
Multiple Measures for the Prediction of Counsellor Trainee Effectiveness

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Abstract

A set of five variables was used to predict the counselling effectiveness of 42 counsellor trainees who received microskills-based instruction. Assessment and analysis of post-training performance data, which used a different set of three outcome measures, revealed a significant relationship between the set of predictor variables and the set of outcome measures of counselling effectiveness. High affective empathy and low purpose-in-life in the predictor set were found to predict counselling skills in the outcome set. Implications for training are discussed.

Résumé

Une série de cinq variables a été utilisée pour prédire l'efficacité de 42 conseillers qualifiés, qui ont reçu "microskills base" instruction. Evaluation et analyse de cet emploi qualifié à cette date qui font usage d'une différente série de trois différentes mesures révèlent une parenté significative entre la série du prédicteur qui varie avec la série d'autres mesures issues de l'efficacité du conseiller. Une haute efficacité accentuée et une série plus basse prédisant une série de résultat ont trouvés la véracité de cette prédiction de ce conseiller. Les implications de ces séries et de ces évaluations sont très discutées.

Despite their obvious potential value and long history of investigation, predictions of those persons who will benefit most from training in counselling skills has met with only limited success (Hosford, Johnson & Atkinson, 1984).

A number of studies have tested only one variable for its predictive power and have found nonsignificant and inconsistent results (Neimeyer & Fong, 1983; Rennie, Brewster & Toukmanian, 1985). However, nonsignificant results have also been found in studies where multiple predictors have been used (Hosford, Johnson & Atkinson, 1984; Jackson, 1986; Sharpley & Pain, 1987). These nonsignificant results may derive from the use of multiple variables which did not distinguish between effective and less effective trainees. Therefore, one way to deal with this lack is to test the predictive power of a more comprehensive set of variables upon counselling effectiveness. To be more comprehensive, a set of variables should represent the previously-used major variable categories such as personality, personal meaning/value, and learning-related variables. Additionally, each variable chosen within each of the three domains should have a theoretical link with achievement or counselling.

The importance of empathy within counselling has been well documented (Ivey & Simek-Downing, 1980). However, its multifaceted quality as a cognitive, affective, and communicative construct has not been explored as a predictor variable.

Personal-meaning/value variables have been related to counselling skill (Mahon & Altman, 1977), but have not been extensively used as predictors of counselling effectiveness. One personal-meaning/value variable that has not been used at all as a predictor of counselling effectiveness is purpose-in-life (PIL). PIL has been hypothesized as being related to any human situation which demands high levels of achievement (Frankl, 1963). It can therefore be argued that the ability to learn and perform counselling skills may be influenced by the level of PIL that counsellor trainees exhibit.

Counsellor trainees vary in the strength and level of belief about their ability to successfully learn counselling skills. Such self-efficacy beliefs have been shown to be associated with high academic achievement and persistence (Lent, Brown & Larkin, 1984). However, self-efficacy has not yet been tested as a predictor of counselling effectiveness in trainees.

Therefore, the set of predictor variables chosen for this investigation comprised: (1) empathy, as a cognitive, affective and communicative construct; (2) purpose-in-life; and, (3) self-efficacy regarding success at learning counselling skills. The use of a set of predictor variables has the additional attraction of allowing more powerful statistical procedures to be used thus reducing the likelihood of Type II errors.

Although the use of single variables for the prediction of counselling effectiveness has been common, the use of single measures of counselling performance has been even more widespread. In his review of 42 studies, Ridgway (1988) found that 32 of these used single scales and/or single measures of counselling effectiveness. This use of single scales or single measures occurred in spite of the argument that the complexity of counselling effectiveness requires more than one measure of effectiveness (McLennan, 1986). Additionally, several studies have confirmed that there is little agreement among different types of raters (Fuqua, Newman, Scott & Gade, 1986). Therefore, multiple measures by client/instructors (as recommended by Fuqua et al., 1986) were chosen for use as dependent variables in this study. These multiple measures of counselling effectiveness assessed counsellor trainee *skill*, counsellor trainee *behaviour*, and *client satisfaction*.

METHOD

Sample

Forty-two tertiary graduates with at least a bachelor's degree (28 female, 14 male, mean age = 23, range from 21-55 years) who participated in a post-graduate level behavioural counsellor training program at Monash University, Australia, were subjects in this study. (All subjects were taught by the two authors and received no financial reward for participation in the study.)

MEASURES

Predictor Variables

Cognitive Empathy. The Hogan Empathy Scale (HEMP) was used to measure cognitive empathy (EMP-COG) prior to training. This scale is based on empathy defined as “. . . the intellectual or imaginative apprehension of another’s condition or state of mind. . . .” (Hogan, 1969, p. 307). An extensive review of empathy measures (Chlopan, McCain, Carbonell & Hagen, 1985) quoted a test-retest reliability of .90 for this scale. Various studies (Greif & Hogan, 1973; Hogan, 1969) have also provided evidence of the validity of this scale. The scale consists of 60 true/false items (e.g., “A person needs to show off a little now and then”) for which a maximum score of 64 and a minimum score of 0 can be attained.

Affective empathy. The Questionnaire Measure of Emotional Empathy (QUEE) was used to measure affective empathy (EMP-AFF). The scale was derived from an emotional responsiveness definition of empathy as “. . . a vicarious emotional response to the perceived emotional experiences of others.” (Mehrabian & Epstein, 1972, p. 525). Split-half reliability has been reported as .84 (Mehrabian & Epstein, 1972). The scale showed discriminant validity with only a .06 correlation with the Crowne and Marlowe (1960) social desirability scale. The QUEE scale consists of 33 statements (e.g., “It makes me sad to see a lonely stranger in a group”) which require subjects to indicate their strength of agreement or disagreement on a 9-point Likert scale. A maximum score of 297 and a minimum score of 9 can be attained.

Communicative empathy. The Affective Communication Test (ACT) was developed by Friedman, Prince, Riggio and DiMatteo (1980) to measure non-verbal emotional expressiveness and was used in this study to measure communicative empathy (EMP-COM). Test-retest reliability for a two-month period was reported as .90, and internal consistency is acceptable at .77 (Friedman et al., 1980). Validity studies have demonstrated positive significant relationships between ACT ratings and ratings of expressiveness by friends, various occupations requiring expressiveness and acting ability. Discriminant validity has been demonstrated with neuroticism, machiavellianism, and manifest anxiety (Friedman et al., 1980). The ACT scale consists of 13 statements (e.g., “When I hear good dance music, I can hardly keep still”) and subjects are required to indicate the level of accuracy of each statement on a 9-point Likert scale. A maximum score of 117 and a minimum score of 9 can be attained.

Purpose in Life. Purpose-in-life (PIL) was measured using the Purpose in Life Test (PILT; Crumbaugh & Maholick, 1969). PIL is defined as “. . . the degree to which the subject experiences a sense of meaning and purpose in life.” (Crumbaugh, 1968, p. 73). Split-half reliability for the PILT is reported as .85 by Crumbaugh (1968). Only part A of the PILT

was used here (parts B and C being for qualitative assessment alone), consisting of 20 short statements (e.g., "I am usually . . .") followed by a 7-point number scale where 1 designates "completely bored," 4 "neutral," and 7 "exuberant, enthusiastic." Subjects were asked to circle the number that would be "most nearly true for you." The PILT was scored by simple addition of the circled numbers. A maximum score of 140 and a minimum score of 7 can be attained.

Self-efficacy. Self-efficacy (SE) is defined as ". . . beliefs about one's ability to successfully perform a given task or behaviour . . ." (Lent, Brown & Larkin, 1984, p. 356). The higher the level and the greater the strength of self-efficacy in a particular situation the greater will be the achievement and persistence shown by an individual to achieve results on a specific task (Lent, Brown & Larkin, 1984).

A test to measure self-efficacy (Self-Efficacy Test: SET) was constructed. This consisted of two items: "Tick the box that best represents the grade you expect to receive for your counselling skills examination." Five categories (High Distinction, Distinction, Credit, Pass, Fail) were listed, which were the actual grades used. This chosen category was a measure of the level of the subjects' self-efficacy (Lent, Brown & Larkin, 1984). The second item was: "Put a cross on the line below at any point from 0 to 100 that best indicates your degree of confidence in your choice of grade." This item gave a measure of the strength of the subjects' confidence in their choice of their predicted result.

Outcome Variables

Counselling skill ability. Counselling skill ability was rated using the Micro-skills & Systematic Counselling Model Checklist (MSC), derived from Ivey and Simek-Downing (1980). The first part of the MSC is a list of 22 counselling skills arranged under three headings: "Attending," "Responding to Feelings," and "Strategies/Influencing Skills." Beside each of the 22 skills is a seven-point scale representing observed use of the skill: with 0 to 2 (insufficient use), 3 (appropriate use), and 2 to 0 (over-use). These scales are filled in by the client-examiner who gives a global assessment weighted as 56% of the total evaluation. The second part of the MSC is a list of the 20 steps (4.0 to 7.0) from the Systematic Counselling Model of Stewart, Winborn, Johnson, Burks & Engelkes (1978). Successful completion of each step earns 1.5%. A possible fourteen percent is allocated for the integration of the skills and the systematic model.

Counsellor behaviour. Counsellor behaviour was assessed using the Counsellor Description Form (CDF), (McLennan, 1986). This scale was developed from the Counselor Rating Form-Short Version (CRF-S: Corrigan & Schmidt, 1983), and consists of 22 counsellor characteristics such as "friendly," "alert," etc., two of which were fillers. The client-examiner indicated with a cross the extent to which the counsellor trainee showed a

particular characteristic. The choices for the client/instructor were either "not at all" or one of seven positions between "somewhat" to "extremely" for each of the 22 characteristics. The CDF has two sub-scales: Likability and Competence. Cronbach's alpha was reported to be .84 based on a group of 108 20-minute analogue client interviews by 108 students who had completed 45 hours of training in basic counselling skills (McLennan, 1986). Test/retest reliability was .70 over a ten-week period. Validity studies carried out using the Attractiveness and Expertness scales of the Counsellor Rating Form-Short Version, CRF-S (Corrigan & Schmidt, 1983), have resulted in correlations of .69 and .70 for the Likability and Competence scales of the CDF respectively (McLennan, 1986).

Client satisfaction. Client satisfaction was measured by using the Client Satisfaction Scale (CSS), (McLennan, 1986). This scale was made up of three items from the Follow-Up Questionnaire of the Individual Counselling (Tracey & Ray, 1984). Each question requires clients to respond on a 5-point Likert scale concerning their satisfaction with the counselling interview. These results are summed to give totals from 3 to 15 for client satisfaction. Test-retest reliabilities for each of the three questions are reported as .85, .87 and .82 respectively for a five-month period (Tracey & Ray, 1984).

PROCEDURE

The Hogan Empathy Scale (HEMP), the Questionnaire of Emotional Empathy (QUEE), the Affective Communication Test (ACT), the Purpose in Life Test (PILT), and a Self-Efficacy Test (SET) were administered in counterbalanced order to all subjects before the first training session.

The counselling instruction was given in three-hour sessions over five weeks. It was based on Ivey and Simek-Downing's microcounselling approach (1980), and a systematic procedural model (Stewart, Winborn, Johnson, Burks & Engelkes, 1978), and began with instructor identification and demonstration of a particular skill, followed by video vignettes depicting ineffective and effective uses of each skill. Student triads were then organized to practise the skills, with each student taking turns to play the roles of counsellor, client, and observer.

Students were also required to give verbal and written counselling skill responses to specially formulated video segments of clients. As the students' skills increased, practice sessions were conducted in terms of a systematic counselling procedure (Stewart et al., 1978) for an initial counselling session. For feedback and correction purposes, student pairs were also videotaped systematically during the instructional periods.

TABLE 1

Means and Standard Deviations of Experimental Variables

a) Predictor variables

	SE	EMP-COG	EMP-AFF	EMP-COM	PIL
Mean	2.6	31.7	214.9	77.2	112
St.Dev.	1.4	5.1	17.7	15.0	13.6

b) Outcome variables

	MSC	CDF	CSS
Mean	21.3	70.2	10.7
St.Dev.	4.7	25.1	5.7

TABLE 2

Correlations Between Predictor Variables

	SE	EMP-COG	EMP-AFF	EMP-COM	PIL
SE	1.00	.31	.12	.07	.13
EMP-COG	.31	1.00	-.01	.32	-.11
EMP-AFF	.12	-.01	1.00	.16	.02
EMP-COM	.07	.32	.15	1.00	.09
PIL	.13	-.11	.02	.09	1.00

Assessment Procedures

Before data-collection, the three client-examiners underwent training in assessment of counsellors using the instruments described above. A small subset of trainees ($n = 5$) was videotaped and independent ratings of these five was found to be over 90%. Unfortunately, due to a number of factors (appearance of trainees, familiarity with the professional trainees, and time of day scheduled for assessment), it was not possible for the client-examiners to remain blind to the identity of the trainees. However, the training mentioned above, the interrater reliability check, plus the use of three examiners, make it unlikely that there was a consistent bias towards the trainees.

Students' performances were assessed by means of a simulated counselling interview with one of three examiners (two instructors plus an experienced counselling psychologist), role-playing clients, and evaluating trainees. After each 40-50 minute interview the client-examiner filled in the MSC, the CDF, and the CSS for each subject.

RESULTS

A canonical correlation analysis subprogram was used in the MANOVA procedure from SPSS*. The five predictors (cognitive empathy, affective empathy, communicative empathy, purpose-in-life, and self-efficacy) were independent measures, and the three outcome variables (counselling skill ability, counsellor behaviour, and client satisfaction) were dependent measures. A significant positive relationship was found between the two sets of factors ($F(15, 94) = 2.6, p < .05$).

To identify any possible problem of within-set multicollinearity, Pearson correlation coefficients were calculated between the five predictor variables. These correlations, means and standard deviations for each of the variables are outlined in Tables 1 and 2. None of the variables was correlated by an amount greater than .33 and most were correlated less than .16 which suggests that within-set multicollinearity will not be a problem.

In order to simplify the relationship between the two sets of variables (i.e., in order to reduce the number of variate pairs to one, if possible) a dimension reduction analysis in the MANOVA procedure was performed, and results are summarized in Table 3.

It may be observed from Table 3 that neither the F values for second and third canonical correlations taken together, nor the F value for the third canonical correlation alone, were significant at the .05 level. Therefore, because the three canonical correlations together were significant, the correlation of the first canonical variate pair must be significant, and the second and third canonical variate pairs can be ignored.

Percentage of variance explained by each canonical variable of the outcome variables is reported in Table 4. Percentage of variance ex-

TABLE 3

Dimension Reduction Analysis of Canonical Variate Pairs

Roots	Wilks L.	F	Hypoth. df	Error df	Sig. of F
1 to 3	.387	2.578	15.00	94.26	0.003
2 to 3	.831	.844	8.00	70.00	0.567
3 to 3	.980	.243	3.00	36.00	0.865

TABLE 4

Variance Explained by Canonical Variables of Outcome Variables

Canonical variable	% Variable Outcome	% Variable Predictor
1	15.05	8.71
2	8.15	1.01
3	76.80	1.50

TABLE 5

Variance Explained by Canonical Variables of Predictor Variables

Canonical variable	% Variable Outcome	% Variable Predictor
1	10.40	17.98
2	2.34	18.95
3	.44	22.32

plained by the first canonical variable of the outcome variables was 15% of outcome variance and 8% of predictor set. Percentage of variance explained by each canonical variable of the predictor variables is reported in Table 5. Percentage of variance explained by the first canonical variable of the predictor set was 10% of the outcome variables and 17% of the predictor variables. Both of these percentages is relatively high which indicates that the variance between factors is well explained by the predictor and outcome variables identified by the canonical solution.

In order to interpret the meaning of the first canonical variate pair (which represents the significant variance between the two sets of variables), correlations between the original variables and the first canonical variate pair were examined (Cooley & Lohnes, 1962). These data appear in Tables 6 and 7.

The correlations between each of the outcome variables and the appropriate variate (Table 6) indicate that the first canonical variate can be interpreted as counselling skills because only its correlation with the MSC is significant at the .05 level. However, the retention of the negative sign of this correlation would mean that any predictor subsequently discovered would be correlated with low counselling skills rather than high counselling skills. It is therefore advantageous to alter the negative sign and make it positive, so that the predictor variable set contribution, with consequent corresponding changes in the signs of the correlations, will be related to *high* counselling skill.

The correlations between each of the predictor variables and the variate pair (Table 7) indicate that two of the predictor variables, affective empathy (EMP-AFF) and purpose-in-life (PIL), were significantly correlated with the canonical variate. The negative correlation for PIL indicates that low scores on the PILT combined with high scores on the QUEE were significantly predictive of high scores on the MSC. Therefore, the interpretation that can be made of this canonical variate pair is that high affective empathy and low purpose-in-life were found to predict high counselling skill in the present sample.

DISCUSSION

A set of variables (multi-faceted empathy, purpose-in-life, self-efficacy), was found to predict counselling effectiveness for a group of counsellor trainees. Within that set, affective empathy was found to be a significant contributor to the prediction of counselling skills, a result which confirms affective empathy as a central construct in initial counselling interviews (Gladstein, 1983). However, it was surprising to find that high affective empathy was significantly related to the production of high counselling skills *only* when combined with low purpose-in-life given that a strong sense of the meaning and significance of a person's life has been

TABLE 6

Correlations between Outcome Variables and the first Canonical Variate pair

Outcome Variable	Canonical Variate pair
MSC	-.560 *
CSS	.275
CDF	.235

* $p < .05$

TABLE 7

Correlations between Predictor Variables and the first Canonical Variate pair

Predictor Variable	First Canonical Variate pair
PIL	-.662 *
EMP-AFF	+.611 *
EMP-COG	-.241
EMP-COM	+.164
SE	-.070

Note: All signs of the correlations have been adjusted to correspond to a positive outcome value for the MSC.

* $p < .05$

hypothesized to be related positively to success in related areas (Frankl, 1963).

It was also surprising to find that self-efficacy was not related to the prediction of counselling skill ability. It had been hypothesized that this learning variable, operationalized as performance expectations about a counselling interview examination, would be related to counselling effectiveness. One possible explanation for this finding is that measurement of self-efficacy performed a relatively long time (five weeks) before the assessment of the counselling skills evaluation may produce reports of self-efficacy which are not accurate at the time of the skills evaluation. This issue requires further examination.

The value of using canonical variate analysis in predicting counselling effectiveness research can be supported by the observation that, had a simple regression analysis involving one predictor variable with one outcome variable been used, none of these predictor variables would have shown any significant relationships with the outcome variables, thus resulting in a Type II error. The present significant findings obtained by using canonical variate analysis may indicate that the large body of past research has failed to consistently find predictors of counselling effectiveness because of a selective focus upon only a *part* of the relevant set of variables associated with counsellor effectiveness.

Implications for the training of counsellors (where a microskills approach is used) may be derived from these data. The data join with past results to support the assumption that potential counselling effectiveness may be predicted on the basis of enduring personality characteristics of counsellor trainees. This implies that counsellor training should emphasize the personal qualities underlying skills as much as the skills themselves, although there are data which suggest that skills training should precede attention to the development of such personal qualities (Cash & Vellema, 1979).

However, the above positive finding needs to be qualified by the observation that two of the client-examiners were also instructors and therefore knew the subjects in the study. Although possible confounds were minimized by the controls used, further investigations should employ client-examiners who do not know counsellor trainees.

References

- Cash, R. W., & Vellema, C. K. (1979). Conceptual versus competency approach in human relations training programs. *Personnel and Guidance Journal*, *58*, 91-94.
- Chlopan, B. E., McCain, M. L., Carbonell, J. L., & Hagen, R. L. (1985). Empathy: Review of available measures. *Journal of Personality and Social Psychology*, *48*, 635-653.
- Dooley, W. W., & Lohnes, P. R. (1962). *Multivariate procedures for the behavioral sciences*. New York: John Wiley & Sons.
- Dorrigan, J. D., & Schmidt, L. D. (1983). Development and validation of revisions in the Counselor Rating Form. *Journal of Counseling Psychology*, *30*, 64-75.

- Crowne, D. P., & Marlowe, D. (1960). A new scale of social desirability independent of psychopathology. *Journal of Consulting Psychology, 24*, 349-354.
- Crumbaugh, J. C. (1968). Cross-validation of purpose-in-life test based on Frankl's concepts. *Journal of Individual Psychology, 24*, 74-81.
- Crumbaugh, J. C., & Maholick, L. T. (1969). *Manual of Instructions for the Purpose in Life Test*. Illinois: Psychometric Affiliates.
- Frankl, V. E. (1963). *Man's search for meaning*. Boston, Mass.: Beacon Press.
- Friedman, H. S., Prince, L. M., Riggio, R. E., & DiMatteo, M. R. (1980). Understanding and assessing nonverbal expressiveness: The affective communication test. *Journal of Personality and Social Psychology, 39*, 333-351.
- Fuqua, D. R., Newman, J. L., Scott, T. B., & Gade, E. M. (1986). Variability across sources of performance ratings: Further evidence. *Journal of Counseling Psychology, 33*, 353-356.
- Gladstein, G. A. (1983). Understanding empathy: Integrating counselling, developmental, and social psychology perspectives. *Journal of Counseling Psychology, 30*, 467-482.
- Greif, E. B., & Hogan, R. (1973). The theory and measurement of empathy. *Journal of Counseling Psychology, 20*, 280-284.
- Hogan, R. (1969). Development of an empathy scale. *Journal of Counseling and Clinical Psychology, 33*, 307-316.
- Hosford, R. E., Johnson, M. E., & Atkinson, D. R. (1984). Academic criteria, experiential background, and personal interviews as predictors of success in a counsellor education program. *Counselor Education and Supervision, 23*, 268-275.
- Ivey, A. E., & Simek-Downing, L. (1980). *Counseling and Psychotherapy: Skills, Theories, and Practice*. New Jersey: Prentice-Hall, Inc.
- Jackson, E. (1986). Affective sensitivity and peer selection of counseling potential. *Counselor Education and Supervision, 25*, 230-236.
- Lent, R. W., Brown, S. D., & Larkin, K. C. (1984). Relations of self-efficacy expectations to academic achievement and persistence. *Journal of Counseling Psychology, 31*, 356-362.
- Mahon, B. R., & Altman, H. A. (1977). Skill-training: Cautions and recommendations. *Counselor Education and Supervision, 17*, 42-50.
- McLennan, J. (1986, August). *Cognitive structure and counsellor training*. Paper presented at the Third Australian Personal Construct Psychology Conference, Melbourne.
- Mehrabian, A., & Epstein, N. (1972). A measure of emotional empathy. *Journal of Personality, 40*, 525-543.
- Neimeyer, G. J., & Fong, M. L. (1983). Self-disclosure flexibility and counselor effectiveness. *Journal of Counseling Psychology, 30*, 258-261.
- Rennie, D. L., Brewster, L. J., & Toukmanian, S. G. (1985). The counselor trainee as client: Client process as a predictor of skill acquisition. *Canadian Journal of Behavioral Science, 17*, 16-28.
- Ridgway, I. R. (1988). *Predictor variables for counselling effectiveness in professional and para-professional counsellor-trainees*. Unpublished master's thesis, Monash University, Clayton, Victoria, Australia.
- Sharpley, C. F., & Pain, M. D. (1987). Self-motivation as a predictor of success in counsellor training. *Canadian Journal of Counselling, 21*, 200-206.
- Stewart, N. R., Winborn, B. B., Johnson, R. G., Burks, H. M., & Engelkes, J. R. (1978). *Systematic counseling*. Englewood Cliffs, New Jersey: Prentice-Hall.
- Tracey, T. J., & Ray, P. B. (1984). Stages in successful time-limited counselling: An interactional examination. *Journal of Counseling Psychology, 31*, 13-27.

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