

The efficacy of couples-based interventions for panic disorder with agoraphobia

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From this systematic literature review it was concluded that panic disorder with agoraphobia (PDA) can sometimes occur in conjunction with marital problems. Couples-based treatments for PDA – partner-assisted exposure and marital therapy – can be an effective treatment for the condition. It is as effective as individually based cognitive behaviour therapy. Involving partners of people with PDA in therapy may be appropriate in some cases, particularly those in which there are marital difficulties. Couple-focused interventions may enhance the maintenance of treatment gains by facilitating interactions that positively reinforce and perpetuate attempts by people with PDA to enter feared situations and cope with these effectively. People with PDA who have good marital relationships show a better response to both individual and couples-based treatment programmes. In some instances effective couples-based treatment leads to improvement in marital adjustment as well as in PDA symptomatology.

Introduction

The primary aim of this paper is to review evidence for a link between panic disorder with agoraphobia (PDA) and marital problems and the efficacy of couples-based treatment programmes for people with PDA. Both partner-assisted interventions and marital therapy interventions will be reviewed. Before considering the rationale for such programmes, the features and epidemiology of PDA deserve mention.

Panic disorder and agoraphobia

Panic disorder is characterized by recurrent unexpected panic attacks and a marked fear of these acute episodes of anxiety, ruminations

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about the possible implications of repeated attacks and in some instances agoraphobia. Agoraphobia entails a fear of leaving the safety of the home and entering situations that might trigger panic attacks. This commonly leads to the development of a restricted housebound lifestyle. The lifetime prevalence of PDA is between 1.5 per cent and 3.5 per cent (Kessler *et al.*, 1994) with a one-year prevalence rate between 1 per cent and 2 per cent (APA, 1994). Women are twice as likely as men to be diagnosed with panic disorder without agoraphobia and three times as likely to be diagnosed with PDA (Kessler *et al.*, 1994).

Although DSM-IV (APA, 1994) distinguishes between panic disorder, agoraphobia, and panic disorder with or without agoraphobia, it was only with the advent of DSM-III (APA, 1980) that both panic disorder and agoraphobia were differentiated from other anxiety presentations (Markowitz *et al.*, 1989). Prior to this, studies typically classified individuals who exhibited a marked degree of behavioural avoidance (due to fear of panic attacks) as agoraphobic. Available evidence suggests that agoraphobia is a secondary manifestation of panic disorder and that many individuals with panic disorder may be pre-agoraphobic (Garvey and Tuason, 1984; Klein, 1981). Over 95 per cent of individuals in clinical samples who have agoraphobia also have panic disorder (APA, 1994).

Rationale for couples-based treatment for panic disorder and agoraphobia

Both empirical and theoretical factors have contributed to the development of couples-based approaches to the treatment of PDA. From an empirical perspective, it is now widely accepted that the more established psychological and pharmacological treatments for PDA are not effective in all cases. More than 25 per cent of cases do not respond to antidepressant medication, and may entail significant dropout and relapse rates (Mavissakalian and Perel, 1992; van Balkom *et al.*, 1997). Situational *in vivo* exposure may result in as many as 87 per cent of clients ($n = 90$) being panic-free and 67 per cent remaining in remission at seven years post-treatment (Fava *et al.*, 1995). Other studies indicate efficacy rates for this intervention to vary between 66 per cent (Roth and Fonagy, 1996) and 80 per cent (Barlow and Lehman, 1996). However, this treatment approach may also entail significant dropout and relapse rates with as many as 50 per cent of clients failing to ultimately reach a symptom-free state (Barlow and Brown, 1996).

From a theoretical perspective, cognitive behaviour therapists argue that spouses can make a significant contribution to treatment, by ceasing to inadvertently reinforce agoraphobia through excessive caretaking and actively reinforcing the development of anxiety management skills and the completion of exposure-based homework assignments (Oatley and Hodgson, 1987). This is the rationale for spouse-assisted therapy.

A variety of systemic formulations have inspired marital therapy approaches to the treatment of PDA (Chambless and Goldstein, 1981; Fry, 1962; Hafner, 1977a; Haley, 1963; Minuchin and Fishman, 1981; Skynner, 1976). From these disparate sources, an integrative systemic hypothesis may be derived. In PDA a circular homeostatic pattern develops in which the dependent role of the person with PDA is complemented by their partner's caretaking role. These complementary roles entail benefits for both partners. The apparently healthy partner is permitted to avoid addressing anxiety-provoking personal issues such as low self-esteem or fear of psychological and sexual intimacy. The person with PDA is protected from having to face the challenges of individuation. These difficulties with self-esteem, intimacy and individuation are rooted in unresolved developmental difficulties in partners' families of origin. These complementary developmental difficulties may have initially been a significant factor in attracting members of the couple to each other. This systemic formulation provides a rationale for marital therapy in which partners develop alternatives to their complementary care-giving and agoraphobic roles, and address unresolved issues such as low self-esteem, fear of intimacy and individuation. This systemic formulation also entails the view that the apparently healthy partner may show deterioration in functioning if their agoraphobic partner receives effective individual therapy. This in turn may lead the apparently healthy partner to undermine their agoraphobic partner's recovery. This aspect of the systemic formulation of PDA provides a further rationale for including both members of the couple in marital therapy for the effective and lasting treatment of PDA.

Conclusions of previous reviews

From previous narrative reviews and meta-analyses of the literature on couples-based approaches to PDA a number of tentative conclusions may be drawn (Carter *et al.*, 1994; Daiuto *et al.*, 1998; Dewey and Hunsley, 1990; Emmelkamp and Gerlsma, 1994; Kleiner and Marshall,

1985; Vandereycken, 1983). First, PDA is sometimes associated with marital problems. Second, both individually oriented and couples-based treatments for PDA can be effective for a significant proportion of cases. All effective treatment programmes involve exposure to anxiety-provoking situations that typically trigger panic attacks and remaining in such situations until the anxiety subsides. Third, people with PDA who have good marital relationships show a better response to treatment. Fourth, involving partners of people with PDA in therapy may be appropriate in some cases, particularly those in which there are marital difficulties. Fifth, individual treatment involving exposure does not have a negative impact on the adjustment of non-agoraphobic partners or the quality of the marital relationship, as suggested by marital and family systems theory. The aim of this review was to attempt to refine these tentative conclusions, by systematically evaluating (1) descriptive studies of PDA and marital problems; (2) evaluation studies of couples-based treatment programmes for PDA; (3) studies that evaluated the effect of couples' relationship quality on response to psychological treatment; and (4) evaluation studies of the effects of psychological treatment on relationship quality.

Method

A series of computer-based literature searches of the PsychInfo database were conducted. A variety of terms were used to define PDA including *anxiety, fears, phobias, panic attacks, panic disorder and agoraphobia*. To identify studies of marital problems and PDA, these terms were combined with terms such as *marriage, relationship and interpersonal*. To identify studies that evaluated the efficacy of couples-based treatment programmes for PDA, terms that defined PDA (as listed above) were combined with terms that defined interventions such as *treatment, therapy, marriage, couple, relationship, marital therapy, couple therapy, family therapy, spouse-assisted therapy, spouse-assisted exposure, behaviour therapy, cognitive behaviour therapy, exposure and response prevention*. This search strategy was also used to find studies that evaluated the effect of couples' relationship quality on response to psychological treatment and evaluation studies of the effects of psychological treatment on relationship quality. The searches, which were confined to English-language journals and some book chapters, covered the period 1950 to 2001. A manual search through the bibliographies of major recent review papers on PDA and marital adjustment and psychological interventions for PDA was also

conducted. Descriptive studies that included at least four cases were selected for review. Both controlled and uncontrolled treatment outcome studies were selected for review, provided they included reliable and valid pre- and post-treatment assessment instruments. Single-case designs and studies reported in dissertations or convention papers were not included in the review.

Results

Twenty-four studies that investigated the relationship between marital problems and PDA were identified. Twelve studies that evaluated the efficacy of couples-oriented interventions for PDA were identified, and the features and findings of these are presented in Tables 1 and 2. Seventeen studies that evaluated the impact of the couples' relationship quality on response to treatment (both individually based and couples-oriented) were identified, and the features and findings from these studies are presented in Table 3. Thirteen studies that evaluated the impact of the treatment (both individually based and couples-oriented) on the quality of the marital relationship were identified, and the features and findings from these studies are presented in Table 4.

Couples' relationship quality and PDA

Of the identified twenty-four studies that investigated the relationship between marital problems and PDA, ten were retrospective reviews of case records and in nine of these, high rates of relationship problems in cases with PDA were found (Fry, 1962; Goldstein and Chambless, 1978; Goodstein and Swift, 1977; Holmes, 1982; Kleiner and Marshall, 1987; Quadrio, 1984; Roberts, 1964; Symonds, 1971; Webster, 1953). In both recording data in case files and coding these unstandardized data, clinicians' and coders' biases may have influenced the findings of these studies. Thus while these findings suggest that there is an association between relationship quality and PDA symptomatology, the reliability and validity of this conclusion is relatively weak.

In the fourteen prospective studies identified (Arrindell and Emmelkamp, 1986; Buglass *et al.*, 1977; Emmelkamp *et al.*, 1992; Fisher and Wilson, 1985; Friedman, 1990; Hafner, 1977a, 1983; Hand and Lamontagne, 1976; Kleiner *et al.*, 1987; Lange and van Dyck, 1992; McLeod, 1994; Markowitz *et al.*, 1989; Massion *et al.*, 1993; Torpy and Measey, 1974) data were collected using standardized

TABLE 1 Methodological features of outcome studies of couples-based treatment for PDA

Design feature	Study number													Total
	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12		
1 Comparison group	0	1	0	0	0	1	1	1	1	1	1	1	1	8
2 Random assignment	0	1	0	0	0	0	1	1	1	1	1	1	1	7
3 Diagnostic homogeneity	1	0	1	1	1	1	1	1	1	1	1	1	1	11
4 Not on medication	0	0	0	0	0	0	0	0	0	1	1	0	0	2
5 Pre-treatment assessment	1	1	1	1	1	1	1	1	1	1	1	1	1	12
6 Post-treatment assessment	1	1	1	1	1	1	1	1	1	1	1	1	1	12
7 Follow-up assessment at three months or later	1	1	1	1	0	1	0	1	1	0	1	1	1	9
8 Client self-report	1	1	1	1	1	1	1	1	1	1	1	1	1	12
9 Partner self-report	0	0	1	1	1	0	1	1	1	1	1	0	0	8
10 Therapist ratings	0	0	0	0	1	0	1	0	0	0	0	0	0	2
11 Researcher ratings	0	1	1	0	0	1	1	0	1	1	1	1	1	8
12 Quality of the couples' relationship assessed	0	1	1	1	1	1	1	0	1	1	1	1	1	10
13 Clinical significance of change assessed	0	0	0	0	1	0	0	0	0	1	1	0	0	3
14 Experienced therapists used	1	1	1	0	1	0	0	1	1	1	1	0	0	8
15 Treatments were manualized	0	0	1	0	1	1	0	1	1	1	1	0	0	7
16 Therapy supervision was provided	0	0	0	0	0	0	1	0	1	0	0	0	0	2
Total	6	9	10	7	10	9	11	10	13	13	14	9	9	

Note: 0 = design feature was absent. 1 = design feature was present. PDA = panic disorder with agoraphobia. S = study.

TABLE 2 Key findings from outcome studies of couples-based treatment for PDA

Study no.	Authors	Year	N per group	Group format (no. per group)	No. of sessions or hours of contact	Group differences	Follow-up period	Percentage of cases improved post-treatment	Percentage of cases improved at longest follow-up
1	Chernen and Friedman	1993	1. IE+BMT = 4	No	23 × 1.5h over 23w	-	3m	66	-
2	Cobb <i>et al.</i>	1980	1. MT = 5 2. PAE = 6	No	10 × .8 h over 10w	2 > 1	20m	-	-
3	Mathews <i>et al.</i>	1977	1. PAE = 12	No	7h over 4w	-	6m	58	67
4	Barlow <i>et al.</i>	1981	1. PAE + CT = 6	Yes (3)	13 over 13w	-	16m	-	-
5	Craske <i>et al.</i>	1989	1. PAE + CT = 22	Yes (3-6)	12 over 16w	-	-	54	-
6	Cobb <i>et al.</i>	1984	1. PAE = 9 2. IE = 10	No	5h	1 = 2	6m	-	-
7	Emmelkamp <i>et al.</i>	1992	1. PAE = 30 2. IE = 30	No	6 over 4w	1 = 2	8w	-	-
8	Oatley and Hodgson	1987	1. PAE = 15 2. FAE = 15	No	6 × 1h and 26 phone calls over 52w	1 = 2	12m	-	-
9	Jannoun <i>et al.</i>	1980	1. PAE = 14 2. PS = 14	No	1 × 1.5h and 4 × .5h over 4w	1 > 2	6m	-	-
10	Barlow <i>et al.</i>	1984	1. PAE + CT = 14 2. IE + CT = 14	Yes (3-6)	12 × 1.5h over 12w	1 > 2	-	(1) 86 (2) 43	-
11	Himadi <i>et al.</i> Cerny <i>et al.</i>	1986 1987	1. PAE + CT = 28 2. IE + CT = 14	Yes (3-6)	12 over 12w	1 > 2	24m	64	(1) 82 (2) 46

TABLE 2 (Continued)

Study no.	Authors	Year	N per group	Group format (no. per group)	No. of sessions or hours of contact	Group differences	Follow-up period	Percentage of cases improved post-treatment	Percentage of cases improved at longest follow-up
12	Arnrow <i>et al.</i>	1985	1. PAE+IE+CCST = 12 2. PAE+IE+CRT = 12	Yes (8-9)	IE: 3 x 4h over 3d PAE: 3 x 1.5h over 3w CCST and CRT: 8 over 8w	1 > 2	8m	(1) 83 (2) 67	(1) 67 (2) 55

Notes: BMT = behaviour marital therapy. CCST = couples communication skills training. CRT = couples relaxation training. CT = cognitive therapy. d = day. FAE = female friend-assisted exposure. h = hour. IE = individual exposure. m = month. MT = marital therapy. PAE = partner-assisted exposure. PDA = panic disorder with agoraphobia. w = week. PS = partner-assisted problem-solving.

TABLE 3 Studies of the effect of relationship quality on the psychological treatment of PDA

Study no.	Authors	Year	Study design	Treatment duration	Positive initial relationship improved treatment response
1	Hudson	1974	IE+M = 18	5d	Yes
2	Hafner	1976	IE = 39	12h over 4d	Yes
3	Mathews <i>et al.</i>	1977	PAE = 12	8h over 4w	Yes
4	Milton and Hafner	1979	IE+M = 14	14h over 3d 4h over 4w	Yes
5	Bland and Hallam	1981	IE = 12	12h over 2w	Yes
6	Monteiro <i>et al.</i> Lelliott <i>et al.</i>	1985 1987	IE+M = 27	28w	Yes
7	Emmelkamp	1980	IE = 17	8h over 4w	No
8	Barlow <i>et al.</i>	1981	PAE+CT = 6	13h over 13w	No
9	Thomas <i>et al.</i>	1983	IE = 17	10h over 10w	No
10	Cobb <i>et al.</i>	1984	PAE = 10 IE = 9	5h	No
11	Arrindell <i>et al.</i>	1986	IE = 23	30h over 4w	No
12	Himadi <i>et al.</i> Cerney <i>et al.</i>	1986 1987	PAE+CT = 28 IE+CT = 14	12 over 12w	No
13	Chambless <i>et al.</i>	1988a	IE = 134	27h over 2w	No
14	Chambless <i>et al.</i>	1988b	IE = 30	10 × 1.5h	No
15	Peter and Hand	1988	IE = 25	4w with 5 in-office contacts	No
16	Craske <i>et al.</i>	1989	PAE+CT = 22	12h over 16w	No
17	Emmelkamp <i>et al.</i>	1992	PAE = 30 IE = 30	6h over 4w	No

Notes: PDA = panic disorder with agoraphobia. IE = individual exposure. PAE = partner-assisted exposure. CT = cognitive therapy. +M = with medication. h = hour. d = day. w = week.

assessment procedures, and in some instances these were normed on the general population. Findings from these prospective studies on the relationship between couples problems and PDA symptoms were more varied than those from the retrospective studies mentioned above.

In six of these studies, relationship quality and PDA symptomatology were negatively correlated, with relationship difficulties being more common in couples where there was more severe PDA symptomatology. Four of these were uncontrolled studies (Hafner, 1983; Hand and Lamontagne, 1976; Kleiner *et al.*, 1987; Torpy and Measey, 1974), and a control group was included in the design of two

TABLE 4 Studies of the effect of the psychological treatment of PDA on relationship quality

Study no.	Authors	Year	Study design	Treatment duration	Treatment has positive effect on relationship quality
1	Cobb <i>et al.</i>	1980	MT = 5 PAE = 6	10h over 10w	Yes
2	Bland and Hallam	1981	IE = 16	12h over 2w	Yes
3	Cobb <i>et al.</i>	1984	PAE = 10 IE = 9	5h	Yes
4	Monteiro <i>et al.</i> Lelliott <i>et al.</i>	1985 1987	IE+M = 27	28w	Yes
5	Arrindell <i>et al.</i>	1986	IE = 23	30h over 4w	Yes
6	Himadi <i>et al.</i> Cerny <i>et al.</i>	1986 1987	PAE+CT = 28 IE+CT = 14	12 sess over 12w	Yes
7	Kleiner <i>et al.</i>	1987	IE = 13 IE+PS = 13	24h over 12w	Yes
8	Barlow <i>et al.</i>	1981	PAE+CT = 6	13h over 13w	Partly
9	Hand and Lamontagne	1976	IE = 25	12h over 3d	Partly
10	Milton and Hafner	1979	IE+M = 14	14h over 3d 4 × 1.5h over 4w	No
11	Emmelkamp <i>et al.</i>	1992	PAE = 30 IE = 30	6 sess over 4w	No
12	Emmelkamp	1980	IE = 17	8h	No
13	Hafner	1976 1977a 1977b	IE = 39	12h over 4d	No

Notes: CT = cognitive therapy. d = day. FAE = female friend-assisted exposure. h = hour. IE = individual exposure. +M = with medication. MT = marital therapy. PAE = partner-assisted exposure. PDA = panic disorder with agoraphobia. PS = problem-solving. w = week.

of these (McLeod, 1994; Markowitz *et al.*, 1989). In the four uncontrolled studies, 40 to 66 per cent of couples in which one partner had PDA reported significant relationship problems. In one of the controlled studies, compared with normal controls, couples in which one partner had PDA were seven times more likely to say that they did not get along with their partner (Markowitz *et al.*, 1989). In the other controlled study, asymptomatic husbands but not symptomatic wives reported greater marital adjustment problems than did normal controls (McLeod, 1994).

In seven of the prospective studies, no association was found between PDA symptomatology and relationship quality or spouse's psychological adjustment (Arrindell and Emmelkamp, 1986; Buglass *et al.*, 1977; Emmelkamp *et al.*, 1992; Fisher and Wilson, 1985; Friedman, 1990; Hafner, 1977a; Lange and van Dyck, 1992). All of these studies included either a control group or normed measures of relationship adjustment or partner's psychological adjustment that permitted comparison with a normative sample. From a methodological perspective, these were particularly robust studies.

In both studies where couples in which one member had PDA were compared with couples in which one member had generalized anxiety disorder, those with PDA showed similar (Massion *et al.*, 1993) or better (Friedman, 1990) levels of marital adjustment.

Couples-based PDA treatment outcome studies

The twelve PDA treatment outcome studies of couples-based interventions summarized in Tables 1 and 2 were published between 1977 and 1993.

General characteristics of couples-based PDA treatment outcome studies

Of the 291 participants in these studies, approximately 95 per cent were women. About 61 per cent were married and the remainder were married, planning marriage, or cohabiting and/or involved in a stable relationship for longer than six months. Participants' ages ranged from 18 to 64 years, with the mean age of participants ranging from 32 to 44 years across studies. Referrals included routine referrals to a hospital clinic, those from self-help organizations and community agencies, and referrals received via advertisements. The duration of agoraphobic symptoms ranged from six months to twenty-five years, and the mean duration of agoraphobic symptoms ranged from more than one year to eighteen years across studies. Two of these studies evaluated the efficacy of marital therapy (Chernen and Friedman, 1993; Cobb *et al.*, 1980), and ten evaluated the effects of partner-assisted exposure (Arnow *et al.*, 1985; Barlow *et al.*, 1981, 1984; Cerny *et al.*, 1987; Cobb *et al.*, 1984; Craske *et al.*, 1989; Emmelkamp *et al.*, 1992; Himadi *et al.*, 1986; Jannoun *et al.*, 1980; Mathews *et al.*, 1977; Oatley and Hodgson, 1987). Dropout rates from the twelve studies ranged from 3 per cent to 25 per cent.

Methodological features of couples-based PDA treatment outcome studies

Using the checklist for methodological robustness in Table 1, scores of studies ranged from six to fourteen out of sixteen, indicating that this was a fairly robust group of treatment outcome studies, so a fair degree of confidence may be placed in the reliability and validity of the results of these studies.

Key findings from couples-based PDA treatment outcome studies

From Table 2 it may be seen that the number of participants per treatment condition ranged from four to thirty. Treatment duration ranged from five to thirty-five hours over periods from a month to a year.

In the first of two studies of marital therapy in Table 2, Chernen and Friedman (1993) found that behavioural marital therapy led to significant improvements in relationship quality and PDA symptomatology for couples from discordant marriages, but had little impact on couples without significant relationship difficulties. Behavioural marital therapy in this study focused on coaching couples in communication, problem-solving and behavioural exchange skills (Jacobson and Margolin, 1979). In the second marital therapy study in Table 2, Cobb *et al.* (1980) evaluated the efficacy of a systems approach to marital therapy where the focus was on helping couples understand how their patterns of interaction and belief systems maintained PDA symptomatology and how alternatives to these interaction patterns and beliefs might be developed. This form of marital therapy was particularly effective in enhancing the quality of couples' relationships but had little impact on PDA symptomatology. In contrast, cases in the comparison group who participated in partner-assisted exposure therapy showed significant symptomatic improvement post-treatment and at follow-up.

In the six studies that evaluated partner-assisted exposure therapy, this treatment programme was found to be effective. Using Mathews *et al.*'s (1977) data, it may be concluded that this treatment yielded a percentage improvement rate of 58 per cent if an item ranked 8 or above (out of 15 on their fear hierarchy) is taken to indicate clinically significant improvement. In two studies partner-assisted exposure therapy and individual exposure therapy were compared, and in both studies these two treatments were found to be equally effective (Cobb *et al.*, 1984; Emmelkamp *et al.*, 1992). In the single study where partner-assisted exposure therapy and female friend-assisted exposure therapy were compared, these two treatments were found to be

equally effective (Oatley and Hodgson, 1987). In the single study where partner-assisted exposure therapy and partner-assisted problem-solving therapy were compared, partner-assisted exposure therapy was found to be more effective (Jannoun *et al.*, 1980).

Cognitive therapy combined with partner-assisted exposure appears to have produced treatment gains in all six of Barlow *et al.*'s (1981) couples and resulted in 54 per cent of participants being rated as treatment responders based on a composite criterion in Craske *et al.* (1989). In two other studies, group-based partner-assisted exposure therapy combined with cognitive therapy was found to be more effective in alleviating PDA symptoms than group-based individual exposure therapy combined with cognitive therapy (Barlow *et al.*, 1984; Himadi *et al.*, 1986; Cerny *et al.*, 1987). In the Barlow *et al.* (1984) study, as many as 86 per cent of the participants were rated as treatment responders to the partner-assisted exposure/cognitive therapy combination, while this figure was 82 per cent at twenty-four-month follow-up in the original Himadi *et al.* (1986) sample.

Arnow *et al.* (1985) found that group-based individual exposure therapy followed by partner-assisted exposure therapy combined with couples-based communication training was more effective than group-based individual exposure therapy followed by partner-assisted exposure therapy combined with couples-based relaxation training in alleviating PDA symptoms. These gains were maintained at eight-month follow-up. It may be seen from Table 2 that in five of the eleven studies which included partner-assisted exposure as a treatment component, a group therapy format was used. The size of these groups ranged from three to nine individuals. In the remaining five studies, couples were seen without other couples in the treatment sessions. Although data are limited, it appears that both couples-based and group couples-based treatment formats for partner-assisted exposure therapy were comparable in their treatment effects.

The effect of relationship quality on the psychological treatment of PDA

It may be seen from Table 3 that in six of seventeen studies the quality of couples relationship at the outset of therapy was associated with symptomatic improvement after treatment or during the follow-up periods of up to five years (Bland and Hallam, 1981; Hafner, 1976; Hudson, 1974; Lelliott *et al.*, 1987; Mathews *et al.*, 1977; Milton and Hafner, 1979; Monteiro *et al.*, 1985). In five of these studies, individual treatments such as individual exposure therapy were

evaluated and in only one study was a couples-based intervention evaluated. This was Mathews *et al.*'s (1977) study of partner-assisted exposure. In the remaining eleven studies, no association was found between the initial quality of couples' relationships and their immediate response to treatment or the severity of PDA symptoms during the follow-up periods of up to sixteen months (Arrindell *et al.*, 1986; Barlow *et al.*, 1981; Chambless and Gracely, 1988; Cobb *et al.*, 1984; Craske *et al.*, 1989; Emmelkamp, 1980; Emmelkamp *et al.*, 1992; Himadi *et al.*, 1986; Peter and Hand, 1988; Thomas-Peter *et al.*, 1983). In eight of these studies individually based treatment conditions such as individual exposure therapy were evaluated, and in five studies couples-based treatment conditions such as partner-assisted exposure were evaluated. While some studies included a placebo versus medication feature in their designs, it appears that only two studies involving individual exposure therapy (Arrindell *et al.*, 1986; Emmelkamp, 1980) and only one partner-assisted exposure therapy study (Cerney *et al.*, 1987; Himadi *et al.*, 1986) controlled for medication.

The effect of psychological treatment of PDA on relationship quality

It may be seen from Table 4 that in six of thirteen studies, psychological treatment of PDA had a positive effect on the quality of couples' relationships (Bland and Hallam, 1981; Cerny *et al.*, 1987; Cobb *et al.*, 1980, 1984; Himadi *et al.*, 1986; Kleiner *et al.*, 1987; Lelliott *et al.*, 1987; Monteiro *et al.*, 1985). Again, it appears that only four studies (Arrindell *et al.*, 1986; Cerny *et al.*, 1987; Emmelkamp, 1980; Himadi *et al.*, 1986) controlled for medication. In four of thirteen studies, psychological treatment of PDA had no effect on the quality of couples' relationships (Emmelkamp, 1980; Emmelkamp *et al.*, 1992; Hafner, 1976, 1977a, 1977b; Milton and Hafner, 1979). In the remaining three studies, psychological treatment of PDA yielded a partial positive effect on the quality of couples' relationships (Arrindell *et al.*, 1986; Barlow *et al.*, 1981; Hand and Lamontagne, 1976).

In these thirteen studies, whether treatment was couples-based or individually based had no deleterious effect on the quality of couples' relationships. It may be seen from Table 4 that in three of seven (43 per cent) studies where treatment had a positive effect on relationship quality, couples-based treatment conditions such as partner-assisted exposure or marital therapy were evaluated. Only two (33 per cent) of the remaining six studies involved partner-assisted exposure and these found no treatment effect or only a partial effect on relationship

quality. This figure could be even smaller considering that one of these two studies (e.g. Barlow *et al.*, 1981) had a cell size of only 6 and hence its findings may not be generalizable.

Discussion

The following conclusions may be drawn from this review. First, PDA is sometimes, but not always, associated with couple relationship problems. In couples where one member has PDA, it is unclear whether couple relationship difficulties are predisposing or maintaining factors for PDA or both. Second, in some instances the initial quality of couples' relationship affects their response to couples-based or individual treatment, with non-distressed couples deriving greater benefits from treatment. Third, partner-assisted exposure therapy, whether conducted with couples on their own or in groups, leads to symptomatic improvement for 23 to 45 per cent of cases. It is as effective as individual exposure therapy and female friend-assisted exposure therapy, and is more effective than partner-assisted problem-solving therapy and marital therapy. Fourth, combining it with cognitive therapy, which addresses problematic belief systems underlying avoidant behaviour, and with couples-based communication training, which empowers couples to address relationship issues, may enhance the efficacy of partner-assisted exposure therapy. A treatment combination of group-based partner-assisted therapy and cognitive therapy may result in as many as 84 per cent of participants being rated as treatment responders.

Fifth, couples-based treatment programmes such as partner-assisted exposure or marital therapy tend to have a more positive effect on the quality of couples relationships than do individually based treatment conditions such as individual exposure therapy. It may be that while exposure is a critical aspect of all effective therapeutic approaches to PDA, couple-focused interventions may enhance maintenance of treatment gains by facilitating interactions that positively reinforce and perpetuate exposure attempts. These conclusions are consistent with those from previous narrative reviews and meta-analyses of the literature on the quality couples and PDA (Carter *et al.*, 1994; Daiuto *et al.*, 1998; Dewey and Hunsley, 1990; Emmelkamp and Gerlsma, 1994; Kleiner and Marshall, 1985; Vandereycken, 1983). However, these conclusions remain somewhat tentative considering the small sample sizes of many of the studies as compared with those of individual exposure therapy (e.g. Fava *et al.*, 1995).

The most important implication of these conclusions for practice is that the quality of couples' relationships should be routinely assessed as part of a preliminary evaluation of people with PDA in stable long-term relationships, and couples-oriented treatment programmes should be routinely used particularly in the case of distressed couples. It may be concluded from this review that partner-assisted exposure combined with cognitive therapy and couples communication training or marital therapy is the treatment package of choice for distressed couples.

With respect to future research, there are a number of areas that deserve urgent attention. Considering that men's roles traditionally require greater independence, it seems reasonable to hypothesize that husbands' phobias would influence marital quality at least as strongly as wives' phobias (McLeod, 1994, p. 767). Hence there is a need to evaluate couples-based treatment programmes for men with PDA. Other special populations that need to be considered include gay couples or those who are poor treatment responders such as people who meet the diagnostic criteria for personality disorders as well as PDA. There is also a need to evaluate programmes designed for members of different ethnic groups that entail sensitivity to cultural and personal characteristics of participants. Studies which examine the impact of design features that may make programmes more effective are also required. For example, there is a need for studies which compare the impact of programmes in which partner-assisted exposure is combined with a variety of other relationship-oriented interventions such as systemic marital therapy or behavioural marital therapy. Studies which evaluate the impact of treatment duration, location and therapist training also require evaluation.

Future treatment outcome studies should meet the methodological criteria listed in Table 3. In addition, future evaluation studies should routinely include assessments of programme integrity into the research design. In such studies, treatment sessions are recorded and blind raters use programme integrity checklists to evaluate the degree to which sessions approximate manualized training curricula. Such integrity checks allow researchers to state with confidence the degree to which a pure and potent version of their programme has been evaluated.

Studies are also required that investigate the mechanisms and processes which underpin treatment efficacy. It is clear that there is wide variability in couples' responses to treatment. The determinants of these different outcomes require careful investigation.

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