

# The effectiveness of psychodynamic psychotherapies: an update

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*This paper provides a comprehensive review of outcome studies and meta-analyses of effectiveness studies of psychodynamic therapy (PDT) for the major categories of mental disorders. Comparisons with inactive controls (waitlist, treatment as usual and placebo) generally but by no means invariably show PDT to be effective for depression, some anxiety disorders, eating disorders and somatic disorders. There is little evidence to support its implementation for post-traumatic stress disorder, obsessive-compulsive disorder, bulimia nervosa, cocaine dependence or psychosis. The strongest current evidence base supports relatively long-term psychodynamic treatment of some personality disorders, particularly borderline personality disorder. Comparisons with active treatments rarely identify PDT as superior to control interventions and studies are generally not appropriately designed to provide tests of statistical equivalence. Studies that demonstrate inferiority of PDT to alternatives exist, but are small in number and often questionable in design. Reviews of the field appear to be subject to allegiance effects. The present review recommends abandoning the inherently conservative strategy of comparing heterogeneous “families” of therapies for heterogeneous diagnostic groups. Instead, it advocates using the opportunities provided by bioscience and computational psychiatry to creatively explore and assess the value of protocol-directed combinations of specific treatment components to address the key problems of individual patients.*

**Key words:** Psychodynamic psychotherapy, psychoanalysis, depression, anxiety disorders, eating disorders, somatic disorders, personality disorders

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Psychodynamic therapy (PDT) is on the retreat around the world in the face of critique of its scientific credibility. Empirically substantiated clinical judgement underpins professional accountability and transparency in health care and increasingly so in mental health (1). One would therefore expect empirically supported therapies to gradually replace treatment as usual in everyday clinical care (2-5). Many outside the cognitive-behavioural therapy (CBT) community have objected to this, raising concerns about the generalizability of findings from randomized controlled trials (RCTs) (6).

The issue of external validity of RCTs in the context of health care policy was recently exposed to philosophical scrutiny (7), leading to the suggestion that the key issue may not be the theory-driven question of whether an intervention works, but the implementation question “Will it work for us?”. For example, multisystemic therapy for conduct disorder is supported by trials in the U.S. and Norway, but these results were not replicated in Sweden and Canada (8-19).

Along with other researchers, we have argued that, in order for a treatment to be considered as empirically supported, evidence beyond that provided by RCTs is required (20,21). However, this does not imply, as many have assumed, that RCTs can be replaced by methods that do not comply with Mill’s “method of difference” maxim (stating that where you have one situation that leads to an effect, and another which does not, and the only difference is the presence of a single factor in the first situation, you can infer this factor as the cause of the effect) (22).

Some have argued that not only are RCTs for psychotherapy flawed because of issues of generalizability, but also that there are alternative ways of establishing psychothera-

py as “evidence-based” (e.g., practice-based evidence) (23). However, it is misguided to deny that RCTs are key to establishing the validity of a therapeutic modality.

The history of medicine is littered with interventions that did remarkable duty as therapies and yet, when subjected to RCT methodology, were shown either to have no benefit over alternative treatments or even to prevent the patient from benefitting, in terms of effect size or speed, from a superior intervention. Perhaps the most dramatic example is the RCT that ended 100 years of radical mastectomies for breast carcinoma only 30 years ago. The study showed that half a million women who had been subjected to disabling, mutilating operations, performed with the best of intentions on the basis of a fallacious theory about how carcinoma spreads, could have had equally good outcomes with lumpectomies (24).

Empirical knowledge in psychological therapies is multifaceted and complex, and requires sophistication in the scrutiny of research data. While critical reviews that summarize or synthesize a body of research are not without value, they also have major limitations. They rely on the statistical significance of a study to determine an intervention’s efficacy, yet statistical significance is primarily determined by sample size. Meta-analyses can pool multiple studies where each has low statistical power (a pervasive problem in psychotherapy research), but are potentially misleading when the RCTs being aggregated are not homogeneous in terms of the target population, the treatment method and the outcome measures. This is often the case for trials of PDT.

A recent meta-review of 61 meta-analyses covering 21 psychiatric disorders containing 852 trials and 137,126 participants yielded slightly larger effect sizes for psychotherapy

(0.58; 95% CI: 0.42 to 0.76) than pharmacotherapy (0.40; 95% CI: 0.28 to 0.52) studies (25), but the applicability of these figures is brought into question by the null results from head-to-head studies.

The limitations of meta-analyses have generated concern among a number of reviewers (26,27) that undue weight is given to heterogeneous small-scale studies, which are considered in preference to well-designed and well-conducted RCTs that converge in their results. While hard-pressed readers may understandably wish to take an intellectual short-cut to a pooled effect size rather than considering individual investigations, it is important to remember that meta-analyses lack individual patient data – they are based on response rates and mean values. This masks important heterogeneity that is often revealed by careful scrutiny of individual investigations.

This review has opted to prioritize individual studies. The key limitation of small studies is the so-called “file drawer” problem. Insufficient patients are sampled in small studies. As a consequence, relying on underpowered studies means that there is a risk that the likely effectiveness of a therapy is overstated simply because a study with the same sample size but chance negative findings is unlikely to have been published.

Further, it is important to recognize that the absence of a significant difference between two conditions in a study should not be considered evidence for equivalence. The latter requires a different statistical procedure and a larger sample size than the so-called “superiority trials” which most psychotherapy trials are (28). Lack of significant difference does not mean that two interventions are equally effective, but only that it is impossible to rule out their equivalence (29). A confident statement of superiority requires a trial with at least 50 individuals per arm for a medium effect size (30). Equivalence trials are expected to have sample sizes several times larger. Sadly, few of the trials which are reviewed here meet this elementary criterion.

Finally, how do we define psychodynamic psychotherapy? A recent meta-analysis likened the family of psychodynamic therapies to an actual, if somewhat dysfunctional, family whose many members hardly spoke to each other and sometimes even spoke different languages (31). This review uses a broad definition of psychodynamic treatment as a stance taken to human subjectivity that is inclusive and aimed at a comprehensive understanding of the interplay between aspects of the individual’s relationship with his/her environment, whether external or internal (32). It refers to the extraordinary human potential for dynamic self-alteration and self-correction. This definition incorporates a developmental perspective, and assumes limitations on conscious influence, ubiquity of conflict, internal representation of relationships, mental defences, and that complex meanings can be attached to experience (32).

The boundaries of PDT have become blurred over recent decades by changes in both CBT approaches and psychodynamic theory and technique, leading to increasing convergence of both understanding and clinical methods, exempli-

fied by the work of those around the boundaries of both domains (33-36). The common distinction between interpretive and supportive approaches (37) speaks to a clinical dichotomy that existed 30-40 years ago, but hardly applies today. Certain manualized treatments are labelled as psychodynamic (38,39), but a thorough content analysis of these remains to be done. The pragmatic approach adopted in this review has been to use self-declared allegiance as the guiding principle as to what constitutes PDT.

This review focuses on effectiveness and ignores questions of mechanism and treatment process. This was, again, a decision of expedience given the space limitations and the wish to provide a comprehensive survey. The literature search on which this contribution depends was based on the methodology evolved for two previous large-scale surveys (20,40) and involved a computer search of all major databases using 100 terms referring to different aspects of mental health problems and 11 terms describing psychotherapy (the search algorithm and full inclusion criteria are available on request). Studies were selected if they reported outcomes that were directly related to the disorder or to intermediate variables. The review is limited to experimental designs involving some degree of random assignment.

## DEPRESSION

### Short-term PDT

Several studies have compared PDT to waitlist (41,42), placebo (43-46) or usual care controls (47-50) in the short-term treatment of depression. The results are mixed, with some favouring PDT (41-43,47,49,51) while others report no superiority to controls (44-46,48,50).

A number of these studies are methodologically too weak to permit definitive conclusions, either due to small sample size (41-43,50) or because their implementation of PDT fails to meet criteria (52) for a *bona fide* treatment (44,48).

Among the good studies, results are still mixed. Some studies report medium effect sizes:  $-0.57$  (95% CI:  $-0.99$  to  $-0.14$ ) (47) and  $-0.53$  (95% CI:  $-0.92$  to  $-0.13$ ) (49). Perhaps the most rigorous study comparing supportive expressive therapy with placebo medication reported no superior effects at the end of treatment on either depression (45) or quality of life (46). However, a recent well-conducted study of women with depressive disorders and breast cancer found that significantly more of the PDT group achieved remission from depression than the usual care group (44% vs. 23%) (53). An RCT of a mixed anxiety and depression group also reported favourable post-treatment results for PDT on clinician and self-report measures (54).

An intriguing meta-analysis of studies carried out in China lists six controlled trials that reported substantial treatment success from psychodynamic psychotherapy as an adjunct to medication and conventional nursing in the treatment of depression in patients with Parkinson’s disease (55).

Since in clinical practice psychological therapies for depression are mostly offered in combination with medication, the potential value added by brief dynamic therapy is a key question for practitioners. A well-constructed, appropriately powered RCT found combined treatment to be more acceptable (reducing refusal and premature termination of medication) and associated with higher recovery rates (41% vs. 59%) (56). These findings were confirmed for self-reported depression and quality of life outcomes, but not for clinician-rated outcomes (57). A further smaller study comparing clomipramine with or without PDT reported reduced depression, lower hospitalization rates, better work adjustment and better global functioning in the combined treatment group (58). A combined analysis of three RCTs (56,59,60), in which data were pooled to enable contrasts between pharmacotherapy alone and combination treatment, yielded better observer-rated and self-reported outcomes in terms of remission and response rates at treatment termination for combination treatments (61).

There may be moderators of the superior effect of combination treatments. So far, unreplicated findings suggest that PDT may be particularly indicated if depression is accompanied by personality disorder (62,63) or childhood trauma (64), and findings are restricted to long-term follow-ups (42,65,66). Dose-effect relations associated with the length of therapy (8 vs. 16 sessions) have not been found for combination treatments (59).

When pharmacotherapy is contrasted head-to-head with PDT, studies fail to identify differential effects (45,46,67,68). Adding pharmacotherapy to PDT brings equivocal benefit (60), an important observation in the light of consistent findings of patient preference for PDT (69). A meta-analysis comparing psychotherapies to treatment with selective serotonin reuptake inhibitors demonstrated that the former were comparable to medication and that PDT was as efficacious as other therapies. However, psychotherapies that were not *bona fide* (i.e., those delivered by professionals without substantial training in psychotherapy) had significantly worse outcomes (70).

Several high-quality trials reported comparisons between CBT and PDT. A well-powered equivalence trial (N=341) reported no observer-rated, patient-rated or therapist-rated differences at treatment termination or follow-up, although overall the remission rate was low at 22.7% (71-73). Another trial found PDT, but not counselling or CBT, to be superior to a control in reducing the rate of postnatal depression at termination (49), although the treatments were equivalent at short-term and long-term follow-up. By contrast, an RCT of 291 inpatients reported that CBT was equally effective in those selected for CBT or PDT, while PDT benefitted only those who were specifically selected for that treatment (74). Consequently, CBT was superior for the randomly rather than systematically assigned group of patients (75).

Earlier studies tended to show negligible differences between PDT and CBT, but the trials were too small and

reporting too limited to permit reliable inferences about equivalence or even superiority (76-82). If CBT is superior to PDT, it is so only in very brief (8-session) implementations (77). PDT and solution-focused therapy appear comparable in effectiveness (83).

A recently advanced innovative approach used the Internet to deliver PDT based on a self-help manual in a programme lasting 10 weeks. Compared to a structured support condition, recovery rates of 35% vs. 9% were reported, which were maintained at 10-month follow-up (84). A second trial based on a different model also yielded good outcomes compared to online therapist support without treatment modules in a mixed mood and anxiety disorder population (85).

### Long-term PDT

In normal practice, PDT is often offered as a long-term (50 sessions or more) treatment. However, only a handful of studies have explored the effectiveness of long-term PDT.

The Helsinki study showed long-term PDT to be inferior to short-term PDT initially, but superior after 3-year follow-up (86-88). In an intriguing comparison between intensive long-term PDT (psychoanalysis), long-term PDT and short-term PDT, psychoanalysis was initially inferior to both other therapies, but was more effective at 5-year follow-up (89).

A large-scale naturalistic study randomized 272 depressed patients to unmanualized long-term PDT, fluoxetine or their combination for 24 months (51). Long-term PDT on its own or in combination was more effective in reducing depression scores than fluoxetine alone, with a medium effect size.

A study in which participants with major depressive disorder were randomized to psychoanalysis or long-term PDT found significant superiority of psychoanalysis on self-rated measures of depression at 3-year follow-up, but no differences at 1 and 2 years (90). A quasi-experimental comparison found psychoanalysis but not long-term PDT to be superior to CBT on measures of depression at 3 year follow-up (91).

A recently completed study of 18 months of once-weekly psychoanalytic psychotherapy for patients with two previous documented treatment failures reported the psychotherapy to be superior to U.K. practice guidelines-based treatment, but superiority was not apparent until 2 years after the end of treatment (92).

### Meta-analyses

Meta-analytic findings on the whole reveal large pre-post treatment effects (93,94) for PDT maintained at 1-year follow-up, with medium effect sizes indicating superiority to inactive controls (31,95) but either no difference (31) or slight inferiority (94) in relation to alternative interventions post-treatment. Checking for publication bias revealed the existence of “file drawer” studies favouring PDT, which abolished the inferiority.

Effect sizes at follow-up relative to other treatments are insignificant overall (31,94,96), but PDT performed significantly worse against CBT (31) and in geriatric studies (31). PDT is comparable to alternative treatments at long-term follow-up. It also increases the effect of antidepressant medication (31,96).

## Comment

On the whole, evidence supports the use of PDT in the treatment of depression, although its effects compared to placebo and other inactive control treatments are moderate rather than large. There is evidence that the effects are maintained in both the short and long term. PDT may be a preferred alternative to pharmacotherapy and certainly adds to the effectiveness of medication. If CBT is more effective than PDT, this difference is neither large nor reliable. However, there are too few large-scale trials to fully establish equivalence.

The dynamic therapies considered under the heading "PDT" are probably quite similar in practice, but vary in theoretical orientation, content focus, and style of delivery (supportive vs. confrontational), and no single type of PDT emerges as particularly efficacious. The literature on long-term PDT, which is still in its infancy, suggests that this approach may have value, perhaps particularly with more complex and chronic cases of depression. There is a question over the issue of cost-effectiveness of these therapies. Both established and currently emerging Internet applications of PDT are of particular interest, because of their potential for efficient dissemination.

## ANXIETY

### Short-term PDT

Notwithstanding the high lifetime prevalence of anxiety disorders (97), few studies have examined the effectiveness of PDT for these conditions.

PDT has been shown to be superior to enhanced waitlist for social anxiety and social phobia (98-102). The most recent study, with 207 PDT and 79 waitlist patients, yielded large differences in remission rates (26% vs. 9%) (100). A smaller study showed that adding group PDT to medication (clonazepam) reduced social anxiety (103) and immature defence styles (104).

Whilst short-term PDT outperformed applied relaxation, it was equivalent or inferior to prolonged exposure in two small, early studies (98,99). More recent trials contrasting PDT with CBT found small between-group differences in remission (100,102). Continuous measures of phobia favoured CBT at termination. Between 6-month and 2-year follow-up, the differences between the two treatments disappeared (105).

A health economics study reported that the end of treatment cost-effectiveness of CBT and PDT compared to waitlist was uncertain and depended on societal willingness to pay (WTP): CBT proved cost-effective at  $WTP \geq \text{€}16,100$  per responder and PDT at  $WTP \geq \text{€}27,290$  (106).

There are no studies of PDT against inactive controls in generalized anxiety disorder, except a study of Internet-based PDT, which yielded no evidence of superiority to waitlist control on anxiety ratings (107). An early study of a poorly specified PDT showed it to be inferior to both anxiety management training and cognitive therapy at termination and short-term follow-up (108). A small study comparing PDT to supportive therapy failed to find superiority of PDT for interpersonal problems (109). An RCT contrasting CBT with PDT found the former to be superior on self-reported measures of anxiety, but this was not confirmed by independent observer ratings (110). At 12-month follow-up, significant differences favouring CBT remained on two of the measures (110).

Two small studies of panic disorder have been reported. In one study, panic-focused PDT was clearly superior to applied relaxation (73% vs. 39% response) (111), specifically for those with comorbid personality disorders (112). A similar study contrasted this treatment with CBT and found no significant differences, although a larger sample with the same response ratios (47% PDT vs. 72% CBT) would lead to statistical significance ( $H=0.52$ ) (113).

There is no evidence that PDT is helpful for obsessive-compulsive disorder (114). The single study adding PDT to pharmacotherapy reported no significant clinical effect from this supplemental treatment (115).

There is only one study of PDT as an approach to post-traumatic stress disorder (PTSD) (116), which shows a significant reduction of intrusion and avoidance compared to waitlist, to about the same extent as hypnotherapy and trauma desensitization. Systematic reviews found insufficient evidence in relation to PTSD to warrant comment (117-119), although strong theoretical and clinical arguments have been advanced for incorporating a psychodynamic approach into PTSD treatment programmes (120).

### Meta-analyses

Meta-analyses have tended to combine different anxiety disorders when providing effect sizes (31,121). PDT is reported to be significantly more effective than inactive control conditions with a medium effect size, and to be overall insignificantly different when compared with alternative treatments. However, substantial heterogeneity is reported in both primary and secondary outcomes. These conclusions differ from those of other reviewers (122,123) who compared PDT only with CBT and claimed definite superiority for the latter. This claim, however, has been questioned (121) and significant errors may indeed have crept into one of the above meta-analyses (122).

## Comment

The effectiveness of PDT for anxiety is crucial in the debate between those who argue for specific treatment approaches, as in CBT, versus those who support a generic approach seeking to identify similar unconscious content across diagnostic groups.

In relation to social anxiety and perhaps generalized anxiety disorder and panic disorder, promising emerging evidence supports the argument for a generic approach. The case is weakened, however, by the absence of evidence for PTSD and the evidence of absence of effect for obsessive-compulsive disorder. In general, the methodological weaknesses of earlier studies call meta-analytic findings into question.

Overall, there is considerable potential for further sound research aiming to identify the anxiety conditions for which PDT may be particularly helpful.

## EATING DISORDERS

A small study showed self-psychology oriented PDT to be superior to nutritional counselling in treating a combination of anorexia and bulimia nervosa. The comparison with an active treatment in the same study (cognitive orientation therapy) favoured PDT, particularly for bulimia nervosa (124). By contrast, two studies focusing on bulimia nervosa found both PDT and CBT to be effective in reducing eating disorder symptoms, but CBT was slightly superior on global measures of clinical outcome, self-rated psychopathology and some indicators of social adjustment (125,126).

A 16-week course of group psychodynamic psychotherapy for binge eating disorder was superior to treatment as usual on all measures, and mostly equivalent to group CBT in reducing binge eating and overall improvement (79% PDT vs. 73% CBT) (127). PDT resulted in lower depression and more improvement in self-esteem, but greater susceptibility to hunger. There was some indication that patients with higher attachment anxiety benefitted more from PDT.

A recent report of an RCT of 70 patients with bulimia nervosa, contrasting 2 years of once-weekly PDT with 20 sessions of CBT over 5 months, found CBT to be more effective in both the short (5 months) and long (2 years) term (128). Both treatments were effective in reducing eating disorder symptoms and general psychopathology. On the face of it, this finding might be considered to have appropriately challenged the value of PDT, except that, strangely, this manualization of PDT precluded addressing bingeing and purging *unless the topic was volunteered by the patient* (129). The findings drew attention to the importance of adapting PDT to the patient's presenting problems (130).

An RCT comparing focal PDT with family therapy, cognitive analytic therapy and routine treatment of anorexia nervosa found that PDT achieved more improvement (52%)

than routine treatment (21%) and achieved outcomes comparable to family therapy (41%) and cognitive analytic therapy (32%) (131).

In a recent, exceptionally high-quality study (Anorexia Nervosa Treatment of OutPatients, ANTOP) (132,133), focal dynamic psychotherapy was contrasted with enhanced CBT and treatment as usual, which incorporated the same intensity of psychotherapy, offered by community experts. Weight gains were comparable across the three groups over 12 months. With respect to global outcome measures, patients allocated to PDT had higher recovery rates than the control group; this was the first study to show superiority to CBT. Patients in the control group more frequently required inpatient treatment (41%) than those receiving PDT (23%) or CBT (35%). Although full syndrome anorexia nervosa persisted in 21% of PDT patients (versus 28% of controls), the findings, in association with other studies (134), suggest that a focus on intra- and interpersonal factors is beneficial for individuals with this disorder (135).

PDT in the treatment of anorexia nervosa in 12-19-year olds was found to be comparable to family-based treatment after 12-18 months of implementation in terms of achieving a target weight, but slightly inferior in terms of change in body mass index and more frequent hospitalization (136,137). In an independent study of PDT versus family-based therapy, age appeared to be a significant moderator, with older patients benefitting more from individual therapy and younger patients from family-based approaches in both short-term (138) and long-term follow-up (139). A definitive study with larger samples found that, even for older adolescents, family-based treatment achieved higher rates of remission and larger treatment effects than individual treatment (140).

## Comment

There is strong evidence (two independent RCTs, one of which is large) that PDT can contribute to recovery from anorexia nervosa. This is underscored by the fact that treatment as usual in the ANTOP trial included psychotherapy, which, given the location of the study (Germany), was most likely to have been non-manualized PDT.

While available studies are small and conflicting, there is sufficient uncertainty about the relevance of PDT for bulimia nervosa to warrant further research in which the implementation of the therapy is more appropriately symptom-focused.

## SOMATIC PROBLEMS

A number of studies have examined the usefulness of interpersonally oriented PDT for individuals presenting with a range of pain symptoms.

A relatively large study of irritable bowel syndrome patients, randomized to usual (medical) care or PDT (plus usual care), reported substantial changes in somatic symptoms, abdominal pain and bowel dysfunction at 3 and 15 months in the PDT group (141). A 12-week trial found that women presenting with irritable bowel syndrome benefitted more from PDT than from active listening in terms of self- and doctor-rated symptoms (142). Those in the control group who accepted psychotherapy after the end of treatment improved, and those who declined relapsed.

A further study with people with the same clinical problems contrasted eight sessions of PDT with pharmacological treatment (paroxetine) and treatment as usual (143). Both active treatments reduced physical distress but neither improved pain ratings. Psychotherapy reduced health care costs during the follow-up year. Patients with a history of sexual abuse particularly benefitted from PDT, but those with depression did better with paroxetine treatment.

A comparison of PDT with supportive psychotherapy in patients with dyspepsia reported that at 1 year 54% felt physically much better with the former treatment, compared to 28% of those receiving the latter (144). The physical improvements were in line with improvements in psychological symptoms in the PDT group. These findings were replicated in a small Iranian RCT, indicating cultural generalizability (145).

A well-powered trial in patients with chronic pain symptoms, randomized to PDT or enhanced medical care, yielded medium between-group effects ( $d=0.42$ ) for physical quality of life at 9-month follow-up (146). An earlier study with a smaller sample of patients with somatoform pain disorder and a much longer (33 sessions) treatment also yielded significant pain reductions, in addition to improvements in somatization, mood and social adjustment (147).

An evaluation of 25 sessions of PDT compared to four consultations over 6 months for patients with fibromyalgia found no evidence of superiority of PDT for symptoms specific to this disorder or general psychiatric problems (148). However, the training offered to the therapists was brief (4 hours) and focused on insight rather than interpersonal emotional awareness, which has been found to be more relevant (149).

An imaginative study randomized general practitioners to be trained to work jointly with psychodynamic psychotherapists to deliver 10 weekly group therapy sessions in addition to the diagnosis and psychological management of medically unexplained symptoms (150). This large trial found significant small to medium health benefits over enhanced medical care from this psychodynamic group intervention.

A large quasi-experimental study compared pre- and post-treatment health care costs for 890 patients treated with brief PDT for a broad range of somatic and psychiatric disorders with those of a control group ( $N=192$ ) who were referred but never treated, and found an average cost reduction per treated case of \$12,628 over 3 follow-up years, with

significant differences between groups for follow-up hospital costs (151).

## Meta-analyses

No meta-analyses have been reported recently. A limited review identified only 13 RCTs and a moderate effect size for somatic symptoms ( $d=-0.59$ ; 95% CI:  $-0.78$  to  $-0.40$ ), but the random effects model failed to reach significance (152). The effects are clearer for psychiatric symptoms and social adjustment than somatic symptoms.

## Comment

The evidence base for PDT in somatoform disorders compared to control treatments is quite robust. Although there are no adequate meta-analytic summaries, this narrative review clearly reveals that an interpersonal form of dynamic therapy has substantial and relatively long-term effects, with medium effect sizes compared to enhanced treatment as usual, and that PDT may be able to reduce long-term health care costs for somatic disorders.

Interestingly, there appear to have been no comparisons with active symptom-focused psychosocial treatments such as CBT. Yet, a comparison may be relatively easy, since in this context PDT is mostly offered as a particularly brief intervention (8-10 sessions).

The overall impression is that PDT may be more effective when somatoform disorders are associated with adverse social histories rather than manifest psychiatric problems.

## DRUG DEPENDENCE

RCTs suggest that the value of PDT in the treatment of drug dependence is moderated by the substance involved. An early study of methadone-maintained opiate dependence found drug counselling plus either supportive-expressive PDT or CBT to be beneficial relative to drug counselling alone, but there were no differences between the two psychotherapies (153-155). Patients with psychiatric morbidity benefitted most from the psychotherapies (156). A replication study of methadone users with psychiatric morbidity contrasted only PDT with counselling and observed a reduction of cocaine-positive but not opiate-positive urine samples during the treatment period (157). Importantly, this study demonstrated better maintenance of abstinence at 6 months, lower-dose methadone use and a significant reduction in psychiatric morbidity.

A study of cocaine dependence, contrasting CBT, PDT and individual drug counselling based on the 12-step philosophy (all incorporating group drug counselling) with group drug counselling alone, found individual drug counselling to be most efficacious (158). Neither CBT nor PDT added

benefit to group drug counselling, and they did not differ from each other in terms of effectiveness. Thirty-eight percent of individual drug counselling patients compared to 18% of PDT patients maintained 3 months of consecutive abstinence. However, individual drug counselling did not reduce psychiatric symptoms, unemployment, or medico-legal, social, alcohol or interpersonal problems to a greater extent than the other treatments (159).

### Comment

It is unclear whether PDT should be recommended to supplement the treatment of opiate-dependent individuals. Individual drug counselling clearly has benefit and, since contingency management has become a preferred treatment for dependency problems (20,40), the role of PDT in the treatment of drug dependence is currently doubtful.

## PSYCHOSIS

A Cochrane review of individual PDT for schizophrenia and severe mental illness, including four randomized trials with 528 participants, found that patients who had received PDT used less medication, were no more or less likely to be rehospitalized, but were less likely to be discharged (160). There was no clear evidence of any positive effect of PDT and adverse effects were not considered. Another meta-analytic review (161), which identified 37 studies with 2,642 patients, incorporated many studies from the 1950s to the 1970s, when treatment pathways and practices were quite different, which makes the pooled estimates impossible to interpret.

In a partial RCT, the Danish National Schizophrenia Project (162), patients with first episode psychosis received one of three treatment packages: one including PDT, the second multi-family treatment, and the third treatment as usual. Only a small subgroup of patients was randomized. When controlled for drug and alcohol use, the 1-year comparison revealed benefit from PDT (162). A further analysis after 2 years contrasted treatment as usual (N=150) with PDT (N=119) (only 72 patients had been randomly allocated). Patients receiving PDT had higher Global Assessment of Functioning scores (medium effect size) (163). Benefits were no longer evident at 5-year follow-up (164).

A pilot study of psychodynamic art therapy vs. treatment as usual with a small sample found a post-treatment reduction in positive psychotic symptoms, which dissipated 6 weeks later (165).

### Comment

There is increasing optimism about the value of psychological therapy for psychosis, although the supporting evidence

is limited even for CBT. The available evidence for PDT suggests some possible immediate benefit from dynamic approaches, but benefits are not sustained in the longer term.

## PERSONALITY DISORDERS

A relatively wide range of dynamic therapies have been evaluated for a number of personality disorders, against both active and inactive control treatments. A number of small trials report intensive, relatively brief (25-40 sessions) PDT to be superior to minimal contact (166), waitlist (167,168) and treatment as usual (169-172). Some studies demonstrated the value of longer-term treatments for specific diagnoses, for example, borderline personality disorder (173,174).

Brief therapies do less well against active controls. In mixed personality disorder populations, manualized PDT was not superior to supportive psychotherapy (175), adaptive psychotherapy (167) or non-manualized community-delivered PDT (176). In a comparison of non-manualized PDT with CBT, the latter was more efficacious over a 20-session treatment and follow-up for avoidant personality disorder (168). In contrast, a trial of manualized PDT versus CBT for cluster C personality disorder patients reported no significant differences and a somewhat more rapid reduction of symptom distress in the PDT group (177). A further comparison between PDT, CBT and brief relational therapy (which focuses on ruptures in the therapeutic alliance) found that the latter two treatments were associated with a higher percentage of clinically significant and reliable change in the treatment of cluster C personality disorder, although the differences were not significant (178).

There have been larger trials with active treatment comparisons focused on borderline personality disorder. Transference-focused psychotherapy was shown to be superior to supportive psychotherapy and dialectical behaviour therapy on some symptom measures (improving irritability, anger and assault and impulsivity) (179) as well as a number of attachment-related measures (180). Similarly, mentalization-based treatment was shown to be superior to structured clinical management of equal intensity (181), particularly for patients with more than two personality disorder diagnoses (182). Mentalization-based treatment was also found to be superior to supportive group therapy, but only in terms of global assessment of functioning, at termination (183) and at 18-month follow-up (184). However, an RCT comparing transference-focused psychotherapy and CBT (schema-focused therapy) found CBT to be more effective, particularly because early dropout rates were higher for the former treatment (185). In this context, it is noteworthy that the introduction of mentalization-based treatment to a specialist unit for borderline personality disorder was historically associated with a substantial reduction of dropouts (from 15% to 2%) (186).

While the inclusion of general psychiatric management in a review of PDT may perhaps be controversial, this

“dynamically informed” intervention, manualized by two psychodynamic practitioners (187), owes much to dynamic techniques and conceptualization of borderline personality disorder. It has been shown to be comparable to dialectical behaviour therapy at termination (188) and 2-year follow-up (189).

### Meta-analyses

There are few meta-analyses specific to PDT for personality disorders, although a number of the meta-analyses focusing on long-term psychotherapy capture many if not all of the relevant studies (190,191).

One meta-analysis of controlled and uncontrolled studies for patients with comorbid depression reported large pre-post effect sizes ( $d=1-1.27$ ) and superiority to waitlist, but no significant differences in efficacy compared to other treatments (63). The most comprehensive meta-analysis reported medium effect sizes compared to inactive controls (31). Active treatment comparisons yield insignificant but negative effect sizes ( $g=-0.15$ , 95% CI:  $-0.3$  to  $0.1$ ) and no significant difference at follow-up.

Breaking down outcomes to symptomatology, global functioning, interpersonal problems, depression and suicidality also revealed no significant differences between PDT and other therapies on any of these dimensions, but medium effect sizes in relation to control treatments. A marginally significant association between the number of sessions and effect size is reported.

However, it would be wrong to argue that complex disorders always require complex and long-term PDT interventions. Patients with chronic mental disorders (average 5-year chronicity), who were frequent utilizers of mental health services, were randomized to treatment as usual or very brief (8-session) PDT (192). Six months post-treatment there were significant benefits in terms of general psychiatric distress, social functioning, quality of life, and resource utilization in terms of outpatient attendance, general practitioner contacts, nurse contacts and medication. The cost of psychotherapy was recouped through reductions in resource use. The study underscores the absence of a simple linear relationship between the length of a dynamic treatment and the severity of psychopathology.

### Comment

The evidence concerning personality disorders is relatively robust in highlighting the superiority of PDT over controls across key clinical variables including suicidality, global and interpersonal functioning, as well as comorbid psychopathology.

The American Psychological Association (Division 12) has designated transference-focused psychotherapy a well-established treatment for borderline personality disorder,

while mentalization-based treatment is deemed probably efficacious. In fact, a number of the comparator treatments considered above also have strong claims to being empirically supported, notably relational psychotherapy for general personality disorder (193), manualized dynamic supportive therapy (194) and brief adaptive psychotherapy (195).

A review of the treatment of personality disorders (196) summarizes the characteristics required for an effective treatment as structured, focused on developing agency, integrative of feelings and actions, active and validating, and incorporating supervision. Most dynamic therapies will incorporate these features. Their relative efficacy is thus hardly surprising.

### DISCUSSION

What can be concluded about the efficacy of PDT? Intriguingly, different reviews of the same literature appear sometimes to reach dramatically different conclusions (190, 191,197-201). There is a clear need for authors to declare interests, since the conclusions of reviews often appear to reflect the authors’ theoretical orientation, just as the outcomes of individual studies appear to be highly correlated with the first author’s affiliation (202). This tendency is regrettable, because the lack of balance and the determination to use statistics primarily for support leads to entrenched traditions and conflicts with the need to innovate through the process of collaboration that is so characteristic of discovery science.

The extension of the evidence-based movement to psychotherapy, which we strongly support, may have reinforced a conservatism by raising the bar for accepting innovative approaches. Could CBT be discovered and disseminated now under the empirically supported therapies paradigm (203)? Complex combinations of techniques have been packaged as empirically supported therapies. Increasingly, developers have prioritized the implementation of packages without regard to the unique value of each component. These treatment packages evolve in relation to what many now consider a less-than-adequate system of diagnostic classification (204-206). Transdiagnostic considerations will ultimately outweigh syndrome-specific treatment recommendations.

Given all this, is it possible to make meaningful recommendations about PDT based on the evidence? The following suggestions seem to be well grounded in data:

- Treatment approaches generated from PDT principles appear to benefit individuals who present with depression, some forms of anxiety, eating disorders and somatic problems.
- Implementations of the same principles in long-term treatments (1 year and longer) appear to benefit individuals with complex disorders where the severity manifests as a combination of syndromal and spectral-level problems (a generally high level of vulnerability to psychopathology) (207,208).

- There is little evidence to suggest that PDT is superior to other therapeutic approaches. Its implementation in most instances will depend on the availability of appropriately trained personnel and their willingness to acquire the specific techniques that have been shown to be efficacious to a level of competence on a par with personnel delivering treatments in RCTs.
- The speed of recovery and cost-effectiveness of interventions is a crucial parameter, since there is little evidence that in the long term major differences exist between therapies in terms of recovery or remission. Any apparent superiority of long-term PDT is attributable to the prolonged contact between patient and therapist.

Looking towards the future, the modularization of interventions and their combination to meet the needs of individual patients is the highest priority. Currently, there are very few systematic, empirically tested protocols for combining treatments in either pharmacotherapy or psychotherapy. Yet, the reality is that most patients receive empirically untested combinations. In the newly established self-report system of the U.K.'s Children and Young People's Improving Access to Psychological Therapies programme (CYP IAPT), the treatment most commonly offered – almost twice as often as anything else – is “other”; that is, not CBT, family therapy, PDT or counselling.

In developing new therapies, researchers have to aim to innovate in the direction of directly addressing the deficits patients with mental disorder present with. The alignment of PDT with such deficits is the most important priority. We may well be concerned that current PDT approaches are too deeply rooted in the technical preferences of developers (supportive vs. expressive, relational vs. ego-oriented, self-psychological vs. conflict-focused, etc.). This is the language of professionals rather than patients. Each approach may have meaningful components in relation to particular individuals, but how is a therapist to know which approach to apply to whom? The evidence certainly does not speak to such a choice.

If the field is to advance, we have to do more than talk about the global effectiveness of a heterogeneous category of approaches, such as PDT, in relation to a heterogeneous group of patients, such as those who experience depression. There have been some attempts to match particular presentations to specific PDT techniques (e.g., work on introjective vs. anaclitic depression) (209-211). However, there is considerably more to be achieved by “playful” experimentation, probably driven by advances in bioscience and computational psychiatry.

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