Latent Dimensions of the Counselor Rating Form and the Counseling Evaluation Inventory

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Abstract

Although they are extensively used to assess counsellor performance, the construct validity of rating scales such as the Counselor Rating Form (CRF) and the Counseling Evaluation Inventory (CEI) has been challenged because of the observed statistical overlap both within and across these theoretically different measures. In contrast to previous studies based on raw scores, we examined the extent to which dimensions of the CRF and CEI represent similar constructs when controlling for intra-measure overlap through the use of factor scores. Factor scores derived from separate factor analyses of CRF and CEI ratings, obtained from 230 undergraduates viewing videotaped excerpts of therapy sessions, were submitted to a second-order factor analysis. Three higher-order factors were identified, accounting for 66% of the total variance, each of which contained a dimension from each measure. The use of factor scores thus resulted in a clearer separation of individual scales, supporting the purported multidimensionality of each measure, yet similarities between the two measures were also observed.

Résumé

Bien que l'usage des échelles d'évaluation soit largement répandu pour mesurer la performance des conseillers, on met en doute la validité de construction des échelles, telles que le Counselor Rating Form (CRF) (Mesure de l'efficacité perçue de l'aidant) et le Counseling Evaluation Inventory (CEI) (Inventaire d'évaluation du counseling), en raison du chevauchement statistique observé à l'intérieur de et entre ces mesures, qui sont théoriquement différentes. Par contraste avec les études précédentes basées sur des scores bruts, nous avon étudié à quel point les dimensions du CRF et du CEI représentent des constructions semblables, quand on tient compte du chevauchement d'une mesure sur l'autre, au moyen de l'utilisation des scores de facteurs. Les scores de facteurs, dérivés d'analyses de facteurs séparées des mesures CRF et CEI, et obtenus à partir de l'étude de 230 étudiants qui ont regardé des extraits de sessions thérapeutiques sur vidéo, ont été soumis à une analyse de facteurs de deuxième ordre. Trois facteurs d'ordre supérieur ont été identifiés, ce qui expliquait 66% de la variation totale; chaque facteur comprenait une dimension de chaque mesure. L'emploi de scores de facteurs a ainsi eu comme résultat la séparation plus nette des échelles individuelles, soutenant la multidimensionalité prétendue de chaque mesure; cependant, on a aussi remarqué des ressemblances entre les deux mesures.

Rating scales based on respondents' perceptions are used extensively, and are perhaps the most prevalent method for evaluating counsellor competence and various other characteristics associated with effective performance (Ponterotto & Furlong, 1985; Scofield & Yoxtheimer, 1983).

Critical reviews of the most frequently cited counsellor rating scales, such as the Counselor Rating Form (CRF; Barak & LaCrosse, 1975), the Counseling Evaluation Inventory (CEI; Linden, Stone, & Shertzer, 1965), the Barrett-Lennard Relationship Inventory (BLRI; Barrett-Lennard,

1962), and the Counselor Effectiveness Rating Scale (CERS; Atkinson & Wampold, 1982), have noted the lack of satisfactory answers to a number of basic validity questions, and have called for more rigorous evaluation of these questionnaires (Ford, 1979; Ponterotto & Furlong, 1985). The lack of appropriate validation hinders the construction of adequate models for understanding counselling processes, and compromises the usefulness of these measures in studying relevant variables.

One methodological concern relates to the construct validity of several of these widely used measures. Several studies have questioned whether the CRF, the most frequently cited scale, developed to assess Strong's (1968) three dimensions of social influence (Expertness, Trustworthiness, and Attractiveness), measures three independent dimensions or a unidimensional aspect of client perceptions (Atkinson & Wampold, 1982; Corrigan & Schmidt, 1983). Observed intrascale correlations across studies have been consistently high (Atkinson & Wampold, 1982; Bachelor, 1987a; LaCrosse, 1980; LaCrosse & Barak, 1976; Wilson & Yager, 1990; Zamostny, Corrigan, & Eggert, 1981). Similarly, the factorial validity of the frequently cited CEI, purportedly assessing three independent dimensions of Counseling climate, Counselor comfort, and Client satisfaction, has been challenged (Bachelor & Salamé, 1992; Haase & Miller, 1968; Ponterotto & Furlong, 1985). Further, observed moderate to high intercorrelations of dimensions across these two measures (Bachelor, 1987a; Heppner & Heesacker, 1983) questions the uniqueness of the constructs measured by these scales, based on different theoretical perspectives.

Only scarce empirical attention has been paid to such validity issues. Recently, Hayes and Tinsley (1989) examined, using factor analysis, the similarities and differences in the constructs measured by six instruments widely used to assess both perceptions of and expectations about counselling. Hayes and Tinsley found, with respect specifically to the CRF and CEI, that the three original CRF scales of Expertness, Trustworthiness, and Attractiveness loaded on a same factor together with the Client satisfaction scale of the CEI, whereas the other two CEI scales, Counseling climate and Counselor comfort loaded on a different factor. These results were not found to provide support for considering the three CEI scales, or the three CRF scales, to measure independent dimensions of counselling behaviour. Wilson and Yager (1990) similarly concluded, in a factor-analytic study focusing on social influence measures (including the CRF and CERS) that respondents did not differentiate between the Expertness, Attractiveness, and Trustworthiness constructs. In spite of a clearer separation of the dimensions in a combined analysis, high interfactor correlations were observed both in combined and invidual analyses, together with high discriminant validity coefficients between scales.

Hayes and Tinsley's multi-instrument factor analysis (including both factor structure and factor pattern matrices) was based, however, on raw scores on the scales examined, the use of which can be problematic when dependency of measures is observed (Tinsley & Tinsley, 1987). Because moderate to high intra-instrument correlations have been reported for these scales when using raw scores, both by the original authors and other researchers, factor analysis using such scores will most likely result in intra-measure scales loading on a single factor (as was observed in Hayes and Tinsley for all measures (excepting the CEI) comprising more than one scale). Given the observed relative overlap within instruments, it is preferable to employ factor scores which take into consideration the loading of each item on more than one factor (Wampold, cited in Ponterotto & Furlong, 1985). Scoring based on raw data, in contrast, uses each item only once, without regard to its possible differential loading on separate factors. Neglecting the contribution of peripherally loading items, together with attributing equal weight to items that are retained, results in less precise estimates of respondents' perceptions.

The purpose of the present study was to examine the extent to which dimensions of the CRF and CEI represent similar constructs when controlling for intra-measure overlap through the use of factor scores. To facilitate cross-study comparison of results, we used a procedure similar to Barak and LaCrosse (1975) and Hayes and Tinsley (1989) was used, in which undergraduate psychology students viewed filmed excerpts of therapy sessions conducted by experienced male therapists of different therapeutic approaches.

METHOD

Participants and Procedure

Subjects in this study were the same 230 white, undergraduate students of a large Canadian francophone university, who participated in the French adaptations of the CRF and CEI (Bachelor, 1987b; Bachelor & Salamé, 1992). Of these consenting students, who represented from 50-80% of four psychology classes that were invited to participate, 24% were men and 76% women, with a mean age of 24 years (range: 19-48 years). Subdivided into smaller sections, subjects viewed in succession, and in an alternate order, the first 20 minutes of video-taped interviews conducted by three experienced male therapists with the same female client. After viewing each segment, respondents completed the CRF and CEI, presented in a counterbalanced order. The three therapists had an average of 20 years clinical experience, and indicated their approach, which each taught at a graduate level, as cognitive-behavioural, humanistic, and bioenergetic, respectively. The entire procedure lasted approximately 100 minutes.

Instruments

The CRF (Barak & LaCrosse, 1975) contains 36 7-point bipolar items developed to measure the three dimensions of counsellor Expertness, Attractiveness, and Trustworthiness. Split-half reliabilities ranging from .85-.91 are reported by LaCrosse and Barak (1976), and evidence for the predictive and concurrent validity of the CRF was provided by LaCrosse (1980). Principal components analyses with varimax rotation of a French-Canadian version of the CRF (Bachelor, 1987b), using ratings obtained from students viewing filmed excerpts of three therapists, and effected separately for each therapist, yielded three factors accounting for an average 64% of the total variance, and highly comparable to the three original factors (Barak & LaCrosse, 1975). In general, as was the case for the original version, items theoretically associated with "Expertness" and "Trustworthiness" loaded on the same factor, although comparatively to a lesser extent.

The CEI (Linden et al., 1965) contains 21 5-point Likert items designed to assess counsellor effectiveness on the three dimensions of Counseling climate, Client satisfaction, and Counselor comfort. Linden et al. reported a test-retest reliability of .83 (total score) as well as evidence for the convergent and discriminant validity of the scale. Principal components analyses with varimax rotation of the French-Canadian version of the CEI (Bachelor & Salamé, 1992), effected separately for each of three therapists, yielded three relatively consistent factors across therapists, accounting for 60-64% of the total variance. The second and third factors corresponded to Linden et al.'s (1965) "Counselor comfort" and "Counseling climate," respectively, whereas the first factor contained most of the original "Client satisfaction" and a few "Counseling climate" items. The third factor further subdivided into a fourth factor for one of the three therapists. Moderate to high correlations among the three factors were also observed.

RESULTS AND DISCUSSION

Separate factor analyses using principal components extraction procedures and varimax rotations were performed on subjects' responses, obtained from the above studies (Bachelor, 1987b; Bachelor & Salamé, 1992), to the CRF and CEI items, using combined ratings of the three therapists. Product-moment correlations computed among the seven factors thus obtained (4 CEI factors: Counseling climate, Counselor comfort and Counselor involvement, Client satisfaction; 3 CRF factors: Expertness, Trustworthiness, Attractiveness; results are available on request from the first author) revealed a moderate to high degree of interrelationship, both within (CRF: range: .85-.86; CEI: range: .53-.72;) and between the two inventories (range: -.42 to -.82; average = -.69), supporting previous findings of substantial intra- and interscale overlap.

For purposes of comparison with Hayes and Tinsley (1989), a preliminary factor analysis, using the same procedures, was effected on raw scores on the seven scales, and yielded comparable results. Using, as Hayes and Tinsley, eigenvalue, scree test and factor interpretability criteria to select the number of factors to extract, all three CRF dimensions, together with three of the four CEI scales, were found to load highest on a first factor, while one of the CEI scales, "Counseling climate," loaded on a second factor, together accounting for 83.5% of the variance. Factor scores on the seven obtained factors were then submitted to a second-order factor analysis using the same procedures. This analysis yielded three interpretable factors (see Table 1) with eigenvalues superior to 1.0 and differentiable according to the scree test, which accounted for 66% of the total variance.

As can be seen in Table 1, the three CRF scales of Expertness, Attractiveness, and Trustworthiness each loaded highest on a different second-order factor, while two of the four CEI scales, Client satisfaction and Counselor involvement, loaded on the same factor, and the remaining two each on a different factor. The loadings of the scales on other factors were particularly low, indicating no substantial overlap among the three

TABLE 1

Rotated Factor Structure Matrix for CRF and CEI Scales[a]

	Factors			
Scale	*1*	*2*	*3*	h^2
Counselor Rating Form				
Expertness	-.14	.82	.06	.70
Trustworthiness	.89	.13	.18	.84
Attractiveness	-.09	.18	.82	.71
Counseling Evaluation Inventory				
Counseling Climate	.88	-.15	-.07	.80
Counselor Comfort	.11	.83	.13	.72
Client Satisfaction[b]	.05	-.07	.76	.58
Counselor Involvement[b]	.20	.22	.40	.25
Eigenvalue	1.65	1.48	1.46	
% total variance	23.57	21.14	20.86	

Note. 635 observations.

[a] CRF=Counselor Rating Form (Barak & LaCrosse, 1975); CEI=Counseling Evaluation Inventory (Linden, Stone, & Shertzer, 1965).

[b] To ensure consistency of presentation across scales, scale title is formulated in the positive, and the sign of the loading reversed, although scale is essentially derived from items reflecting absence of Satisfaction or Involvement.

h^2 indicates communalities.

factors. The observed factor pattern matrix yielded essentially similar results.

The first second-order factor was composed of one of the CRF and one of the CEI factors, Trustworthiness and Counseling climate, respectively, and was labeled, on the basis of item content, Counselor sincerity and respectfulness. Items of the CEI and CRF dimensions loading on this factor, in particular those with the highest loadings, could be seen as essentially reflecting therapist-offered attitudes of respect and sincerity (e.g. "I felt the counselor accepted me as an individual"; "In our talks, the counselor acted as if he were better than I" (inverted scoring); "The counselor was very patient"; "Respectful—disrespectful"; "Sincere —insincere"). These two CEI and CRF factors appeared, at face, to tap an identical construct.

The second higher-order factor comprised one CRF factor, Expertness and one CEI factor, Counselor comfort, and was labeled "Counselor credibility." Apparently, expertise was associated, at least from an observer perspective, with the perceived comfort of the therapist. These two dimensions, reflecting cognitive and emotional-toned responses, respectively, could be viewed as complementary, each contributing to the perceived credibility of the therapist.

The third factor contained the CRF Attractiveness scale and the two CEI scales of Client satisfaction and Counselor involvement, and was named, on the basis of content, "Counselor warmth and involvement". The content of CRF Attractiveness items showing the highest loadings (e.g. "Close-distant"; "Friendly-unfriendly") are suggestive of therapist-conveyed warmth which, together with the therapist's perceived involvement (i.e., support and helpfulness) appeared to promote the client's ease and satisfaction. It should be noted, however, that Counselor involvement yielded a relatively low communality with the set of other variables and appeared to be less central in the determination of the total variance of the constructs examined.

Thus, controlling for intrascale dependency of dimensions via the use of factor scores, the observed second-order factor structure matrix was quite different from Hayes and Tinsley (1989). The intrascale dimensions of each instrument loaded on different factors (if ignoring the marginally significant Counselor Involvement subscale)—thus supporting the original theoretical constructs—, and, also, each dimension of one instrument was found to correspond to a dimension of the other. The observed unidimensionality of these instruments could thus be an artifact of the scoring procedure; the use, in this study, of the more sophisticated factor scoring method proved to be more successful in tapping the purported multifacetness of counsellor influence and effectiveness. However, even when statistical precautions were taken to avoid overlap within instruments, similarities between the CRF and CEI ques-

tionnaires still obtained. These results suggest that perceptions of the counselling-therapy interaction cannot be reduced either to aspects of counsellor-client rapport (effective communication) or to social influence attributes; to satisfactorily account for respondents' perceptions, dimensions from both conceptual frameworks should be taken into consideration. Two implications for further use of these instruments can be noted. The relative superiority of the one over the other cannot be determined without additional research on their criterion or predictive validity. Given available computer technology, factor scores could readily be calculated for further validation studies. Second, it does not seem advisable to use the one to predict the other as they reflect similar and complementary constructs. It would also be of interest to further study the cross-inventory second-order factors as broader and more complex explanatory constructs in the understanding of positive outcome.

With regard to counselling practice, the present data suggest the usefulness of the individual CRF and CEI dimensions as specific indices of counsellor competencies, for example in identifying and monitoring trainee behaviours, and providing feedback on their impact, either from the perspective of confederate or actual clients, or supervisors. However, given the apparent complementarity of particular dimensions of the two measures, consideration of both underlying theoretical frameworks (i.e., social influence, Strong, 1968; effective rapport, Anderson & Anderson, 1962) could add to practitioners' and trainees' understanding of the perceived counselling relationship. Using both measures in combination could capture the more comprehensive and representative dimensions of perceived counsellor sincerity and respectfulness, credibility, and warmth and involvement. In this regard, rating scale items on the basis of factor loadings provides a more accurate estimate of respondents' perceptions of the seven dimensions of the counselling relationship observed in the present study. (The factor loadings of the CRF and CEI items on the first-order factors are available on request from A. Bachelor).

It should be noted that this study was limited to two instruments, and the present analyses should be replicated with other frequently cited rating scales, such as the BLRI. Further, although the analogue design allowed for comparison of our findings with earlier data (Barak & Lacrosse, 1975 ; Hayes & Tinsley, 1989), and such methodology remains useful (e.g., in determining initial reactions to therapists, Hill & Corbett, 1993)—, future research should attempt to evaluate these findings in genuine counselling or therapy settings.

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