sizes, particularly at the session level, some small, clinically negligible correlations were statistically significant.

Table 3  
Means, Standard Deviations, Internal Consistency Reliability (Coefficient Alpha), and Proportions of Variance Attributable to Therapists, Dyads, and Sessions for the Clients' Session Evaluation Questionnaire (SEQ) Indexes, the Session Impacts Scale (SIS) Indexes, and Single Item Global Evaluation Indexes

Index	No. items	No. forms	<i>M</i>	<i>SD</i>	Reliability	Proportion of variance		
						Therapist	Dyad	Session
SEQ								
Depth	5	2,388	5.16	0.91	.90	.06	.47	.47
Smoothness	5	2,385	4.38	1.30	.92	.03	.41	.56
Positivity	5	2,399	4.62	1.12	.90	.04	.44	.52
Arousal	5	2,394	4.12	0.92	.80	.01	.39	.60
Good Therapist	3	2,397	5.57	1.13	.77	.10	.72	.18
SIS								
Understanding	3	1,698	2.60	1.05	.78	.05	.46	.49
Problem Solving	2	1,705	2.87	1.11	.82	.07	.45	.48
Relationship	5	1,676	3.11	1.04	.90	.03	.52	.45
Unwanted Thoughts	1	1,705	1.50	0.83	—	.02	.29	.69
Hindering Impacts	5	1,692	1.17	0.37	.80	.03	.42	.55
Global								
Good-Bad (SEQ)	1	2,398	5.52	1.14	—	.04	.36	.60
Helpful-Hindering	1	2,400	7.27	1.25	—	.04	.34	.62

*Note.* Indexes were calculated as the mean of clients' ratings on constituent items (see Tables 1 and 2). SEQ items could range from 1 to 7, SIS items from 1 to 5, and the helpful-hindering item from 1 to 9. Reliability = internal consistency measured by coefficient alpha. Proportion of variance = proportions of the total variance on each index attributable to (a) Therapist (differences among therapists based on the means of their clients' ratings), (b) Dyad (mean differences among dyads within therapists) and (c) Session (the remainder of the variance, due to sessions within dyads). Dashes indicate single-item indexes for which internal consistency cannot be calculated.

**Intercorrelations within the SEQ.** The correlations contained in Table 4 show that Depth and Smoothness, the two SEQ session evaluation indexes, were nearly independent at the session level (.06) and only modestly correlated at the client level (.28). Positivity and Arousal, the SEQ postsession mood indexes, were nearly independent at both session and client levels (.09 and .10, respectively). The Positivity index was strongly correlated with both Depth and Smoothness, suggesting that both aspects of session goodness contribute to clients' positive mood. On the other hand, Arousal was largely unrelated to any of the other SEQ indexes, which suggests that this is a separate, nonevaluative dimension of session impact. The Good Therapist index was correlated substantially with all of the other SEQ indexes except Arousal.

**Intercorrelations within the SIS.** Table 4 shows that the SIS's three positive impacts indexes—Understanding, Problem Solving, and Relationship—were strongly intercorrelated at both session and client levels (.51 to .73). The Unwanted Thoughts index showed small negative correlations with the positive impacts indexes at the session level (–.16 to –.08) but nonsignificant or slightly positive correlations at the client level (.06 to .22). The Hindering Impacts index showed null or modest negative correlations with the positive impacts indexes at both levels (–.04 to –.42).

**Correlations between SEQ and SIS indexes.** As shown in Table 4, the SIS's positive impacts indexes (Understanding, Problem Solving, and Relationship) were moderately to strongly correlated with the SEQ Depth index at both ses-

sion and client levels (.44 to .72), which suggests that the SIS evaluative items concern the potency-value aspect of session evaluation. These SIS indexes were only weakly to moderately correlated with the SEQ Smoothness index (.06 to .43), which suggests, at best, a moderate relation to the session's relaxation-comfort aspect. The SIS's positive impacts indexes correlated with SEQ postsession Positivity at numerical levels between their correlations with Depth and Smoothness. The SEQ Good Therapist index's numerically strongest correlations with any SIS index were, as might be expected, with the Relationship index. The SIS Unwanted Thoughts index showed very modest negative or null correlations with SEQ indexes (–.31 to .04). The SIS Hindering Impacts index, predictably, was negatively correlated with the SEQ evaluative and mood indexes; these correlations may have been attenuated by the lack of variation on the Hindering Impacts index (because most ratings were at the 1.0 floor). The SEQ Arousal index showed little relation to any of the SIS indexes.

**Correlations of global evaluations with impact dimensions.** As Table 4 shows, Good-Bad and Helpful-Hindering, the two single-item global evaluation indexes, were moderately to strongly correlated with SEQ Depth, Smoothness, Positivity and Good Therapist, with SIS Understanding, Problem Solving, and Relationship, and with each other at both the session and client levels (.25 to .79). The single-item global indexes' correlations with SEQ Arousal and with SIS Unwanted Thoughts were small or

Table 4

*Intercorrelations of Session Evaluation Questionnaire (SEQ) Indexes, Session Impacts Scales (SIS) Indexes, and Single-Item Global Evaluation Indexes at Session Level and Client Level*

Index	SEQ					SIS					Global	
	1	2	3	4	5	6	7	8	9	10	11	12
<b>SEQ</b>												
1. Depth	—	.28**	.54**	.12	.62**	.59**	.52**	.72**	.04	-.22**	.71**	.72**
2. Smoothness	.06*	—	.72**	-.04	.36**	.17*	.43**	.36**	-.20*	-.31**	.55**	.38**
3. Positivity	.30**	.67**	—	.09	.39**	.27*	.47**	.49**	-.26*	-.37**	.69**	.53**
4. Arousal	.24**	-.08**	.10**	—	.01	.02	-.04	-.01	-.13	.02	.03	-.04
5. Good Therapist	.46**	.25**	.36**	.08**	—	.30**	.40**	.48**	-.10	-.33**	.60**	.53**
<b>SIS</b>												
6. Understanding	.55**	.06*	.26**	.09**	.33**	—	.64**	.72**	.22*	-.04	.45**	.54**
7. Problem Solving	.44**	.22**	.38**	.06*	.33**	.51**	—	.73**	.06	-.22*	.60**	.70**
8. Relationship	.51**	.28**	.49**	.07*	.48**	.54**	.60**	—	.09	-.19*	.64**	.67**
9. Unwanted Thoughts	-.10*	-.27**	-.31**	.02	-.13**	-.08*	-.15**	-.16**	—	.49**	-.15	-.02
10. Hindering Impacts	-.36**	-.29**	-.39**	.00	-.38**	-.23**	-.27**	-.42**	.17**	—	-.34**	-.37**
<b>Global</b>												
11. Good-Bad	.52**	.46**	.56**	.10**	.42**	.34**	.37**	.51**	-.22**	-.46**	—	.79**
12. Helpful-Hindering	.57**	.25**	.42**	.10**	.45**	.47**	.45**	.55**	-.17	-.46**	.61**	—

*Note.*  $n = 2,371$  to  $2,390$  sessions in session-level analyses (shown below the diagonal) and  $n = 210$  clients in client-level analyses (shown above the diagonal) for correlations among SEQ indexes and single-item global indexes.  $n = 1,655$  to  $1,698$  sessions in session-level analyses and  $n = 146$  clients in client-level analyses for correlations involving SIS indexes. Clients were included in client-level analyses only if they had completed four or more forms.

\*  $p < .05$ . \*\*  $p < .001$ .

negligible, and they had moderate negative correlations with SIS Hindering Impacts.

**Combined evaluative dimensions.** Finally, Table 5 contains the multiple correlations of SEQ Depth and Smoothness, the best-established of the evaluative impact indexes, with each of the other indexes as a way of summarizing the magnitude of evaluative influences. The multiple correlations were based on simultaneous regression analyses in which the Depth and Smoothness indexes were the predictors, and each of the other impact indexes was, in turn, the dependent variable. At both session and client levels, these multiple correlations were roughly in the .5–.7 range for SEQ Positivity and Good Therapist; for SIS Understanding, Problem Solving, and Relationship; and for Good-Bad and Helpful-Hindering. The multiple correlations were somewhat lower for SIS Hindering Impacts and substantially lower for SEQ Arousal and SIS Unwanted Thoughts.

### Discussion

Many of the session impact indexes appeared to reflect clients' evaluations of their sessions. With a few exceptions, SEQ and SIS indexes were highly correlated with explicitly evaluative indexes (e.g., SEQ Depth and Smoothness) and with each other (Tables 4 and 5). Despite this prominence of evaluation and the overlap among indexes, however, there was some evidence that additional descriptive dimensions underlay some client ratings, and in our discussion we attend to the question of how more differentiated descriptions might be obtained.

The generally similar factor structures at session and client levels (Tables 1 and 2) probably reflect the similar meanings of the SEQ's and the SIS's constituent words and

phrases when applied at these different levels. For example, such terms as "deep" and "powerful" are synonymous to a similar degree at both levels, that is whether they are used to describe a particular session or the average of sessions involving a particular client. Because the factor structures are similar, the same indexes (i.e., combinations of scales)

Table 5

*Multiple Correlations of Depth and Smoothness Indexes at Session Level and Client Level With Other Impact Indexes*

Index	Session level	Client level
<b>SEQ</b>		
Positivity	.72	.79
Arousal	.26	.13
Good Therapist	.51	.61
<b>SIS</b>		
Understanding	.55	.59
Problem Solving	.49	.60
Relationship	.57	.74
Unwanted Thoughts	.28	.23
Hindering Impacts	.45	.34
<b>Global</b>		
Good-Bad	.67	.78
Helpful-Hindering	.60	.71

*Note.* Session-level scores were deviations of raw scores from the mean for that client-therapist dyad. Client-level scores were deviations of client's mean scores from the mean for all of that therapist's clients. Clients were included in client-level analyses only if they had completed four or more forms. All of the multiple correlations were statistically significant ( $p < .01$ ) except for Arousal at the client level. SEQ = Session Evaluation Questionnaire; SIS = Session Impacts Scale.



can be used for research comparing sessions within dyads as can be used for research comparing typical sessions across dyads. Nevertheless, the indexes have different interpretations, and in application they may have different relationships with each other or with other variables at the different levels. For example, as shown in Table 4, the Unwanted Thoughts index had a small significant negative correlation with the Understanding index at the session level ( $r = -.08$ ,  $p < .01$ ) but a small significant positive correlation with the Understanding index at the client level ( $r = .22$ ,  $p < .01$ ). That is, even though Unwanted Thoughts was not associated with Understanding within sessions, clients who reported on the average more Unwanted Thoughts during their treatment showed on the average a slight tendency to report relatively more Understanding. Perhaps their understanding tended to occur in different sessions from their unwanted thoughts (see also Dill-Standiford et al., 1988).

### *Positive Evaluation Indexes*

The widely used distinction between depth and smoothness as separate evaluative dimensions was strongly supported. These two internally consistent factors were replicated at both session and client levels (Table 1), which confirmed their stability and coherence across time, settings, and therapeutic approaches (cf. Stiles, 1980; Stiles & Snow, 1984b). They can be used as points of reference in a consideration of the other impact indexes.

The SEQ Positivity and Good Therapist indexes and the SIS Understanding, Problem Solving, and Relationship indexes, along with the global indexes Good-Bad and Helpful-Hindering, were all highly correlated with Depth, Smoothness, or both and were intercorrelated with each other (Tables 4 and 5). We consider each of these overlapping indexes first, before turning to Arousal, Unwanted Thoughts, and Hindering Impacts, which appeared to be more separate.

The Positivity index's strong correlation with the Smoothness index at both session and client levels (Table 4) plausibly suggests an important association between clients' feelings of comfort, relaxation, and lack of distress in sessions and their positive mood after sessions. Positivity's even larger multiple correlation with Depth and Smoothness (Table 5) suggests that clients' postsession positive mood is even more closely associated with the combination of the two aspects of their session evaluations. On the other hand, the literal meaning of the SEQ items' stem, "Right now I feel," does not restrict clients to evaluating the session itself; hypothetically, other influences, such as their current degree of depression or anxiety, might affect their responses. Further work is required to assess this possibility.

The Good Therapist index's large proportion of variance attributable to dyads (Table 3) suggests that clients' perceptions of their therapist's performance tended to remain relatively stable across sessions. As might be expected, the Good Therapist index was particularly highly correlated with the SIS Relationship index at both session and client levels (Table 4), which lends some support to both indexes'

concurrent validity. Further work is needed to assess whether the SEQ Good Therapist index and the SIS Relationship index could be used as simple session-by-session assessments of the therapeutic alliance.

The identification of three positive impacts factors in the SIS (i.e., Understanding, Problem Solving, and Relationship) extended the structure reported by Elliott and Wexler (1994) by subdividing their Task Impacts factor into Understanding and Problem Solving factors. The content of each set of items appears to concern a conceptually different sort of positive impact (see Elliott & Wexler, 1994, for item content). Theoretically, separate processes of (a) understanding, insight, or scheme change; (b) application of understandings to the solutions of life problems; and (c) formation and maintenance of a productive therapeutic relationship can be discriminated within sessions (e.g., Elliott et al., 1985; Stiles, Elliott et al., 1990; Stiles et al., 1991), even though all are likely to be evaluated positively. Orlinsky and Howard's (1975) analysis of the Therapy Session Report also found multiple specific factors that reflected nuances of clients' positive or negative evaluations of their therapy.

Despite their high intercorrelations (Table 4), the SIS Understanding, Problem Solving, and Relationship indexes responded differently to experimental manipulations of theoretical approach and treatment duration (limited to 8 or 16 sessions), as reported elsewhere (Reynolds et al., 1993). For example, in keeping with expectations derived from a model of therapeutic assimilation of problematic experiences (Stiles, Elliott et al., 1990), clients rated cognitive-behavioral sessions as significantly higher than psychodynamic-interpersonal sessions in Problem Solving impacts (particularly early in treatment) but not in Understanding impacts or Relationship impacts. Clients in the 8-session treatments averaged significantly higher levels of Understanding impacts than did the 16-session treatments, but not of Problem Solving impacts or Relationship impacts.

Thus, the SIS's positive indexes, though burdened by clients' global evaluations, show potential for the assessment of more descriptive impacts. There is adequate reason to preserve and enhance these indexes as separate dimensions rather than to collapse them into a single Helpful Impacts index, which would probably add little to the information obtainable with simpler measures (e.g., the Depth index of the SEQ). Because the current items are so evaluatively loaded, however, sessions that have any positive features tend to get relatively high scores on all three indexes, thus reducing the indexes' ability to discriminate. It would be desirable to make sharper distinctions, perhaps by a revision of the wording of the SIS items or a construction of new items that avoid evaluative terms in favor of more differentiated descriptive terms.

The single-item global evaluation indexes, Good-Bad and Helpful-Hindering, showed large overlaps with each other and with the other evaluative indexes (Table 4). Although simple and compact, single-item indexes are likely to be less reliable than multiple-item indexes (Anastasi, 1988, p. 121), and they fail to distinguish between the value-power and comfort-relaxation aspects of session

evaluations. A multiple-item instrument such as the SEQ offers psychometrically and conceptually stronger measurement of participants' evaluations of sessions.

### *Beyond Evaluative Ratings*

The Arousal index achieved the highest proportion of variance due to session differences (Table 3), which suggests that arousal is labile and transitory rather than stable across sessions. This index was virtually unrelated to any of the evaluative indexes (Tables 4 and 5), yet it showed good internal consistency (Table 3) and represents a major dimension of mood states across a wide range of situations (Russell, 1978, 1979). The energizing impact of psychotherapy sessions has not yet been widely investigated, but it might be connected with tendencies to put therapeutic learnings into practice or to act upon personal changes in the short term.

The SIS Unwanted Thoughts index was especially interesting. It consisted of a single item:

11. *More bothered by unpleasant thoughts or more likely to push them away.* The session has made me think of uncomfortable or painful ideas, memories, or feelings that weren't helpful; it has made me push certain thoughts or feelings away or avoid them.

This index showed only modest correlations with the other indexes, which could reflect either independent descriptive potential or unreliability. Among clients in the second Sheffield Psychotherapy Project, those who were moderately or severely depressed averaged a higher rate and a higher variability of SIS Unwanted Thoughts than did those who were only mildly depressed (Reynolds et al., 1993), which is in keeping with an expectation that relatively distressed clients are more likely to be bothered by their thoughts. In theory, some of the most important events in therapy—such as the disclosure of traumatic life events—can be disturbing and in that sense unwanted. Such events may yield middling ratings on evaluative items, reflecting powerfully ambivalent reactions rather than neutral ones. We recommend further development of items like the SIS unwanted thoughts item, which may better assess such impacts.

The relative scarcity of endorsements of the hindering impacts items makes the Hindering Impacts index less a continuous scale than a flag for distinctively difficult sessions or problematic therapeutic relationships. Particularly at the session level, use of parametric statistics with this index is questionable. Low response rates are characteristic of negative indicator scales in psychotherapy (cf. Suhr, Strupp, & O'Malley, 1986). On the other hand, a flag for rare problematic sessions or relationships could be extremely valuable, for example, as a way to identify difficult sessions for intensive qualitative study or for feedback in training or supervision.

### *Conclusion*

The high intercorrelations among most of the SEQ and SIS indexes suggest that these impact measures are heavily

slanted toward measuring clients' evaluations of their sessions rather than toward other, more descriptive attributes. In many applications, this slant is unproblematic because evaluative impacts are of primary interest. Of course, session evaluation is the main purpose of the SEQ. Further work is needed to realize fully the more differentiated descriptive potential of the SIS.

Beyond instrument development, comparisons with indexes from other impact measures could indicate ways in which they overlap with or add to the information provided by the SEQ and the SIS. Studies that relate session impact to phenomena at more molecular levels (e.g., behaviors within sessions) and more molar levels (e.g., changes across treatment) will also be important. We hope that psychometric work on the impact measures themselves (e.g., this article and Elliott & Wexler, 1994) encourages and facilitates such studies.

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