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The effectiveness of personal construct psychotherapy in clinical practice: A systematic review and meta-analysis

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Abstract

This study updates a systematic review of the effectiveness of personal construct psychotherapy and refines a previous meta-analysis by focusing on studies conducted in clinical settings. Twenty-seven studies satisfied the criteria for the systematic review, including 20 in clinical settings. Meta-analysis of the latter provided strong evidence of an advantage of personal construct psychotherapy over a no-treatment control; this benefit was maintained at follow-up. Meta-analysis of studies with an active treatment control group provided no evidence of the superiority or inferiority of personal construct psychotherapy. The available research justifies the practice of personal construct psychotherapy with clients in clinical practice, but conclusions must be tempered by the small number of studies and their methodological shortcomings.

Since George Kelly (1955) published his seminal work 50 years ago, personal construct psychology has had a wide range of applications (Fransella, 2003), particularly in the clinical setting, where it underpins the practice of personal construct psychotherapy (Winter, 1992; Winter & Viney, 2005). The personal construct psychologist sees the anticipation of events as central to the functioning of human beings. Because it is assumed that it is not possible to have direct access to reality, this anticipation has its basis in the individual's models, or personal constructions, of the universe. As events unfold, the individual may choose to modify his or her constructions in light of this further experience in accordance with Kelly's (1955) metaphor of the person as a scientist.

Problems may arise if an individual fails to modify a construction that is repeatedly invalidated by experience. They may be associated with imbalanced use of some of the pairs of processes that Kelly considered to be central to optimal functioning (e.g., tight or loose construing and constriction or dilation of the individual's world; Walker & Winter, 2005). Personal construct psychotherapy with such an individual aims to help the client discover why he or she has become stuck and to facilitate reconstruing, with the consequent possibility of movement toward a more viable construction. An important difference between personal construct psychotherapy and rationalist cognitive therapies is that the individual is not guided toward a particular point of view (Winter & Watson, 1999). A range of therapeutic techniques is used to facilitate movement; some are borrowed from other approaches to psychotherapy, but their mode of action is understood from the viewpoint of personal construct psychology. Techniques that are homegrown within personal construct psychotherapy include the self characterization, repertory grid technique, fixed-role therapy (Kelly, 1955), and interpersonal transaction groups (Landfield & Rivers, 1975).

Despite the scientist metaphor and the revision of models in response to experience being central to the philosophy of personal construct psychotherapy, the effectiveness of the approach is evaluated in relatively few empirical studies. This is partly because the notion of empirical validation of therapies has been considered by some constructivist therapists to be incompatible with some of their other core philosophical assumptions (Bohart, O'Hara, & Leitner, 1998). The studies concerned have been reviewed by Winter, Viney, and Metcalfe (Metcalfe, Winter, & Viney, 2005; Viney, 1998; Viney, Metcalfe, & Winter, 2005; Winter, 1992, 2003,

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2005) and Holland and Neimeyer (2005). The most recent review of the former research group found 18 comparisons of personal construct psychotherapy with a no-treatment control and 10 comparisons with an alternative therapeutic approach (Viney et al., 2005). Meta-analysis of the results of those studies indicated strong support from the evidence base for an advantage of personal construct psychotherapy over no intervention, both immediately posttreatment ($d = -0.50$; 95% confidence interval [CI] $= -0.73$ to -0.28, $p < .001$) and after a period of follow-up ($d = -0.36$, 95% CI $= -0.70$ to -0.01, $p = .044$). In addition, personal construct psychotherapy fared well in comparison with alternative therapeutic approaches; there was no strong evidence for greater or lesser effectiveness at immediate posttreatment assessment ($d = -0.22$, 95% CI $= -0.52$ to 0.08, $p = .15$) or after a period of follow-up ($d = 0.03$, 95% CI $= -0.33$ to 0.38, $p = .88$).

The present systematic review and meta-analysis update previous work (Viney et al., 2005), focus on studies conducted in clinical practice, and include an analysis of before-and-after studies. The specific aims are to identify empirical research studies comparing outcome in a group of clients undergoing personal construct psychotherapy with (a) outcome in a group receiving no intervention, (b) outcome in a group undergoing an alternative intervention such as another form of psychotherapy, or (c) the pretreatment response on outcome measures in the same group of clients (before-and-after studies). Meta-analyses are restricted to those studies found in the systematic review that were conducted in clinical practice. Separate analyses are conducted for Comparisons a, b, and c; the aim for each is a pooled estimate of the effect of personal construct psychotherapy. When there is variation in the estimated effectiveness of personal construct psychotherapy across studies included in Comparisons a and b, possible explanatory variables are investigated.

Method

Systematic Review

To identify outcome studies of personal construct psychotherapy, we referred to previous reviews (Holland & Neimeyer, 2005; Viney, 1998; Viney et al., 2005; Winter, 1992, 2003), contacted leading personal construct psychotherapists to inquire about recent outcome studies, searched the University of Wollongong personal construct psychology references database and the Fransella Collection at the University of Hertfordshire, and read abstracts of international and regional personal construct psychology conferences. In addition, we searched Medline, Web of Knowledge, SIGLE, and PsychInfo databases for abstracts containing any of the following terms (asterisks allow any ending to the stated word stem): reconstru* and psychotherap* or counsel*; self characterization; interpersonal transaction; fixed role; rotating dyad*; Kellian; George Kelly; personal construct. We also used Web of Knowledge to conduct citation searches for the references in previous reviews (Viney, 1998; Winter, 2003). Finally, we examined reference lists for identified studies.

To be included in the systematic review, a study was required to compare the outcome in clients receiving personal construct psychotherapy with their own pretreatment response to the same measures (before-and-after studies), with outcome in other similar clients not undergoing an intervention, or with outcome in other similar clients undergoing a different intervention that was not personal construct psychotherapy. Sufficient information was required for the calculation of an effect size. Thus, the report needed to include the number of individuals in each experimental condition as well as the mean and standard deviation outcome for each experimental condition (or proportion subject to an outcome, e.g., relapse, for each experimental condition). Equivalently, a study was included if it reported an appropriate t statistic and degrees of freedom. In addition, before-and-after studies were included in the review only if 10 or more clients were included in the main analysis, if the sample sizes for the before-and-after assessments were equal or differed by less than 5%, and if the main outcome measure could be calculated both before and after therapy.

For a comparison to be included in the main meta-analysis, the study had to be of personal construct psychotherapy conducted with clients in clinical practice. Hence, studies of student volunteers, respondents to newspaper advertisements, and participants in personal growth groups were excluded, unless the participants were shown to have symptoms of similar type and severity to those of clients referred to clinical services through the usual routes.

The suitability of studies was assessed by reading the abstract when possible and by obtaining and reading the full report when necessary.

Outcomes

For simplicity, a single-outcome measure was selected for each study. The following sequence was followed until an outcome measure was selected:

1. When, as recommended by the CONSORT criteria (Moher, Schulz, & Altman, 2001), a

primary outcome measure was specified or an outcome measure had been the basis of a sample size calculation, that measure was selected.
2. When study participants shared a common characteristic that was the subject of the therapeutic intervention, the outcome measure most specific to that characteristic was selected.
3. In studies of participants with a wide range of problems, the outcome measure sensitive to the widest range of those problems was selected.
4. For a handful of studies, there were two measures of equal suitability and in a couple of cases no obvious measure of the key concern. In these cases, the outcome first mentioned was chosen.

For all studies, the results with the chosen measure were compared with the full range of results. In no case did the results with the chosen measure diverge markedly from the whole picture.

Comparisons

Separate meta-analyses were conducted for three groups of studies because of different hypotheses being addressed: (a) comparisons of personal construct psychotherapy with standard care or a wait-list control; (b) comparisons of personal construct psychotherapy with something additional to standard care, whether this was an alternative therapeutic approach or additional support not conducted within any particular model of therapy or counseling; (c) comparison of response to outcome measures before and after personal construct psychotherapy. When a study included comparisons between more than two groups, all comparisons that satisfied these criteria were included. When a study provided sufficient information, it was included both in the controlled comparisons (a or b) and the uncontrolled comparison (c).

Statistics

For each comparison, an effect size was calculated for the effect of personal construct psychotherapy relative to the comparison group. When means were compared between conditions with adjustment for pretreatment responses, the effect size was based on that analysis if the necessary statistics were presented (or the original data were available). This could be the t statistic, or the adjusted regression coefficient with standard error from which the t statistic could be calculated. The effect size was derived as the t statistic multiplied by the square root of $(1/n_1 + 1/n_2)$. Otherwise, the effect size was calculated using the posttreatment means, standard deviations, and sample sizes. That is, the difference between the means was divided by the pooled standard deviation. Alternatively, when the outcome was measured as a proportion, this was transformed onto an equivalent scale of effect size (Chinn, 2000). Having obtained an effect size for each comparison, this was adjusted to obtain an unbiased estimator and its standard error (Hedges, 1981).

For before and after studies, the effect size was calculated as the difference in means divided by the standard deviation of the pretreatment mean (Becker, 1988; S. B. Morris, 2000). This approach gives effect sizes expressed in the same units as those calculated for controlled studies (S. B. Morris & DeShon, 2002). An alternative approach to calculating the effect size from before-and-after studies is to divide the difference in means by the standard deviation of the individual differences (Gibbons, Hedeker, & Davis, 1993). That alternative approach will usually give larger effect sizes, and this should be kept in mind when comparing effect sizes between meta-analyses using the different calculations (Elliott, 1991, uses the alternative approach). To obtain an estimate of what the effect size would be using the alternative calculation, multiply the effect sizes given here by 1.2. This assumes that the correlation between before-and-after measurements is 0.65, which is in line with the individual data available.

Because each meta-analysis incorporates information from studies diverse in the nature of the intervention and client group, it is likely that the true treatment effects vary across studies. Random-effects meta-analysis accommodates this variation (Kirkwood & Sterne, 2005) and was utilized here using the Stata program (Sharp & Sterne, 1997; Stata Corporation, 2005). We investigated the contribution of variations in modality (individual and group psychotherapy), treatment allocation (random or otherwise), and publication (peer-reviewed journal or otherwise) to the heterogeneity across studies. For each of the three factors, the null hypothesis of equal pooled treatment effects between the two subgroups is tested using Stata's metareg command (Sharp, 1998; Stata Corporation, 2005).

Results

The Systematic Review

In total, the systematic review identified 23 controlled studies; the 32 comparisons in these studies are described in Tables I and II according to the meta-analyses to which they contribute. Table I describes the 21 comparisons of personal construct psychotherapy with a no-treatment, standard care,

Table I. Basic Details of Studies Comparing a Personal Construct Psychotherapy (PCP) Intervention With a No-Treatment, Standard Care, or Wait-List Control.

Study	PCP	Control	Clients	Modality	Outcome
Clinical samples					
Lovenfosse & Viney (1999)	PCT	Wait list	Mothers of children w/special needs	Group	Quality of life
Morse (1975)	FRT	No intervent.	Parents of children w/problem behavior	Individual	Mother's rating of child's behavior
Jackson (1990)	PCT	SC	Children w/severe behavior problems	Group	Self-characterization total
Alexander et al. (1989)	IP. transaction	Wait list	Adults sexually abused as children	Group	Global symptoms (psychological)
Winter et al. (in press)	PCT+SC	SC	A&E attenders due to self-harm	Individual	Suicidal ideation
Lane & Viney (2005)	PCT	Wait list	Survivors of breast cancer	Group	Threat
Foster & Viney (2005)	PCT	No intervent.	Women approaching menopause	Group	Anxiety
Viney & Henry (2002)					
Comparison 1	PCT	No intervent.	Adolescent offenders	Group	Trust
Comparison 2	PCT	No intervent.	Troubled Adolescents	Group	Trust
Truneckova & Viney (1997)	IP transaction	No intervent.	Troubled adolescents	Group	No interpersonal constructs
Viney et al. (1989)	PCT	Wait list	Elderly people w/psychological prob.	Individual	Anxiety
Haugli et al. (2000)	PCT+SC	SC	Off work because of musculoskeletal pain	Group	Pain in last week
Viney et al. (1985a)	PCP-based counseling	No intervent.	Surgical/medical hospital inpatients	Individual	Days on antibiotics
Viney et al. (1985b)	PCP-based counseling	No intervent.	Surgical/medical hospital inpatients	Individual	Anxiety
Nonclinical samples					
Botella & Feixas (1992–1993)	PCT-informed self-develop.	No intervent.	Elderly volunteers	Group	Change in construing
Nagae & Nedate (2001)	PCT	Wait list	Student volunteers w/social anxiety	Individual	Fear of neg. evaluation
Nagae & Nedate (2003)	FRT	Wait-list volunteers	Shy student	Individual	Shyness
Lira et al. (1975)	FRT	No intervent.	Snake-phobic student volunteers	Individual	Behavior task w/snakes
Malins et al. (2004)	PCP-based guidance	No intervent.	Staff in elderly care homes	Group	Sociality
Zonderman (1977)	FRT	No intervent.	Neurotic introvert student volunteers	Group	Bendig emotionality
Annesi (2002)	Goal setting	Therapist support	Adults on exercise program	Individual	Attendance on program

Note. PCT = personal construct therapy; FRT = fixed-role therapy; IP = interpersonal; SC = standard care; A&E = Accident & Emergency Department.

or wait-list control group. Comparisons vary greatly in their approach to personal construct psychotherapy, the nature of the comparison group, the client group, whether individual or group therapy is being investigated, and the outcome measure used. Table II shows similar variation across the 11 comparisons of personal construct psychotherapy with an active treatment control group. Table III describes the four studies contributing to the before-and-after comparison only; the after measurement was taken at the end of therapy in each case, although the duration of therapy varied greatly.

Among the studies that failed to meet the inclusion criteria for the systematic review, seven have appeared in previous reviews. Three of these studies were before-and-after studies with small samples of fewer than 10 clients, which may consequently be unrepresentative of the range of clients met in clinical practice (Beail & Parker, 1991; Button, 1987; J. B. Morris, 1977). The other four studies failed to give sufficient information for an effect size to be calculated (Bannister, Adams-Webber, Penn, & Radley, 1975; Karst & Trexler, 1970; Landfield, 1979; Landfield & Rivers, 1975).

Table II. Basic Details of Studies Comparing a Personal Construct Psychotherapy (PCP) Intervention With an Active Treatment Control.

Study	PCP	Control	Clients	Modality	Outcome
Clinical samples					
Morse (1975)	FRT	Alternative FRT model	Parents of children w/problem behavior	Individual	Mother's rating of child's behavior
Watson & Winter (2005)					
Comparison 1	PCT	PD	Clients referred to clin. psych. dept.	Individual	Global symptoms (psychological)
Comparison 2	PCT	CBT	Clients referred to clin. psych. dept.	Individual	Global symptoms (psychological)
Alexander et al. (1989)	IP trans.	IP process	Adults sexually abused as children	Group	Global symptoms (psychological)
Winter et al. (2006)	IP trans. + exposure	Support groups + exposure	Agoraphobics referred to clin. psych. dept.	Group	Agoraphobic symptoms
Evesham & Fransella (1985)	PCT	Fluency training	Stutterers referred to speech therapy	Group	Relapse
Viney & Henry (2002)					
Comparison 3	PCT	PD	Adolescent offenders	Group	Trust
Comparison 4	PCT	PD	Troubled adolescents	Group	Trust
Nonclinical samples					
Nagae & Nedate (2001)	PCT	Rational emotive	Student volunteers w/social anxiety	Individual	Fear of negative evaluation
Nagae & Nedate (2003)	FRT	Self-instructional training	Shy student volunteers	Individual	Shyness
Lira et al. (1975)	FRT	Modeling	Snake-phobic student volunteers	Individual	Behavior task w/snakes

Note. FRT = fixed-role therapy; PCT = personal construct therapy; IP = interpersonal; PD = psychodynamic; CBT = cognitive–behavioral therapy.

Meta-Analysis: Comparisons of Personal Construct Psychotherapy With a No-Treatment Control

Table IV shows that treatment allocation was random in the majority of studies comparing personal construct psychotherapy with a no-treatment control. Studies range in size from the very small to the moderately large. Restricting attention to those comparisons made in clinical contexts, Figure 1 shows that 12 of the 14 effect sizes are in the direction of a benefit of personal construct psychotherapy over a no-treatment control. For five of the 12 positive comparisons, the 95% CI excludes a true intervention effect of zero, indicating significance at the 5% level. The random-effects meta-analysis provides a combined estimate of the effectiveness of personal construct psychotherapy compared with no-treatment control: combined $d = -0.34$, 95% CI $= -0.55$ to -0.13, $p = .001$. In contrast, the seven comparisons based on nonclinical samples suggested a greater effect of personal construct psychotherapy: combined $d = -1.04$, 95% CI $= -1.55$ to -0.52, $p < .001$. Meta-regression indicated evidence of a true difference in effectiveness between the two client groups ($p = .017$).

Table III. Basic Details of Studies Included in the Before-and-After Analysis But Not in One of the Controlled Analyses.

Study	PCP intervention	Before–after interval	Clients	Modality	Outcome
Sheehan (1985)	PCT	*M* 12 months	Adult outpatients w/MD	Individual	BDI
Horley & Francoeur (2003)	PCT	Unknown	Adult male domestic abusers	Group	Self-esteem semantic differential
Viney et al. (1985c)					
Comparison 1	PCT helplessness program	Duration of admission	Gen. hospital inpatients	Individual	Competence
Comparison 2	PCT passive-aggression program	Duration of admission	Gen. hospital inpatients	Individual	Expressed anger
Sewell (1997)	PCT	6 weeks	Adolescent males w/PTSD	Group	PTSD reaction index

Note. All these studies were conducted in a clinical context. PCP = personal construct psychotherapy; PCT = personal construct therapy; BDI = Beck Depression Inventory; PTSD = posttraumatic stress disorder.

Table IV. Basic Methodological Details and Results for Studies Comparing a Personal Construct Psychotherapy (PCP) Intervention With a No-Treatment, Standard Care, or Wait-List Control.

Study	Treatment allocation	No. in PCP condition	No. in control condition	*d*	*SE*
Clinical samples					
Lovenfosse & Viney (1999)	Client choice	6	6	−0.71	0.60
Morse (1975)	Randomized	7	7	−0.99	0.57
Jackson (1990)	Not stated	8	8	−1.07	0.53
Alexander et al. (1989)	Randomized	16	21	−0.55	0.34
Winter et al. (in press)	Order of referral	20	18	−0.66	0.33
Lane & Viney (2005)	Randomized	20	22	−0.82	0.32
Foster & Viney (2005)	Client determined	37	16	−0.30	0.30
Viney & Henry (2002)					
Comparison 1	Randomized	27	28	0.31	0.27
Comparison 2	Randomized	23	24	0.51	0.30
Truneckova & Viney (1997)	Randomized	26	22	−0.15	0.29
Viney et al. (1989)	Randomized	28	28	−0.78	0.28
Haugli et al. (2000)	Randomized	58	53	−0.09	0.19
Viney et al. (1985a)	Randomized	90	94	−0.28	0.15
Viney et al. (1985b)	Randomized	107	114	−0.46	0.14
Nonclinical samples					
Botella & Feixas (1992–1993)	Client choice	8	10	−1.74	0.56
Nagae & Nedate (2001)	Randomized	10	10	−1.93	0.54
Nagae & Nedate (2003)	Randomized	10	10	−1.04	0.48
Lira et al. (1975)	Randomized	12	12	−0.94	0.43
Malins et al. (2004)	Based on workplace	13	14	−0.81	0.40
Zonderman (1977)	Randomized	31	13	0.12	0.33
Annesi (2002)	Randomized	50	50	−1.33	0.22

Table V gives summary statistics for the seven comparisons between personal construct psychotherapy and a no-treatment control, based on a clinical sample, in which there was a follow-up assessment. The duration of follow-up ranged from 2 to 12 months across studies, during which time several studies had seen some sample attrition (Viney, Clarke, Bunn, & Benjamin, 1985b; Viney & Henry, 2002; Winter et al., in press). Six of seven comparisons suggested a benefit of personal

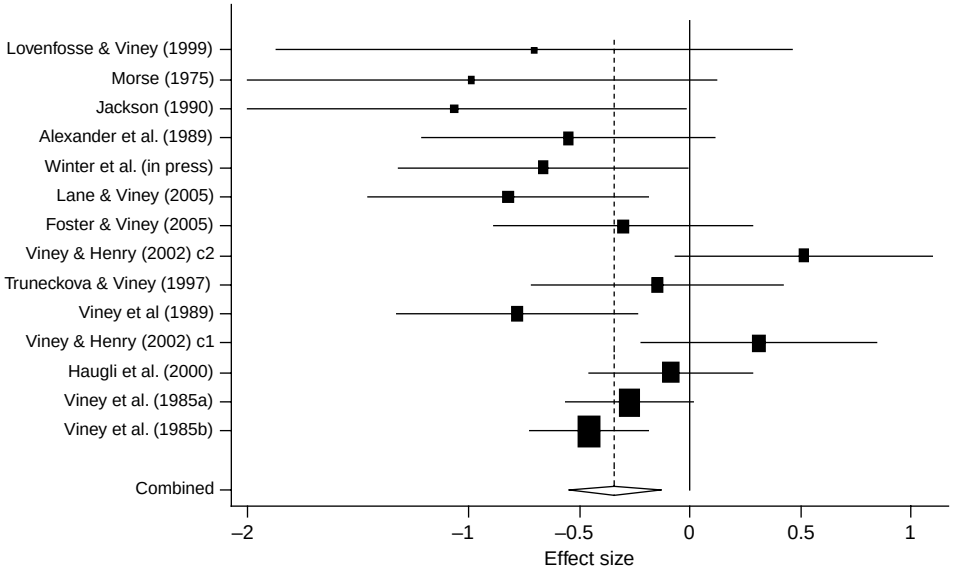

Figure 1. Forest plot of comparisons between personal construct therapy and nonactive control at posttreatment assessment. Only studies carried out in clinical practice are included here. The center of the box indicates the effect size, and the lines represent the 95% confidence interval. The size of boxes is in proportion to the number of participants. An effect size of less than zero suggests an advantage of personal construct therapy.

Table V. Results at Follow-Up for Studies Comparing a Personal Construct Psychotherapy (PCP) Intervention With a No-Treatment, Standard Care, or Wait-List Control in a Clinical Sample.

Study	Follow-up (months)	No. in PCP condition	No. in control condition	*d*	*SE*
Morse (1975)	2	7	7	−0.67	0.55
Winter et al. (in press)	6	12	11	−0.30	0.42
Viney & Henry (2002)					
Comparison 1	6	20	19	−0.04	0.32
Comparison 2	6	16	17	0.67	0.36
Lane & Viney (2005)	3	20	22	−0.52	0.31
Haugli et al (2001)	12	77	44	−0.46	0.19
Viney et al. (1985b)	12	74	84	−0.42	0.16

construct psychotherapy; the pooled estimate of the effect size gave modest evidence of a benefit: $d = -0.30$, 95% CI = −0.60 to 0.001, $p = .051$.

Meta-Analysis: Comparison of Personal Construct Psychotherapy With an Active Treatment Control

Table VI indicates that three of the 11 comparisons of personal construct psychotherapy with an active treatment control were not based on random allocation of participants to interventions; the two studies responsible were both carried out in the same U.K. National Health Service Clinical Psychology Department (Watson & Winter, 2005; Winter, Gournay, Metcalfe, & Rossotti, 2006). These three comparisons were among the eight based on clinical samples; Table VI also shows that five of these comparisons gave results consistent with an advantage of personal construct psychotherapy over an active treatment control. This is clearer in Figure 2; for two of these comparisons, the 95% CI excluded an effect size of zero. Based on the eight comparisons in clinical contexts, the combined estimate of the effect size for personal construct psychotherapy against an active treatment control was −0.20 (95% CI: −0.54 to 0.13, $p = .24$). The combined effect estimate based on the comparisons involving nonclinical samples suggested a similar relative effectiveness of personal construct psychotherapy: −0.36 (95% CI = −0.93 to 0.21, $p = .22$).

Table VII gives summary statistics for the seven studies based in clinical settings with a follow-up assessment. Several studies experienced a small loss of participants between posttreatment and follow-up assessments (Viney & Henry, 2002; Watson & Winter, 2005), although this is not apparent for one study for which imputation of missing values had been used (Winter et al., 2006). Follow-up varied between 2 and 18 months. Four studies provided data suggesting an advantage of personal construct psychotherapy over an active control, but there was no convincing evidence that the pooled effect size differed from zero: $d = -0.07$, 95% CI = −0.48 to 0.35, $p = .75$.

Table VI. Basic Methodological Details and Results for Studies Comparing a Personal Construct Psychotherapy (PCP) Intervention With an Active Treatment Control.

Study	Treatment allocation	No. in PCP condition	No. in control condition	*d*	*SE*
Clinical samples					
Morse (1975)	Randomized	7	7	−0.51	0.54
Watson & Winter (2005)					
Comparison 1	Observational	23	7	−0.35	0.43
Comparison 2	Observational	23	18	−0.04	0.31
Alexander et al. (1989)	Randomized	16	20	−0.71	0.35
Winter et al. (2006)	Order of referral	21	19	0.05	0.32
Evesham & Fransella (1985)	Randomized	22	23	−0.86	0.31
Viney & Henry (2002)					
Comparison 3	Randomized	27	29	0.45	0.27
Comparison 4	Randomized	23	25	0.02	0.29
Nonclinical samples					
Nagae & Nedate (2001)	Randomized	10	8	0.03	0.47
Nagae & Nedate (2003)	Randomized	10	10	−0.14	0.45
Lira et al. (1975)	Randomized	12	12	−0.90	0.43

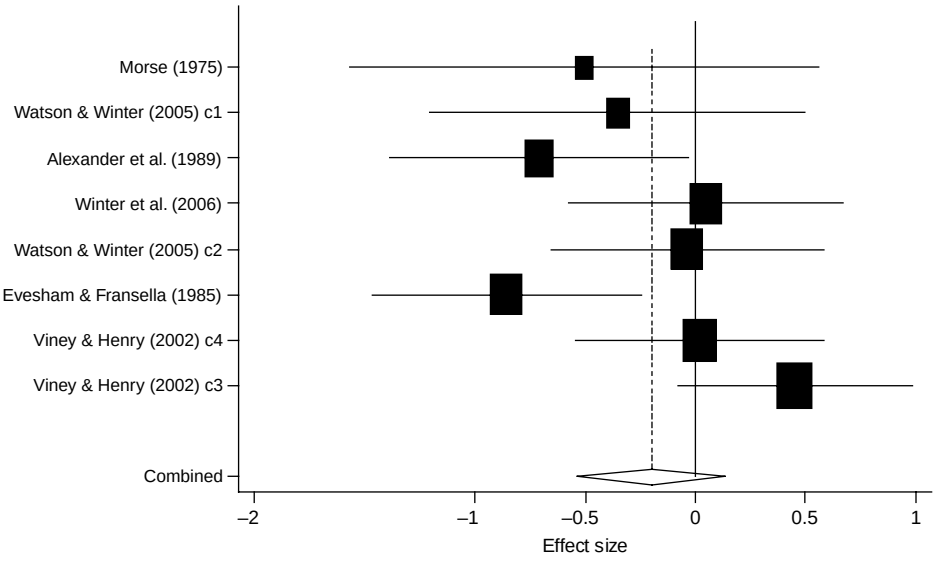

Figure 2. Comparisons of personal construct psychotherapy with other active interventions at posttreatment assessment. Only those studies conducted in clinical practice are included here. An effect size of less than zero indicates an advantage of personal construct psychotherapy.

Meta-Regression: Investigating Variations in Effect Size Across Studies

For those studies based on clinical samples, there was evidence of heterogeneity in the estimated effect sizes across the 14 comparisons with a no-treatment control, $Q(13) = 26.9$, $p = .013$, and the eight comparisons with an active treatment control, $Q(7) = 14.2$, $p = .047$. To investigate this heterogeneity, the 22 comparisons were divided into two groups according to whether treatment allocation was random ($n = 15$) or by some other means ($n = 7$), whether the study was published in a peer-reviewed journal ($n = 11$) or not ($n = 11$), and whether individual ($n = 8$) or group ($n = 14$) therapy was investigated. Comparisons with both no-treatment and active controls were combined into a single analysis for each of the three factors; the difference in average effect sizes between the two types of comparison was accommodated by including a dummy variable in the regression model. As expected (Sutton, Duval, Tweedie, Abrams, & Jones, 2000), there was evidence for stronger treatment effects to be observed in published peer reviewed studies: difference in mean effect sizes = 0.43, 95% CI = 0.07–0.79, $p = .021$. Despite a trend in the expected direction (Kunz & Oxman, 1998), there was not convincing evidence of stronger effects in nonrandomized studies: difference in mean effect sizes = 0.12 (95% CI = −0.35 to 0.59, $p = .61$). Third, despite the trend favoring individual therapy, there was not convincing evidence of an overall true difference in the effectiveness of individual and group therapy: difference in mean effect sizes = 0.25, 95% CI −0.16 to 0.65, $p = .22$. Of course, this latter comparison will be biased by any differences between the characteristics of clients starting individual or group psychotherapy.

Table VII. Results at Follow-Up for Studies Comparing a Personal Construct Psychotherapy (PCP) Intervention With an Active Treatment Control in a Clinical Sample.

Study	Follow-up (months)	No. in PCP condition	No. in control condition	*d*	*SE*
Morse (1975)	2	7	7	−0.61	0.55
Watson & Winter (2005)					
Comparison 1	12	19	6	−0.82	0.48
Comparison 2	12	19	13	0.09	0.36
Viney & Henry (2002)					
Comparison 3	6	20	21	−0.24	0.31
Comparison 4	6	16	16	0.08	0.35
Alexander et al. (1989)	6	16	20	−0.31	0.34
Winter et al. (2006)	18	21	19	0.91	0.33

Table VIII. Summary Statistics and Effect Sizes for the Studies Included in this Before-And-After Meta-Analysis.

Study	n	M_{after}	M_{before}	SD_{before}	d	SE of d
Sheehan (1985)	12	9.08	26.5	8.06	−2.01	0.54
Alexander et al. (1989)	16	1.51	2.17	0.58	−1.08	0.30
Horley & Francoeur (2003)[a]	14	–	–	–	−0.75	0.28
Lane & Viney (2005)	20	1.72	2.33	0.54	−1.08	0.27
Winter et al. (in press)	20	3.90	9.55	8.88	−0.61	0.22
Winter et al. (2006)	19	17.00	22.37	10.61	−0.48	0.21
Watson & Winter (2005)	23	1.23	1.70	0.86	−0.53	0.20
Viney et al. (1985c)[b]						
Comparison 1	40	1.41	0.96	0.42	−1.05	0.18
Comparison 2	59	1.09	1.03	0.59	−0.10	0.11
Truneckova & Viney (1997)[b]	26	9.12	7.50	3.77	−0.42	0.18
Foster & Viney (2005)	38	2.65	3.57	1.11	−0.81	0.17
Sewell (1997)	43	35.16	40.4	13.45	−0.38	0.14

[a]Effect size calculated from t statistic. [b]A high score indicates wellness.

Meta-Analysis: Evaluation of the Effectiveness of Personal Construct Psychotherapy in Before-and-After Studies

Table VIII gives the effect sizes for clinical studies allowing a comparison of client response to outcome measures before and after personal construct psychotherapy. An effect size indicating an improvement after personal construct therapy is obtained from all 12 studies; greater effectiveness tended to be observed in the smaller studies. The pooled effect estimate was of an improvement after therapy of two thirds of a standard deviation: -0.68, 95% CI = -0.90 to -0.45, $p < .001$.

Discussion

This systematic review and meta-analysis have summarized the evidence for the effectiveness of personal construct psychotherapy, with particular focus on 20 studies evaluating its effectiveness for clients of clinical services. Strong evidence of effectiveness was found when personal construct psychotherapy was compared with a no-treatment, standard care, or wait-list control group; the benefits of psychotherapy were still apparent at follow-up assessment. A small number of studies included an active treatment control (e.g., psychodynamic therapy, cognitive–behavioral therapy), and these provided no evidence of personal construct psychotherapy being superior or inferior.

Restricting the meta-analyses to those studies based on clinical samples should provide psychotherapists working with such clients a more accurate indication of what they can expect from personal construct psychotherapy. In fact, smaller estimated effects were observed following this restriction; posttreatment comparisons with a no-treatment control suggest a benefit of about one third of a standard deviation compared with the previous estimate of one half of a standard deviation when studies of nonclinical samples were included in the analysis (Viney et al., 2005). Although nonclinical samples are undoubtedly useful in the development of therapeutic techniques, a more accurate estimate of the effectiveness of a psychotherapy in practice is obtained when studying its use with clients in clinical samples.

Inevitably, the estimated effectiveness of personal construct psychotherapy varied across the broad range of studies included in each meta-analysis. This was accommodated by the use of the random-effects meta-analysis technique and was investigated in a limited number of subgroup analyses. In the latter, there was evidence that publication in a peer-reviewed journal was associated with the observation of larger benefits of personal construct psychotherapy. Despite expectations, random allocation of treatment and the modality of therapy were not responsible for the variation across studies. This may be due to the small number of comparisons available, limiting the statistical power to demonstrate subgroup effects and preventing the separation of the investigated effects from variations across studies in their client groups, implementation of personal construct psychotherapy, and so on.

Before-and-after comparisons have been considered in this systematic review and meta-analysis but separately from the controlled comparisons. Before-and-after comparisons may overestimate the effectiveness of an intervention because they do not separate the specific effects of the intervention under study, nonspecific effects of therapy, and abatement of symptoms over time (Altman, 1991). In fact, an estimate of a larger effect of personal construct psychotherapy did result from the before-and-after comparisons: two thirds of a standard deviation compared with one third of a standard deviation in

controlled studies. The latter estimate seems modest compared with the median effect size of 0.78 for comparisons of psychotherapy with no-treatment controls, as presented in a previous review of psychotherapy effectiveness (Kazdin & Bass, 1989). The current estimates are more in line with the median effect size of 0.38 for comparisons of psychotherapy with control groups receiving therapist support, presented in the same review. However, to put this comparison in context, Kazdin and Bass's review was based only on studies published in four high-profile psychotherapy journals, and so the results obtained are likely to be inflated by publication bias. Furthermore, it is not clear from their report whether attention has been restricted to studies conducted in clinical contexts.

Meta-analyses are only as good as the contributing studies; there are a number of concerns about the quality of the studies included in the present analysis. A genuine random allocation of clients to interventions (Kunz & Oxman, 1998), the concealment of future allocations from the individual recruiting clients to the study (Hewitt, Hahn, Torgerson, Watson, & Bland, 2005; Schulz, Chalmers, Hayes, & Altman, 1995), keeping the individual assessing outcome unaware of each client's treatment allocation (Schulz et al., 1995), the use of intention-to-treat analysis (Lee, Ellenberg, Hirtz, & Nelson, 1991), and completeness of posttreatment data collection (Schulz & Grimes, 2002) have been shown to be necessary for ensuring an unbiased estimate of the effectiveness of an intervention. However, from the written reports, none of the 16 controlled studies included in the meta-analysis could be established to have achieved all of these basic quality criteria. The issue of publication bias is also of concern because, although a number of unpublished studies have been included in the present analysis, there is some suggestion in Figure 1 that larger estimates of the effectiveness of personal construct psychotherapy are being observed in the smaller studies. It may be that small studies suggesting a very limited or even harmful effect of personal construct psychotherapy are either not written up or are presented with the emphasis on analyses or outcomes that suggest a more favorable effect. Finally, although the majority of studies included measures to support the integrity of treatment, such as the use of treatment manuals and supervision of therapists by a senior colleague, few studies reported direct observation of therapy sessions to ensure the fidelity of the personal construct psychotherapy (Dobson & Singer, 2005). An exception is the study by Watson (Winter & Watson, 1999).

Further research into the effectiveness of personal construct psychotherapy is needed. Eleven of the 16 controlled clinical studies included in this meta-analysis resulted from the work of just two research groups, led by David Winter in the United Kingdom and Linda Viney in Australia. Only two of the 16 studies were conducted in the United States. Studies conducted by other research groups will provide evidence of the effectiveness of different implementations of personal construct psychotherapy in a broader range of settings. This would be achieved with particular rigor if research groups collaborated in multicenter studies; the larger size would allow subgroup analyses of how effectiveness varies with the use of different techniques and across different client groups. The pooling of resources may also make it easier to achieve the three quality criteria listed previously. Meeting these is necessary for a more convincing evidence base for the effectiveness of personal construct psychotherapy.

Conclusions for Practice

It may be concluded from the studies reviewed here that there is evidence that clients benefit more from personal construct psychotherapy than from no treatment, or standard treatment. Furthermore, as far as the limited amount of evidence is able to inform us, the size of the benefit appears comparable to that achieved with other approaches to psychotherapy in comparable groups of clients. Personal construct psychotherapy is an approach to the exploration and reconstruction of personal meaning that has a rich theoretical basis, provides a radical alternative to some more commonly applied therapies, and has a growing range of application (Winter & Viney, 2005). Our review suggests that its practitioners can now also be considered to have an empirical justification for their work in terms of positive client outcomes. These conclusions for practice must be made cautiously, however, because the available studies are small in number, rely on limited sample sizes, and do not fully meet currently accepted quality standards for the conduct of effectiveness studies. Nevertheless, several studies have strong external validity because they were carried out with minimal interference to normal clinical practice and often with client groups "depicting the researcher's worst nightmare in terms of co-morbidity, complexity and levels of motivation" (Watson & Winter, 2005, p. 346). They are also complemented by numerous single-case studies and qualitative studies of personal construct psychotherapy, many of them using constructivist research methods (Viney, 1993, 1998; Winter, 2003).

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