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Insight Versus Rehearsal in Cognitive-Behaviour Therapy: A Crossover Study with Sixteen Phobics

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Although cognitive restructuring (CR) procedures have not proven very helpful for phobics in recent studies, insight and rehearsal components of CR have often been confounded. To seek possible differences in effectiveness between insight and rehearsal, we treated 16 phobics (eight agoraphobics and eight others) with four sessions of each method, using a counterbalanced crossover design with 1-month follow-ups after each treatment component. Significantly fewer sessions were attended by the clients in the rehearsal/insight sequence, and benefit ratings made by project completers significantly favoured insight/rehearsal. Few other treatment group differences were seen, but those that emerged gave the advantage to insight. Rehearsal seemed unhelpful, particularly to non-agoraphobics. Conclusions are (1) that CR methods show some promise in application to phobias, provided that self-exposure homework forms the core of the treatment plan, and (2) that insight followed by rehearsal is the preferred sequence.

Introduction

In the short term, at least, exposure methods are generally more effective than cognitive restructuring (CR) procedures in treating simple phobias (Biran and Wilson, 1981) and agoraphobia (Emmelkamp *et al.*, 1978; Emmelkamp and Mersch, 1982). Similarly, CR procedures have not enhanced the effectiveness of behavioural techniques to which they have been added in the treatment of simple phobias (Ladouceur, 1983), or agoraphobia (Thorpe and Burns, 1983, Chapter 6; Williams and Rappoport, 1983). In one of these studies, the

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combined cognitive-behavioural treatment group was still no different from a behavioural treatment group on outcome measures when half of the client sample was reassessed 8 years later (Burns *et al.*, 1987). Reviewers have concluded that whereas cognitive modification *processes* seem vital to therapeutic change, they are best activated by performance-based, rather than verbal-cognitive, treatment *procedures* (Kendall, 1985; Wilson, 1982). For agoraphobics, evidence for the efficacy of exposure treatment is now so strong (Marks, 1981; Mathews *et al.*, 1981) that clinical management without some form of exposure to feared surroundings seems "unimaginable" (Mavissakalian *et al.*, 1983, p. 76). This point has been made equally strongly by Ellis (1979).

It would nevertheless be premature to discard CR methods altogether from treatment plans for phobics. Although disappointing in the short term, CR treatment for phobias may yet show delayed effects, for example. Emmelkamp and Mersch (1982) showed that agoraphobics treated by CR, while less improved than "exposure" clients immediately after treatment, had continued to improve within a 1-month follow-up interval to the extent that their scores were then indistinguishable from those of the exposure group clients (who had tended to backslide). Similar observations were made by Mavissakalian *et al.* (1983). As Emmelkamp and Mersch (1982) note, treatment in the Emmelkamp *et al.* (1978) study had been conducted within a brief period of 2 weeks. Perhaps this explains the poor results of CR in that study, because it is likely that clients need time to assimilate the new ideas. CR techniques could well have been penalized if the time available had been insufficient for treatment processes to take their effect.

Another issue concerns the relative efficacy of different CR procedures. Several studies have included more than one identifiable CR procedure in a single CR treatment condition, hence confounding any possible differential effects. In the studies of Biran and Wilson (1981), Emmelkamp *et al.* (1978), and Emmelkamp and Mersch (1982), for example, potentially separable CR techniques were used in combination: relabelling, insight into irrational beliefs, and the rehearsal of new self-instructions. It is possible, for example, that "rehearsal" is helpful while "insight" is counterproductive, or *vice versa*; if so, the combination could cancel the effects of an otherwise helpful procedure.

Studies with student subjects have produced mixed results on this point. Thorpe *et al.* (1976) noted that insight-based CR was more helpful than self-instructional rehearsal for speech-anxious school students. Glogower *et al.* (1978) observed the opposite in their sample of college students, although there were some procedural differences which may explain the discrepancy (Thorpe and Burns, 1980).

Recent research with social phobics gives the edge, if anything, to insight (Emmelkamp *et al.*, 1985a, b). These studies are notable in showing that CR

procedures of either kind were as effective as exposure treatment for social phobia, by contrast with the findings noted above about simple phobia and agoraphobia.

Rationale and hypotheses

We shall describe a crossover study of a mixed sample of phobics in which clients received insight and rehearsal procedures in counterbalanced sequences. The study was already in progress when the reports by Emmelkamp and his colleagues on this topic became available in 1985. Emmelkamp and Mersch (1982) had emphasized insight in their CR group (which had shown the strong delayed effects), and accordingly they predicted that in future studies of insight *versus* rehearsal, insight would emerge the superior. We made the opposite prediction, because (a) the analogue results of Glogower *et al.* (1978) had seemed stronger for rehearsal than had those of Thorpe *et al.* (1976) for insight; (b) in an earlier analogue study, a successful CR group had emphasized rehearsal rather than insight (Thorpe, 1975); and (c) we thought that in a clinical sample, rehearsal of coping self-statements would be more problem-oriented, practical, and portable than the less specific insight procedures derived from rational-emotive therapy (RET; Ellis, 1962).

The crossover design was chosen so as to elicit as much information as possible from each client, and because within-subject analyses could allow well controlled comparisons of the two treatment components. Because out-patient practice commonly involves weekly 1-hour treatment sessions, we followed this format.

Method

Design

Community residents applying to our research clinic for treatment of phobias were interviewed and accepted for the study if (a) they met current diagnostic criteria for phobic disorder (American Psychiatric Association, 1980) and (b) they were willing to proceed after the project protocol had been explained. Each client was to receive eight sessions of individual treatment over a 4-month period, four sessions devoted to "insight" and four to "rehearsal." Two experimental groups were formed: one in which the insight sessions preceded the rehearsal sessions (I/R), and one in which the sequence was reversed (R/I). Case records were numbered consecutively in order of clients' referral and before assessment was begun; clients with odd-numbered case records were arbitrarily assigned to I/R, even-numbered to R/I. Five assess-

ments were made: before treatment (PRE), after the first block of four sessions (PO1), after a one-month follow-up interval (FO1), after the second block of four sessions (PO2), and after a final one-month follow-up interval (FO2).

Clients

Sixteen clients (13 women, three men) were accepted into the study between October, 1983 and December, 1984. They were selected from a series of 24 consecutive unsolicited referrals for possible treatment of "anxiety problems." Seven did not meet diagnostic criteria for phobic disorder, and were therefore treated independently of this study. One potential client met our criteria but decided not to take part in the study. Of the 16 clients in the study, eight were agoraphobic, six had social phobia (two of these experienced frequent panic attacks), one was claustrophobic, and one had a phobia of taking academic tests or examinations. Three clients were treated in their homes. Three had been referred from an alcoholism treatment facility as part of an aftercare plan; all had been abstinent from alcohol for at least 6 months. Fifteen of the clients were Caucasian, one was a Native American. The mean age of the clients was 37 (range = 20 to 55). All reported having experienced their phobias for more than one year (range = 1.5 to 20 years). Five of the clients took prescription medication during the study. One, an early dropout, was taking imipramine; the others were taking benzodiazepines, minimally and "as needed" in two cases. The last client completed the project in November, 1985. Table 1 gives a summary of client characteristics.

Researchers

The three therapists had all had prior experience of treating phobics by cognitive-behavioural methods. Two were advanced clinical psychology graduate students (JEH and LAC), and the third was a clinical psychologist with experience in the treatment of clients with anxiety disorders (GLT). The independent assessor (GEK) was a clinical psychologist with extensive assessment and therapeutic experience; he made independent ratings of audiotaped assessment interviews.

Assessments

Self-report inventories. Clients completed several inventories at all five assessment sessions. The fear questionnaire (FQ; Marks and Mathews, 1979) has scales for main phobia (FQ Main), total phobia (FQ Total: a composite of three subscales, for agoraphobia, social phobia, and blood/injury phobia), anxiety/depression (FQ AD), and global phobia (FQ GL). Section 39 of the agoraphobia questionnaire (AQ; Thorpe and Burns, 1983, pp. 152-153) lists 25 situations commonly feared or avoided by agoraphobics, and it calls for

TABLE 1. Summary of client characteristics

ID	GP	Sex	Age	Therapist	Sessions	Site	Diagnosis
201	I/R	F	30	GLT	8	Home	Agoraphobia with panics
202	R/I	F	44	GLT	8	Home	Agoraphobia with panics, substance dependence, in remission
203	I/R	F	45	LAC	8	Clinic	Agoraphobia with panics
204	R/I	F	46	JEH	3	Clinic	Agoraphobia with panics
205	I/R	M	52	GLT	8	Clinic	Simple phobia
206	R/I	F	33	GLT	4	Clinic	Social phobia
207	I/R	F	20	JEH	8	Clinic	Simple phobia
208	R/I	F	37	GLT	4	Clinic	Social phobia
209	I/R	M	51	GLT	8	Clinic	Social phobia
210	R/I	F	25	JEH	8	Clinic	Agoraphobia with panics
211	I/R	F	55	GLT	8	Home	Social phobia, substance dependence, in remission
212	R/I	M	33	GLT	8	Clinic	Social phobia with panics, substance dependence, in remission
213	I/R	F	34	JEH	8	Clinic	Agoraphobia with panics
214	R/I	F	37	LAC	2	Clinic	Agoraphobia with panics
215	I/R	F	23	LAC	7	Clinic	Agoraphobia with panics
216	R/I	F	33	JEH(R), GLT(I)	8	Clinic	Social phobia with panics

responses on five-point scales to indicate the degree of difficulty caused by each item. The agoraphobic cognitions questionnaire (ACQ) and the body sensations questionnaire (BSQ), compiled by Chambless *et al.* (1981), describe thoughts and feelings often experienced by agoraphobics during episodes of severe anxiety; each item is rated on a five-point scale for frequency of occurrence (ACQ) or severity of anxiety elicited (BSQ). The social avoidance and distress (SAD) and fear of negative evaluation (FNE) scales (Watson and Friend, 1969) contain items concerning social-evaluative anxiety which are rated true or false by the client. Ancillary inventories completed at PRE, FO1, and FO2 assessment sessions were the adult self-expression scale (ASES; Gay *et al.*, 1975), the Beck depression inventory (BDI; Beck *et al.*, 1979, pp. 398–399), and the fear and general symptom questionnaire (FGSQ; Hallam and Hafner, 1978).

A nine-point "expectancy of benefit" scale was completed by the clients after the rationale for a given procedure had been explained. This scale was

completed twice, in the first and the fifth treatment sessions (once for insight and once for rehearsal).

Structured interviews. Therapists conducted structured interviews at PRE, FO1, and FO2 assessment sessions. The questions asked were taken from the main phobia, the appropriate phobic subscale, and anxiety/depression scales of the FQ. The interviews were audiotaped and later rated independently by GEK; the tapes were presented to him without identification and in random order, so that tapes of different clients and at different assessment sessions appeared haphazardly. Hence, GEK was unaware of which treatment group a given client was in, and whether the particular interview had been conducted at the PRE, FO1, or FO2 assessments. GEK made four ratings from each recording, each on a nine-point scale: main phobia (GK Main), phobic subscale (GK Scale), anxiety/depression (GK AD), and global phobia (GK GL).

Self-monitoring of in vivo ventures. Clients and therapists developed individual, eight-item anxiety hierarchies as part of the initial assessment. At each of the five assessment periods, a client was asked to attempt to enter as many situations as possible from the hierarchy. A client was given a one week period in which to attempt the items at each assessment; the number of successful ventures out of the possible eight was recorded from the client's report.

Treatments

A Treatment Manual (available from the authors) was developed for the project and served as a basis for therapist training; we held several 2-hour practice sessions in which we role-played the procedures. All clients were given a rationale for self-exposure homework, and the importance of real-life practice in phobic situations was stressed throughout the project. The cognitive restructuring procedures were presented as techniques to help clients deal with anxiety while they did the real work of therapy in self-initiated ventures between treatment sessions. The rationale given for "insight" was that it is a method for overcoming negative, anxiety-producing thoughts while tackling anxiety *in vivo*. "Rehearsal" was presented as a method for building confidence so that clients may cope with anxiety while they practise entering feared situations.

In each treatment session, attention was paid to two items from the client's anxiety hierarchy. The CR techniques were practised while the client imagined being in the phobic situation. In insight sessions, clients were asked to identify their thoughts in the situation, and the therapist pointed out (where appropriate) how some thoughts or attitudes are unrealistic or unhelpful and actually contribute to anxiety. Therapist and client then tried to dispute such thinking patterns along the lines suggested by Ellis (1979). In

rehearsal sessions, clients rehearsed individually tailored coping self-statements while imagining the phobic item. The procedure was adapted from the rehearsal phase of stress-inoculation training (Meichenbaum, 1977, Chapter 5). Coping self-statements were rehearsed as the client imagined four stages of dealing with the situation: preparing, confronting, coping and then leaving the situation. Within each type of session, ideas or techniques from the alternative procedure were carefully avoided. All sessions were audiotaped so as to allow monitoring of the therapists' fidelity to the procedures.

Results

Statistical procedures from the SPSSx software package (SPSS, 1983) were used throughout.

Intercorrelations of the pre-treatment measures

Certain pretreatment measures were analysed for theoretical reasons. First, the ACQ; because it served as a direct measure of the impact of the CR procedures upon thought content, its initial relationship to the outcome measures is of interest. Also, because the ACQ was devised initially as an *agoraphobic cognitions questionnaire*, its relationship to the other phobias represented in our client sample has to be determined (our assumption was that the ACQ would be applicable to any phobia). The other measures of importance here are the ratings by the independent assessor; strong correlations of these ratings with the self-report measures would increase confidence in the consistency of findings from different modes of enquiry.

Pearson correlation coefficients are given in parentheses; in all cases, $p < 0.05$.

The ACQ was strongly related to the following measures: FQ agoraphobia ($r = 0.53$), FQ total phobia ($r = 0.68$), FQ anxiety/depression ($r = 0.52$), the AQ ($r = 0.56$), the self-monitored behavioural assessment ($r = -0.74$), and GEK's rating of the phobic subscale ($r = 0.60$). For the GEK ratings, the following relationships were seen: GK main with FQ social phobia ($r = 0.59$), with the ASES ($r = -0.74$), with the SAD ($r = 0.47$), with the FNE ($r = 0.64$), and with the FGSQ, factor H ("General symptoms," $r = 0.50$); GK Scale with FQ agoraphobia ($r = 0.75$), with FQ total phobia ($r = 0.65$), with the AQ ($r = 0.75$), and with the ACQ, as noted above; GK AD with FQ anxiety/depression ($r = 0.73$); and GK GL with the ASES ($r = -0.66$), with the BDI ($r = 0.63$), and with FGSQ Factor H ($r = 0.74$).

Initial equivalence of client-groupings

One-way analyses of variance were calculated in order to seek any pretreatment differences between diagnostic groups or treatment groups.

Analyses by diagnosis. Agoraphobics ($n = 8$) scored higher than non-agoraphobics ($n = 8$) on several measures: FQ main phobia ($F(1, 14) = 4.83$, $p < 0.05$), FQ agoraphobia ($F(1, 14) = 61.47$, $p < 0.001$), FQ total phobia ($F(1, 14) = 18.07$, $p < 0.001$), AQ ($F(1, 14) = 47.61$, $p < 0.001$), and FGSQ: Total ($F(1, 13) = 10.46$, $p < 0.01$), Factor A ("Leaving home or travelling": $F(1, 13) = 12.72$, $p < 0.005$), and Factor B ("Crowded or confined places": $F(1, 13) = 21.81$, $p < 0.001$).

Analyses by treatment group. None of the 25 analyses calculated produced a significant pretreatment group difference. However, there was a marginal result for the postrationale but pretreatment "expectancy of benefit" ratings for the first treatment component: $F(1, 13) = 4.29$, $p = 0.0589$ (insight/rehearsal clients made more favourable ratings than the rehearsal/insight clients).

Premature terminations

Number of sessions attended. Five clients discontinued their participation in the project before they had completed eight treatment sessions; all five terminated either during ($n = 3$) or immediately after ($n = 2$) their "rehearsal" sessions. Four of these clients were in the R/I condition; two stopped attending before the fourth session, and two did not return after the first follow-up. The fifth client did not return after her seventh treatment session; as she was in the I/R group, she left during the rehearsal sessions. One of the clients who left treatment within the first four sessions parted from her therapist with the observation that the rehearsal procedure was "silly." No clear comments were elicited from the other four clients, although all cited extraneous difficulties that made continued participation impractical. One-way analysis of variance of "number of sessions attended" by treatment group showed that fewer sessions were attended by the rehearsal/insight than by the insight/rehearsal clients ($F(1, 14) = 5.81$, $p < 0.05$).

Analyses by "dropout" status. One-way analyses of variance were computed for all pretreatment measures with "dropout" status as the between-subjects factor [dropouts ($n = 5$) versus completers ($n = 11$)]. The dropouts had higher scores than the completers on the BDI ($F(1, 13) = 5.99$, $p < 0.05$) and on FGSQ Factor F ("injury, illness, disease": $F(1, 13) = 9.28$, $p < 0.01$), no other difference was found.

Pretreatment analyses by group for completers. Because of the significant treatment-related discrepancy in number of sessions attended, and because later analyses mainly include project completers only, pretreatment analyses were made anew for the 11 project completers. A group difference appeared on two measures: on FGSQ Factor E ("social situations"), rehearsal/insight clients

had higher scores than the insight/rehearsal clients ($F(1,8) = 5.44, p < 0.05$); the same pattern was seen in the independent assessor's ratings for anxiety/depression ($F(1,9) = 5.17, p < 0.05$). On the postrationale expectancy ratings for the first treatment component, insight/rehearsal clients made more favourable ratings than did the rehearsal/insight clients ($F(1,8) = 9.43, p < 0.05$).

Treatment effects for project completers

The group differences in expectancy ratings and in number of sessions attended, noted above, are regarded as treatment effects. The remaining results are confounded by the differential attrition and shall be discussed conservatively.

One-way analyses of variance. As noted, treatment-group differences appeared at the PRE assessment on two measures. Similar analyses conducted for each of the subsequent assessments gave the following results: At PO1, I/R was superior to R/I on four measures (F -ratios in parentheses; d.f. = 1,9; in each case, $p < 0.05$): FQ main phobia (9.45), FQ social phobia (5.20), AQ (5.13), and ACQ (5.19). At FO1, no measure produced a significant difference. At PO2, I/R was superior to R/I on the SAD ($F(1,9) = 5.10, p < 0.05$). At FO2, I/R was superior to R/I on four measures: FQ main phobia ($F(1,5) = 7.37, p < 0.05$), FQ global phobia ($F(1,9) = 4.84, p = 0.05$), SAD ($F(1,9) = 5.68, p < 0.05$), and GK AD ($F(1,9) = 4.84, p = 0.05$). In view of the PRE assessment group difference on the last measure, the PRE data were entered as a covariate, resulting in a non-significant difference at FO2 ($F(1,8) = 1.18$). A summary of mean scores and standard deviations for project completers at each assessment is presented in Table 2.

Multivariate analyses of variance. Two chief kinds of analysis were conducted. The first was a series of singly multivariate analyses of variance with treatment group (I/R versus R/I) as the between-subjects factor and trial (PRE to FO2) as the within-subjects factor. A separate analysis was carried out for each measure. No overall effects attributable to the treatment groups (i.e. the sequence of the two component treatments) were seen, but improvement during the project was seen on most measures. Planned comparisons for the trials factor were made by Helmert contrasts, which indicated that most of the improvement took place after the first four sessions of treatment. A summary of these results is given in Table 3.

The second type of analysis took advantage of the crossover design by extracting within-subject factors corresponding to the two treatment components. In the manner described by O'Brien and Kaiser (1985), change scores were calculated to reflect improvements occurring within each treatment

TABLE 2. Summary of group means and standard deviations at the five assessments

Measure			PRE	PO1	FO1	PO2	FO2
<i>FQ</i>							
Main	I/R	M	14.6	9.0 a]	11.0	7.4	6.3 b]
		SD	7.2	6.1]	6.6	6.6	2.2]
	R/I	M	18.5	20.3 a]	15.2	13.5	12.5 b]
		SD	6.2	5.2	8.0	7.9	7.6
Total	I/R	M	32.3	30.1	27.0	22.1	21.7
		SD	19.2	25.7	25.0	19.6	19.7
	R/I	M	43.0	48.5	38.8	35.2	30.8
		SD	20.1	24.3	7.4	18.0	18.9
AG	I/R	M	12.0	10.6	9.6	7.7	6.4
		SD	13.2	12.6	12.7	10.8	9.0
	R/I	M	17.2	16.5	14.5	13.0	9.5
		SD	11.5	9.0	3.3	5.0	7.3
SO	I/R	M	13.0	11.0 c]	10.6	8.1	8.0
		SD	7.9	8.4]	8.5	7.4	7.9
	R/I	M	19.2	24.5 c]	18.8	16.3	18.0
		SD	11.3	11.2	10.4	12.5	12.8
BI	I/R	M	7.3	8.6	6.9	6.3	7.3
		SD	7.1	11.0	8.7	8.4	9.9
	R/I	M	6.5	7.5	5.5	6.0	3.2
		SD	5.7	5.1	2.4	5.0	2.5
AD	I/R	M	16.9	14.3	12.9	9.4	9.1
		SD	8.9	7.2	11.0	8.5	6.8
	R/I	M	27.5	23.0	21.0	17.0	18.0
		SD	8.5	10.4	5.7	6.3	9.0
Global	I/R	M	5.1	4.4	3.3	3.1	2.6 d]
		SD	1.9	1.5	2.1	1.3	0.8]
	R/I	M	7.2	6.0	5.5	4.5	4.8 d]
		SD	1.0	2.2	3.5	2.4	2.5
AQ	I/R	M	50.7	44.7 e]	44.4	40.4	40.1
		SD	20.8	18.3]	17.9	14.7	14.8
	R/I	M	70.7	72.7 e]	60.2	57.7	54.5
		SD	19.6	22.3	8.5	11.9	16.3
ACQ	I/R	M	29.9	28.7 f]	26.6	27.0	23.7
		SD	8.9	10.8]	9.6	11.1	8.3
	R/I	M	35.2	43.7 f]	38.8	39.2	32.8
		SD	6.0	9.9	13.6	10.2	7.2
BSQ	I/R	M	2.5	2.5	2.2	2.2	2.0
		SD	1.0	1.0	0.8	0.8	0.8
	R/I	M	3.1	3.5	2.8	2.7	2.8
		SD	0.6	1.5	1.0	0.9	1.2

TABLE 2. (Continued)

Measure			PRE	PO1	FO1	PO2	FO2
SAD	I/R	M	13.7	10.6	12.0	8.1 g]	6.9 h]
		SD	7.6	8.9	9.2	9.5 j]	7.0 j]
	R/I	M	19.0	20.8	20.8	19.7 g]	17.2 h]
		SD	5.3	5.0	4.6	4.7	7.0
FNE	I/R	M	20.1	17.3	15.0	14.6	13.7
		SD	6.5	7.2	7.2	9.7	7.8
	R/I	M	27.7	24.0	19.5	16.5	18.8
		SD	2.1	7.0	8.7	11.4	10.4
BT	I/R	M	0.6	1.8	2.4	2.4	4.0
		SD	1.3	2.1	2.5	3.0	3.3
	R/I	M	1.5	2.3	3.7	6.0	5.5
		SD	2.1	1.1	1.5	1.4	0.7
ASES	I/R	M	106.1		112.0		116.0
		SD	33.2		28.4		22.5
	R/I	M	83.0		105.0		109.7
		SD	29.5		17.7		18.0
BDI	I/R	M	12.3		9.7		5.8
		SD	9.6		6.3		3.9
	R/I	M	12.3		9.0		10.7
		SD	6.0		3.5		2.5
FGSQ Total	I/R	M	47.6		40.4		37.3
		SD	21.8		23.4		29.2
	R/I	M	70.7		52.5		55.0
		SD	29.0		16.0		25.3
GK Main	I/R	M	6.6		5.0		4.7
		SD	1.1		2.4		1.7
	R/I	M	6.7		5.5		6.5
		SD	1.0		1.3		1.9
GK Scale	I/R	M	23.0		16.9		12.1
		SD	11.1		11.4		12.3
	R/I	M	31.5		27.5		25.2
		SD	2.9		5.7		12.0
GK AD	I/R	M	11.3 i]		11.1		7.6 j]
		SD	8.1 j]		8.8		6.8 j]
	R/I	M	21.5 i]		16.8		20.8 j]
		SD	4.7		9.8		13.5
GK GL	I/R	M	6.4		4.6		4.0
		SD	1.1		2.8		2.1
	R/I	M	6.5		5.0		5.5
		SD	0.6		1.4		1.7

Means joined by brackets and having the same subscript are significantly different at $p = 0.05$ or $p < 0.05$ (see text).

TABLE 3. Summary of repeated measures analyses

Measure	Averaged F-ratios for <i>Trials</i>	Univariate F-ratios: Each assessment versus the mean of all subsequent assessments			
		PRE	PO1	FO1	PO2
FQ Main	6.27(4,24)**	4.72	6.88*	29.14**	0.86
FQ Total	3.29(4,36)*	1.42	6.49*	3.99	1.29
FQ AG	3.22(4,36)*	2.30	5.50*	3.25	4.08
FQ SO	2.58(4,36)*	0.71	4.04	4.86*	0.96
FQ BI	1.48(4,36)	0.12	5.33*	0.56	1.08
FQ AD	5.42(4,28)**	12.62**	1.36	3.70	2.97
FQ GL	4.33(4,28)**	7.36*	2.71	0.48	2.97
AQ	5.70(4,36)**	5.10*	7.87*	4.79	0.94
ACQ	4.95(4,36)**	0.00	19.59**	1.64	10.42**
BSQ	3.37(4,36)*	1.67	7.41*	0.12	0.22
SAD	3.66(4,32)*	5.51*	1.44	4.43	2.79
FNE	4.36(4,22)**	5.02*	8.76*	0.47	0.32
BT	6.26(4,16)**	8.02*	8.93*	2.07	0.27
ASES	9.48(2,16)**	10.73*		6.06*	
BDI	6.25(2,10)*	16.70**		0.06	
FGSQ	2.96(2,16)	6.04*		0.01	
GK Main	2.28(2,18)	6.89*		0.20	
GK Scale	2.35(2,18)	2.80		1.30	
GK AD	0.50(2,18)	1.07		0.01	
GK GL	4.24(2,18)*	11.66**		0.00	

* $p < 0.05$; ** $p < 0.01$.

component and follow-up period. The two between-subjects factors were sequence (the order in which the treatment components were presented) and diagnosis (agoraphobia *versus* other); the two within-subjects factors were treatment (insight *versus* rehearsal) and phase (treatment *versus* follow-up). Overall improvement is assessed by the F -ratio for "constant" in this analysis.

On one measure there was a significant overall difference attributable to the phase of the study: ACQ scores showed more improvement during the follow-up intervals than during the periods of active treatment ($F(1,7) = 11.06, p < 0.05$) (see Figure 1). No clear distinction between the phases was seen on any other measure.

Significant overall improvement was seen on most measures, consistent with the results presented in Table 3. No difference due to the sequence of treatments appeared on any measure. Figure 2 displays a typical pattern.

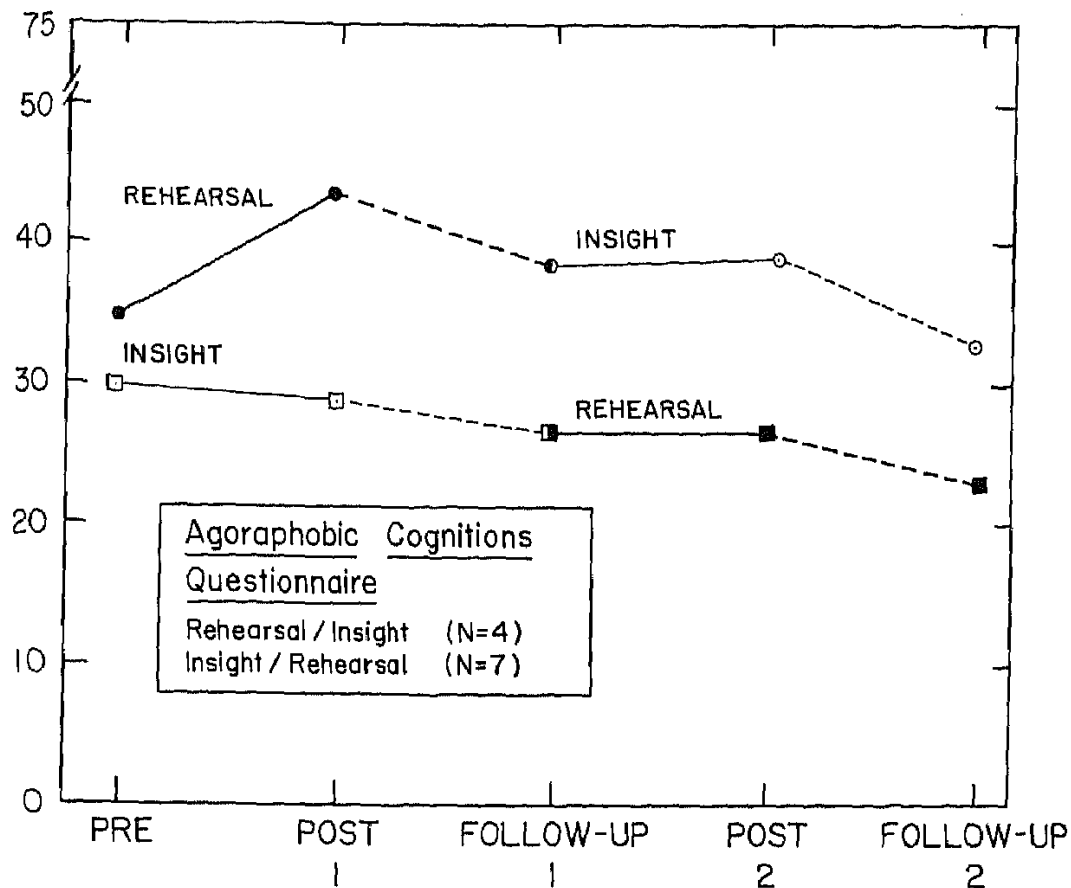


FIGURE 1. Group mean scores on the agoraphobic cognitions questionnaire at the five assessment sessions.

Diagnostic-group differences appeared on five measures; in each case the agoraphobics improved more than the other clients: FQ agoraphobia ($F(1,7) = 7.58, p < 0.05$), FQ social phobia ($F(1,7) = 6.96, p < 0.05$), FQ anxiety/depression ($F(1,5) = 12.97, p < 0.05$); AQ ($F(1,7) = 29.76, p < 0.01$), and GK scale ($F(1,7) = 5.87, p < 0.05$).

Treatment-component differences were seen on two measures, in each case in interaction with diagnosis. On the ACQ and on the SAD, rehearsal was particularly unhelpful for the non-agoraphobics (ACQ: $F(1,7) = 8.14, p < 0.05$; SAD: $F(1,6) = 11.70, p < 0.05$).

Clients' comments. Clients had been asked to comment freely on the study immediately after the FO2 structured interview and while the audiotape was still recording. Of particular interest were clients' opinions as to the relative effectiveness and preferability of the two treatment components. No clear pattern emerged from these comments. Regardless of diagnosis, some clients preferred insight, while others favoured rehearsal. If anything, clients appeared to see the I/R sequence as more appropriate than R/I. Clients often regarded insight as more challenging, yet ultimately more helpful. One client

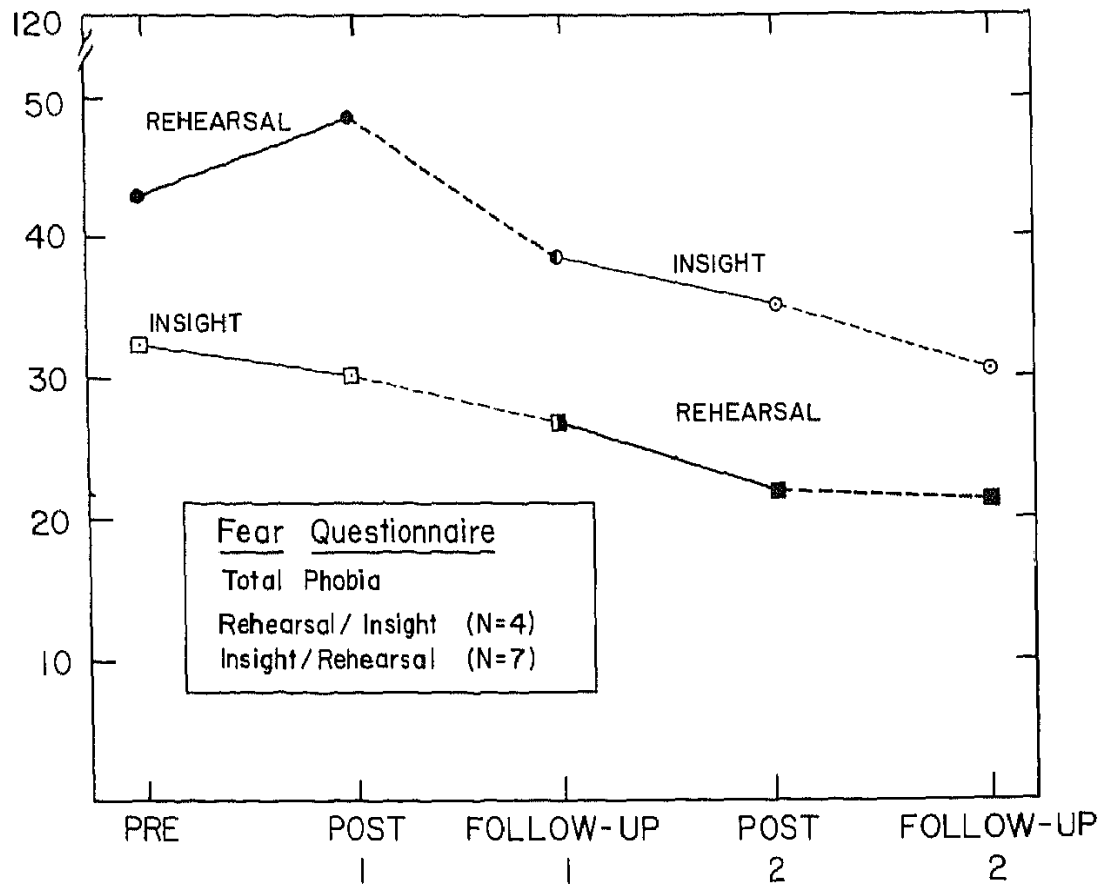


FIGURE 2. Group mean scores on the fear questionnaire: total phobia at the five assessment sessions.

was convinced that rehearsal made her too *aware* of her problem, so that she became preoccupied by the thought of panic early on in her counter-phobic outings. Another said that he cannot be "rational" when in an attack, so the rehearsal procedure was unhelpful. The same client said that, in order to deal with anxiety successfully, he could not *allow* himself to think negative thoughts.

Discussion

The chief treatment effect observed in the study was the tendency for clients who had rehearsal first to terminate treatment early. It is possible that one or two of these four clients had gained benefit from treatment and needed no more attention for their phobias. This is unlikely, however, because informal inspection of these two clients' PO1 scores showed that they were comparable to those of the other clients in the R/I group. Similarly, the expectancy ratings initially made by project completers revealed a significant preference for insight. There are few other significant treatment-related group differences,

but those that do appear consistently favour the insight/rehearsal sequence. These findings seem unambiguously attributable to the experimental procedures because no significant group difference was seen pretreatment on any measure.

It is notable that the significant differences did not concern insight *per se* but rather favoured the insight/rehearsal sequence. Some clients commented that I/R seemed the logical sequence; analyses showed that clients who began with insight went on to do well with rehearsal (witness the one-way analyses that still favour I/R clients after the crossover); and there was no group difference in expectancy ratings made for the second treatment component, whereas there had been for the first. It seems clear enough that clients preferred insight to rehearsal in the first part of the study; those who began with insight seemed content enough with rehearsal as the second treatment. Similarly, indications are that insight is more helpful than rehearsal (as gauged by the questionnaire measures), at least in the first phase of treatment. The chief clinical implication here is that CR procedures are best implemented by progressing from a focus on unhelpful attitudes (with suitably energetic Ellis-like discussion of anxiety-engendering thoughts and how to avoid them) to a focus on the alternative helpful or encouraging thoughts (with a suitably structured Meichenbaumian approach to the rehearsal of coping strategies). We regard our results as applicable to phobic out-patients in general in that our clients were not carefully selected for purity of diagnosis; we took on any client whose behaviour met criteria for phobia, regardless of possible additional clinical issues and concerns.

Although significant improvement was seen on most measures (and as assessed by conservative and stringent statistical analyses), we cannot tell from our study how the two CR procedures would have compared with exposure *in vivo*. Recent research (Emmelkamp *et al.*, 1985) has shown that this depends on the diagnosis; social phobics respond well to exposure or to CR, whereas agoraphobics clearly do better with exposure. This latter finding, however, has sometimes been based upon brief studies in which any delayed effects of CR would have been hard to discern. In any event, in our study we deliberately confounded our CR treatments with self-exposure homework instructions, first because it seemed next to unethical not to (Marks, 1981), and second, following from this, because the CR procedures were designed to be tied in with real-life activities.

In our study, there was no clear difference in improvement within periods of active treatment and similar periods of no treatment. It seems significant that the one measure that did reveal greater change during follow-ups than during active treatment was the ACQ, the sole barometer of change in cognitive content used in the study. This suggests that cognitive changes do continue

gradually after periods of treatment, however brief, and that perhaps we should have left a longer interval of no treatment between components. Although the ACQ had been designed for agoraphobics, we found that ACQ scores correlated strongly not only with agoraphobia measures but with those applicable to other phobias as well: the self-monitored behavioural assessment and the independent assessor's rating of the appropriate phobic subscale for each client, for example. Furthermore, in our sample agoraphobics scored higher than the clients with other phobias on several measures, yet the ACQ was not one of them; hence, it seems generally applicable to phobics. The authors of the ACQ have recently described it more fully (Chambless *et al.*, 1984).

Wherever a clear difference between treatments emerged, insight or insight followed by rehearsal were more helpful than rehearsal or rehearsal followed by insight. Further, there were indications that rehearsal alone is unhelpful, particularly for the non-agoraphobics. If we suppose that insight is designed to abolish negative thinking and rehearsal to stimulate positive thinking, then our results are consistent with other recent work. Kendall (1985) has commented as follows: ". . . data suggest that in some situations, it is not the presence of positive thinking but the absence of negative thinking that is associated with adjustment" (p. 58). Two of our clients spontaneously paraphrased this quotation when commenting on their experiences with insight and rehearsal. These observations are consistent with the results of a survey of the emotionally-relevant thoughts and feelings of two groups of clients and two groups of non-clinical volunteers (Thorpe *et al.*, 1983); all groups, clinical and non-clinical, had comparable levels of "rational" thoughts in imagined stressful situations, yet the clients and patients endorsed significantly more anxiety-provoking thoughts than the other groups.

Our results provide some encouragement for the idea that one form of CR (an RET-like insight procedure) may helpfully pave the way for effective cognitive-behaviour modification in phobics when combined with self-exposure homework recommendations.

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