



Home Office

BUILDING A SAFE, JUST
AND TOLERANT SOCIETY

Review of treatments for severe personality disorder

Fiona Warren
Gill McGauley
Kingsley Norton
Bridget Dolan

Katherine Preedy-Fayers
Alan Pickering
John R Geddes

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The views expressed in this report are those of the authors, not necessarily those of the Home Office (nor do they reflect Government policy).

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Personality Disorder Treatment Review Group

Fiona Warren MA, Research Fellow, Department of General Psychiatry, St. George's Hospital Medical School and Research Psychologist, Henderson Hospital

Katherine Preedy-Fayers, BA, Research Assistant, St. George's Hospital Medical School

Gill McGauley, BSc, MB BS, MRCPsych Consultant and Senior Lecturer in Forensic Psychotherapy, West London Mental Health NHS Trust (Broadmoor Hospital) and Department of Psychiatry St George's Hospital Medical School

Alan Pickering, BA, PhD, Senior Lecturer in Psychology, Dept of Psychology, Goldsmiths College

Dr Kingsley Norton, MA(Cantab) MD FRCPsych Director, Henderson Hospital; Reader in Psychotherapy, St. George's Hospital Medical School

John R Geddes MD FRCPsych, Senior Clinical Research Fellow and Honorary Consultant Psychiatrist, Department of Psychiatry, University of Oxford

Dr Bridget Dolan, Ph.D., C.Psychol, Barrister and Hon.Sen. Lecturer in Forensic Psychology, St. George's Hospital Medical School

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Executive summary

This review was commissioned by the Home Office, Department of Health and Prison Service Dangerous and Severe Personality Disorder Programme. The purpose of the commission was to “review and make recommendations about suitable treatments for severe personality disorder”.

Background

The term Dangerous and Severe Personality Disorder (DSPD) is a working definition to describe the very small group of people with a severe personality disorder who, because of their disorder, also pose a significant risk of serious harm to others. In October 2000, the Government announced its proposals for managing dangerous people with severe personality disorder. A key element of these proposals was a research programme to build a sound evidence base from which to develop DSPD services.

In 1993 the Home Office and Department of Health commissioned a literature review on the treatment of psychopathic and anti-social personality disorders which summarised the relevant literature on treatment up to 1992 (Dolan and Coid, 1993). The review concluded that the evidence for the treatability of anti-social and psychopathic personality disorder was limited to a small number of studies which were themselves limited by poor methodology. This current review brings the literature up to date by examining the evidence base for effective treatments since 1992. The review is intended to provide a central point of reference on treatment intervention for personality disorders. The results will be used to inform the development of DSPD services in high secure facilities.

Methods

A systematic literature review was conducted using guidelines from the Centre for Reviews and Dissemination (Khan, 2001). A systematic literature review is more thorough and rigorous than a standard, narrative literature review. It involves a systematic search of available literature, clear inclusion and exclusion criteria and a critical appraisal of studies included. The results are presented according to the robustness and relevance of the evidence.

Definition of the sample

The terms DSPD and ‘severe personality disorder’ are not clinical or legal terms and are not commonly used in the literature. Therefore, in order not to exclude relevant material, broad search criteria were set for this review of treatment. Personality disorder was a necessary criterion, including psychopathy and sociopathy but not limited to severe personality disorder. However, offending (or dangerousness) was not a necessary criterion. In some cases the severity of personality disorder was inferred from the level of security where the study took place.

Methods for obtaining literature

Studies were obtained from computerised databases and from a survey of over 6,000 professionals in relevant fields.

Criteria for inclusion of studies

The review included literature from 1993 to 2001. However, the review took into account previous reviews of the evidence, such as the previous Home Office review conducted by Dolan and Coid (1993). The review targeted interventions for personality disorder in general and assessed the evidence for particular interventions with respect to dangerous and severely personality disordered offenders by using the outcome measures employed, the setting in which the intervention had taken place and the characteristics of the study participants as proxies for DSPD.

Results

One hundred and seventeen studies of an initial 1,699 were included in the review. The interventions studied were grouped into pharmacological, physical, therapeutic community,

cognitive-behavioural therapy, dialectical behaviour therapy, cognitive-analytical therapy and psychodynamic psychotherapy. Pharmacological treatment and psychodynamic psychotherapy (including both group and individual treatment) were the therapies with the greatest number of outcome studies. However, the majority of these took place within low security settings (inpatient psychiatry, outpatient or other settings). There were only 13 studies of intervention outcome in higher security settings (medium secure units and above) and thus, by extrapolation, with more severe clients. In terms of outcome, few studies considered outcomes that could be related to dangerousness.

Summary of conclusions

A large number of studies have been carried out which suggest that various treatments may have a positive impact among personality disordered offenders on a range of outcome measures. However, weaknesses in the methodology of the majority of these studies mean that the quality of the evidence for the treatment of personality disorders, particularly personality disorders that may be eligible to be termed severe and/or dangerous, that has been generated since 1993 is poor.

The number of studies in high secure settings, where those with severe personality disorder are most likely to be held, is particularly limited and these studies tend to employ a weaker methodology than those conducted in lower levels of security. There were, for example, no randomised-controlled studies in any setting more secure than inpatient psychiatry. Often insufficient detail is provided in the literature to allow reliable interpretation of the results. For example, in many studies only limited information on the diagnoses of the subjects and on the treatments administered is given. Therefore, while this review contains a large amount of material which is suggestive of the potential effectiveness of a range of treatments, reliable evidence of long-term effectiveness is extremely limited.

In terms of specific types of treatment, the following conclusions are drawn:

- The Therapeutic Community (TC) model, in which all members have a significant involvement in decision-making and practicalities of the day-to-day running of the community, currently offers the most promising evidence. It has been shown to be effective in producing long-term symptomatic and behavioural improvements in both personality disordered clients and in offender populations. One study of a TC in a prison setting found moderate evidence for effecting lower recidivism rates up to seven years post treatment. The TC model represents a useful framework within which other treatment interventions can be applied.
- There is some evidence for the effectiveness of cognitive behavioural therapy at lower levels of security, where a number of randomised control trials have been carried out. Until similar studies have been carried out among populations known to be severely personality disordered, these results cannot be assumed to apply to this group. Dialectical behavioural therapy (DBT) is a variation of cognitive behavioural therapy which is aimed at changing the typical behaviour patterns of individuals with borderline personality disorder, such as suicidal tendencies. There is some evidence of the short-term effectiveness of DBT among women, although this comes primarily from outpatient settings.
- Very few studies of psychodynamic psychotherapy have been carried out among populations known to be severely personality disordered. However, psychodynamic day hospital-based programmes with highly structured therapeutic programmes have some promising evidence of effectiveness to treat relatively poorly functioning self-harming borderline patients.
- The evidence for pharmacological intervention is very poor. Although some RCTs have been conducted using drugs, these have generally been characterised by small sample sizes, highly selected participants, high drop-out rates, short duration or lack of long-term follow up. Moreover, pharmacological studies have generally produced only modest treatment effects, often limited to a small subset of the outcomes measures. From this evidence base only limited conclusions can be drawn. The evidence suggests that SSRI antidepressants may ameliorate PD symptomatology and anger and brofaromine, a monoamine oxidase inhibitor, may ameliorate one form of personality disorder (avoidant PD) and symptoms of social anxiety.
- The evidence for the effectiveness of physical treatments is very limited, with only a small number of studies in this area found in the literature. There is some evidence that co-morbidity can be treated in personality disorders by methods such as electro-convulsive therapy but the impact on the underlying personality disorders is not known.

- There is no evidence concerning the relative efficacy of any treatment for people of differing ethnic backgrounds of their participants.
- There is no evidence concerning the relative efficacy of any treatment for women and men as most treatments tend to focus on men or focus exclusively on women.

Summary of recommendations

From this limited evidence base, it is recommended that:

- Treatment based on the therapeutic community approach should be employed within high security settings and that other treatments that target specific aspects relevant to personality disorder should be employed within this overall model.
- Where models have been tested on one sex only, or one cultural group, consideration should be given to adapting them prior to implementing them (for example, the only published evidence for the effectiveness of DBT approaches is derived from studies on women and, indeed, the treatment was specifically developed for women).
- A range of treatments should be available at each level of security to allow individuals to move through levels of security with consistency of treatment approach and the long-term pathway of care should be considered such that service development provides for both geographical and conceptual proximity of treatments delivered at different levels of security.
- Greater priority should be given to research into the treatment of personality disorder, given the paucity of the evidence currently available. The methodological weaknesses encountered in the outcome studies reviewed are set out in a separate section of this review. Efforts should be made to ensure that these weaknesses are avoided in any future research.
- As there is very little evidence concerning the relative efficacy of any particular treatment for men or women or for different cultural groups, particular consideration should be given to these aspects in research and treatment development in this area.

The DSPD programme has a substantial research component and is currently developing an evaluation programme for treatment interventions in order to address the knowledge gaps identified in this review.

1 Introduction

This review was commissioned by the Home Office, Department of Health and Prison Service DSPD Programme. The aim of the review was to update the evidence base on treatments for severe personality disorder, as part of policy development on DSPD. The review was also intended to make recommendations about promising treatments for severe personality disorder, to inform the development of services for this group in high secure facilities.

The terms of reference for the review set out the following requirements:

- The review should cover national and international literature on the existing range of available treatments and should evaluate the effectiveness of treatments in terms of various outcomes, including recidivism.
- The review should incorporate salient information from other reviews (such as *Offenders with Personality Disorder*, 1999, The Royal college of Psychiatrists – Council Report CR71; *Psychopathic and Antisocial Personality Disorders: Treatment and Research Issues*, Dolan and Coid, 1993), thereby providing a central point of reference on treatment intervention for personality disorder.
- The review should take account of the fact that personality disorder is not a homogeneous concept. Treatment approaches will therefore vary according to the needs of those suffering from the condition. The work should also cover a range of intervention approaches including pharmacological and psychological treatments and any other types of intervention.
- The review should try to distinguish between treatments that are proven to be effective for men and particularly for women. In addition, it should highlight treatments that take into account the needs of different cultural groups.
- The setting in which patients are being treated should be identified (i.e. whether this is a prison, hospital or the community).
- The work should be imaginative and attempt to identify or suggest promising treatments and make clear recommendations about the most promising forms of intervention in use or currently in development. In addition, the authors may suggest possible new avenues for treatment intervention, provided that these are based upon clear evidence.

The previous jointly commissioned Home Office and Department of Health review

In 1993 the Home Office and Department of Health commissioned a review of the treatment of psychopathic and anti-social personality disorders (Dolan and Coid 1993). Having considered the literature prior to 1993, Dolan and Coid concluded that the evidence for the treatability of anti-social and psychopathic personality disorder was limited to a small number of studies which themselves were limited by poor methodology, vaguely defined samples, follow up of relatively short periods of time and inadequate measures.

Their view was that there was no convincing evidence that psychopaths and those with anti-social personality disorder could or could not be successfully treated and that the failure of researchers to develop investigative strategies which could prove or disprove the efficacy of a particular treatment modality had been extrapolated to the patients and was often seen as the patients' own failure to be treatable. They felt that the supposed 'untreatability of psychopaths' in part arose from the professionals' inadequate assessment in the first place, followed by an inability to develop, describe, research and adequately demonstrate the efficacy of treatment strategies. They concluded that it could not be said that the psychopath is untreatable until satisfied that all possible treatment interventions had been tried, adequately evaluated and then shown to fail.

Dolan and Coid concluded that in the literature until 1993 studies of Therapeutic Community treatment had shown the most promising results of any treatment modality for psychopathic and anti-social personality disorders in terms of: psychological and behavioural changes during treatment; reduction of violent incidents in treatment settings; significant improvements following treatment in life history variables (recidivism, re-hospitalisation etc.) and psychological states, and in some cases maintenance of these changes at follow-up. However this conclusion was only tentative and they noted particularly the dearth of controlled research studies into TC treatment.

However, that review of the treatment of psychopathic disorder is now eight years out of date. Clearly there is a need for thorough re-evaluation of the current knowledge base in respect of treatment and treatability of those to whom the legislation may apply to inform the current plans for service provision. This current systematic review was commissioned in February 2001, as part of informing the decisions about the development of services for DSPD and as an initial step towards establishing a “what works evidence base”.

2 Results

Principal search: computerised database search

The principal search of computerised databases produced 1,699 references once duplicates had been removed¹. Of these, 1,330 were excluded by reviewing the titles and abstracts of the papers. This left 368 references for which the full paper was to be obtained and assessed by reviewers in a second stage. Of the papers included in the second stage, 120 were excluded on the basis of information from the full paper, leaving 248 to be distributed to reviewers. Of those reviewed, 153 were excluded and 95 included in the review.

The breakdown of papers produced by database is summarised in Appendix 3: Search strategy.

The number of individual papers retrieved and numbers included and excluded are shown in Table 2.2.

Hand searching

Twelve further studies to include were identified by hand searching specific journals. The hand search targeted the five most frequently hit journals from the database search as well as five journals considered to be highly relevant by the project team.

Journals hand searched from 1992:

The following journals produced the most studies in the search:

- American Journal of Psychiatry
- British Journal of Psychiatry
- Journal of Nervous and Mental Disease
- Psychiatric Services
- Journal of Clinical Psychiatry

The following journals were considered highly relevant to the review topic:

- Journal of Personality Disorders
- Criminal Behaviour and Mental Health
- Journal of Forensic Psychiatry
- International Journal of Offender Therapy Comparative Criminology
- Bulletin of the American Academy of Psychiatry and the Law

Hand searching also included some “back-chaining” (searching the reference lists of key papers).

Survey of professionals for “grey” literature

Responders enclosed a total of 162 documents with their responses to the survey questionnaire. Ten of these documents had not been identified by our database search and were included in the review. Two of these ten were unpublished studies.

Final studies included

The computerised database search produced 2,160 papers of which 95 met our inclusion criteria set out in Appendix 1. Our survey produced a further ten studies and hand-searching of relevant journals yielded a further twelve studies for inclusion. In total, then, our search produced 117 studies for full review. Table 2.1 & Table 2.2 show the sources of studies.

¹ Duplicates were removed during the search, using the databases’ “deduping” function. We, therefore, do not know the per cent overlap of the databases with respect to this search strategy. However, a further 462 duplicates were removed manually.

Table 2.1 Search results by database²

	All Personality Disorder terms	Outcome terms	Treatment terms	Combined terms (with age/ year limits where possible)
Embase	20,257	19,472	128,650	647
Medline	17,014	107,258	2,862,055	265
AMED	239	6,629	67,834	10
Cinahl	685	18,782	223,482	32
Cochrane	1,581	-	13,709	438
ASSIA	835	2,710	24,740	17
HMIC	18	-	-	6
HTA	16	-	-	9
SIGLE	34	11	-	33
COPAC	-	-	-	128
SCI/ SSCI	-	-	-	293
PsychINFO	14,851	280,526	30,361	282
Total	55,462	435,377	3,350,831	2,160

Table 2.2 Source of studies identified, excluded and included

	Hand searching	Grey	Computer databases	Total
Identified	82	162	1,699	1,943
Excluded	70	152	1,604	1,826
Included	12	10	95	117

Studies identified by treatment type

Overall 25 studies of CBT and behavioural therapies were found, eight studies of DBT and five of CAT, 32 studies of pharmacological treatment, 35 studies of psychodynamic psychotherapy, ten studies of TCs and two of physical approaches to treatment.

Patient groups studied by treatment type

Seventeen of the studies found were of treatments with Anti-social Personality Disorder (10) or Psychopathic Disorder (7). Fifty-eight studies were of Borderline Personality Disorder.

Treatment outcome by setting

Given the lack of a definition of “severe personality disorder”, setting may be used as a proxy for the extent of an individual’s difficulties, with the more distressed and difficult individuals being found in the more secure environments. Fewer studies of treatment outcome in prisons were found than in hospital settings. It was also generally true that the research studies conducted in higher security settings was of poorer quality than in other settings.

The only prison-based treatment the search identified which described its study participants as personality disordered was HMP Grendon. Four studies conducted at HMP Grendon were identified. Three of these considered the Therapeutic Community treatment and the fourth assessed the progress of an inmate in Art therapy. There were no reported studies of DBT, CAT, CBT, dynamic psychotherapy (with the exception of the art therapy study), drug or physical treatments for personality disorder in prison settings.

² Because of the design of some databases, totals for subgroups of terms such as “all personality disorder terms” could not be first created and then combined with other terms. A full breakdown of the search strategy for each database can be found in Appendix 3: Search strategy.

In high secure psychiatric hospital settings eight studies were found: two studies of pharmacological treatment, both case series; four studies of CBT approaches, three of these were pre- and post- design studies, one case series; one pre- and post- study of DBT; one psychodynamic psychotherapy study. There were no studies of therapeutic community treatment or CAT in high secure psychiatry and no studies of physical treatments.

Very little outcome research in medium security was found. The two reports were a sole case series study of CAT and one study of psychoanalytic psychotherapy.

Twenty-six studies identified which were conducted in inpatient settings: three CBT, including two randomised controlled trials; three DBT, one of which was an RCT; six studies of psychodynamic psychotherapy; and six studies of TCs.

Of the 66 studies conducted in outpatient settings psychodynamic psychotherapy and drugs were the most frequently studied. In five of the 20 studies of psychodynamic psychotherapy participants were randomised. In studies of pharmacological treatment six incorporated randomisation. The other studies primarily comprised of CBT treatments (of which twelve were RCTs).

Some studies were classified as occurring in other settings – these comprised, primarily, treatments conducted in more than one setting, usually in both inpatient and outpatient settings. Twelve studies were found in this category. The majority of these were psychopharmacological treatments.

Table 2.3: Post-1992 Studies of Outcome of PD: treatment setting and type

	TC	CBT	DBT	CAT	Psy ³	Drug	Phys ⁴	Total
Prison	3	-	-	-	1	-	-	4
High secure hospital	-	4	1	-	1	2	-	8
Medium secure hospital	-	-	-	1	1	-	-	2
Inpatient	6	4	2	-	6	7	1	26
Out/day patient	1	17	4	3	20	20	1	66
Other (mixed)	-	-	1	1	3	6	-	11
Total	10	25	8	5	32	35	2	117

Table 2.4: Post-1992 studies of outcome of PD: treatment setting by study design⁵

	1	2	3a	3b	4a	4b	4c	Total
Prison	-	-	2	-	1	-	1	4
High secure	-	-	-	-	-	4	4	8
Medium Secure	-	-	-	-	-	-	2	2
In patient	5	1	-	-	-	13	7	26
Out/Day patient	25	-	3	-	2	24	12	66
Other (mixed)	6	-	1	-	-	2	2	11
Total	36	1	6	0	3	43	28	117

³ Psychodynamic psychotherapy.

⁴ Physical treatment.

⁵ 1 Experimental studies (e.g. RCT with concealed allocation); 2 Quasi-experimental studies (e.g. experimental study without randomisation); 3 Controlled observational studies: 3a Cohort studies; 3b. Case control studies; 4 Observational studies without control groups: 4a Cohort Study; 4b Before and after study; 4c Case Series.

Table 2.5: Post-1992 studies of outcome of PD: treatment type by study design

	1	2	3a	3b	4a	4b	4c	Total
TC	-	2	2	-	2	4	-	10
CBT	12	-	-	-	-	10	3	25
CAT	-	-	-	-	-	1	4	5
DBT	4	-	-	-	-	2	2	8
Psychodynamic	6	-	3	-	1	14	8	32
Drug	13	-	1	-	-	11	10	35
Physical	-	-	-	-	-	1	1	2
Total	35	2	6	0	3	43	28	117

Outcomes by treatment type

A variety of outcome variables were measured in the studies reviewed. Thirty studies did measure DSM personality disorder (or variants, such as Borderline Personality Organisation, or Object relations) at outcome. Four studies evaluated treatment in terms of reoffending or recidivism. The majority of studies assessed self-harming behaviours or Axis-I symptoms. Few assessed syndromes of either Axis-I or II. The outcomes evaluated for each setting and treatment type are shown in Table 2.6 and Table 2.7.

Table 2.6: Post 1992 studies of outcome of PD: main outcome variable by treatment setting

	Prison	High security	Medium security	Inpatient	Outpatient	Other	Total
Recidivism	3	1	1	1	-	-	5
PD	-	-	-	4	24	2	30
Self-harm	-	2	1	6	16	4	29
Violence	-	1	1	1	2	-	5
Anger/impulsivity	-	5	1	5	19	2	32
Social function	-	2	-	1	18	3	24
Depression	-	2	-	6	24	7	39
Other Axis-I	-	5	1	14	47	8	75
Global functioning	-	3	-	5	22	3	33
Alcohol use	-	1	-	3	11	2	17
Service Use	1	2	-	5	11	4	23

Table 2.7: Post 1992 studies of outcome of PD: outcome variable by treatment type

	TC	CBT	DBT	CAT	Psyed	Drug	Phys	Total
Recidivism	4	-	-	-	1	-	-	5
PD	2	5	-	2	12	9	-	30
Self-harm	-	3	5	1	6	13	1	29
Violence	-	1	-	-	3	1	-	5
Anger/impulsivity	2	4	5	-	6	15	-	32
Social function	1	10	4	1	8	-	-	24
Depression	-	9	3	1	8	17	1	39
Other Axis-I	4	14	7	5	22	23	-	75
Global functioning	1	5	2	1	14	10	-	33
Alcohol use	1	6	1	-	4	5	-	17
Service use	2	1	4	1	11	4	-	23

The literature has previously been criticised (for example, in the previously commissioned Home Office review, by Dolan and Coid) for failing to follow participants up after treatment is ended. Only just over half of the studies in this review incorporated follow-up after the end of treatment. Table 2.8 shows the number of studies found for each kind of treatment by follow-up point.

Table 2.8 Treatment type by outcome point (pre or post-treatment)

	Follow-up after treatment	Follow-up during treatment	Total
TC	9	1	10
CBT	22	3	25
DBT	7	1	8
CAT	3	2	5
Psychodynamic psychotherapy	22	10	32
Pharmacology	3	32	35
Physical	2	-	2

3 Substantive findings

The following sections review the findings in respect of each type of treatment in detail. The sections review each study critically.

Where there are further logical subdivisions within a type of treatment that section is further subdivided (e.g. drug classes within the pharmacology section). The studies retrieved in these sections are organised hierarchically by setting (beginning with studies of treatment in high secure settings), and then by study type, with the best quality of evidence first. Each of these treatment sections also concludes with a summary. At the end of each section a table summarises the details of the methods and results of each of the studies described in the section.

Therapeutic community treatment

Introduction

Therapeutic communities (TCs) have been established to treat 'psychopathic' or personality disordered patients and offenders in NHS hospitals, secure hospitals and prisons in Britain and abroad. Many descriptive accounts of TC treatment in a variety of settings exist. Indeed Dolan and Coid (1993) concluded "there seems to be more writings on TC models for treating psychopaths than on any other treatment modality".

TCs are designed as (usually small) cohesive communities all of whose members (staff and patients) have a significant involvement in decision-making and practicalities of the day-to-day running of the community. They originated in the UK during World War II in psychiatric hospitals and represented a move away from an authoritarian doctor-patient model of treatment to a more democratic style (Jones, 1952). It is their culture, rather than organisational structure, which is distinctive. For example, the hierarchy between staff and patients is flattened in a therapeutic community. In this way, some decision-making is delegated to the patients themselves and operates within a "culture of enquiry" - an openness to questioning so that understanding is owned by all, not solely the professionals (Main, 1983). All members are seen as bringing strengths and creative energy into the TC and the peer group is viewed as central in establishing a strong therapeutic alliance. Notwithstanding, staff in modern therapeutic communities, are also aware of the need for strong leadership in the staff and their own responsibility to provide a safe therapeutic "frame" (Lees & Kennard, 1999).

A TC can be defined as the creation of an environment in which complex interpersonal and community processes become central therapeutic factors and are subject to detailed analysis, as well as being considered as a primary medium of treatment (Schimmel, 1997). TCs are thus "distinctive amongst other comparable treatment centres in the way the institution's total resources, both staff and patients, are self-consciously pooled to further treatment" (Jones 1952). The therapeutic community has been characterised by: "communalism in sharing tasks, responsibilities and rewards; permissiveness to act in accord with one's feelings without accustomed social inhibitions; democratic decision-making; reality confrontation of the subject with what they are doing in the here-and-now (Rapoport, 1960; Whiteley, 1975). The well-functioning TC is engaged in social analysis and has been summarised as a "culture of enquiry" (Main 1983; Norton, 1992a).

Whilst early therapeutic communities were residential, more recently day-therapeutic communities have been developed. The day therapeutic community can be seen as a modified therapeutic community, (Piper, 1996). These authors define such a TC to include its: physical structure, social structure, culture and psychodynamic group therapy in large psychotherapy/community meetings. They suggest that there are three basic principles central to effective day treatment – (1) the judicious use of authority; (2) optimal patient-treatment matching; (3) careful attention to referral sources. They also identify six principles of effective therapy in this context, it:

- encourages patients to be responsible

- engenders mutual respect between staff members and patients
- facilitates patients' participation in the treatment of their peers
- fosters collaboration with higher systems
- avoids abdication of authority, on the one hand, and abuse of power on the other, i.e. it involves the judicious use of authority
- uses multiple groups and multiple levels throughout the system, contributing significantly to a culture of enquiry.

Other TCs exist, which differ in a number of ways. Some institutions call themselves therapeutic communities but include operating within a strongly hierarchical model the so-called TC 'concept' model (Kennard, 1998) versus the therapeutic community "proper" (Clarke, 1965) such as Henderson Hospital. The reader must, therefore, have in mind the notion that (1) what constitutes a TC is not necessarily clear; (2) there are several types of TC; (3) what may be described as a TC might not be rated as such by others (and occasionally vice-versa); (4) there may be degrees of TC (e.g. 'milieu,' 'TC approach'); (5) the TC might be usefully thought of as representing a treatment modality (i.e. integrating a range of psychological and/or pharmacological approaches within itself) as much as a specific treatment method itself (Kennard 1998).

Therapeutic communities: the evidence before 1992.

Dolan and Coid (1993) noted, 'in common with other treatment options for psychopathic disorder, controlled research studies are rare'. The studies they reviewed had covered 'an extensive and heterogeneous range of settings and patient groups', making direct comparison between TCs and the generalisation of findings from one setting to another problematic. Most of the studies were uncontrolled and not all treated samples were identified reliably as containing only personality disordered individuals. Some studies included adolescents or learning-disabled participants who are not relevant to the current review. The most robust studies reviewed by Dolan and Coid (1993) involved some comparison or control groups (Copas, O'Brien, Roberts, *et al.*, 1984; Vaglum *et al.*, 1980; Mehlum, Friis, Irion, *et al.*, 1991). The authors reviewed others that have relevance for the current context since they involved secure settings and had assessed participants for personality disorder (Cooke, 1989; Ogloff, Wong & Greenwood, 1990; Harris *et al.*, 1989; Rice, Harris & Cormier, 1992). The last two studies, however, relate to an institution that does not fit the generally accepted criteria for a TC because its programme was strongly hierarchical and incorporated treatment interventions such as "nude marathon therapy" (Warren, 1995).

From the studies reviewed by Dolan and Coid little could be definitively concluded, owing to the lack of scientific rigour of reviewed studies. However, behavioural and psychological changes in many "severely" personality-disordered individuals, during treatment and/or at follow-up, shown by the research into therapeutic communities, in particular, suggested that the then prevailing therapeutic pessimism for this group of patients or inmates was not entirely justified. Indeed, the Reed Report (Home Office/ Department of Health, 1994) having commissioned the review undertaken by Dolan and Coid, commented that, "studies of TC treatment have shown the most promising results of any form of treatment for psychopathy in terms of psychological and behavioural changes during treatment, reduction of violent incidents in treatment settings, significant improvements following treatment and, sometimes, in the maintenance of these changes following treatment" (page 16, para 6.8).

Meta-analysis of therapeutic community treatment RCTs

The most recent outcome research of TCs is featured in a systematic literature review of international research on the effectiveness of therapeutic communities in treating people with personality disorders and mentally disordered offenders in secure and non-secure psychiatric and other settings (Lees, Manning *et al.*, 1999) (This report is also published by the NHS Centre for Reviews and Dissemination at the University of York – "TC effectiveness: a systematic literature review of TC treatment for people with personality disorders and mentally disordered offenders").

The above review related to both democratic TCs and also concept-based TCs (hierarchical organisations primarily for substance abusers in secure settings). It concentrated on post-treatment outcome findings. It identified 8,160 articles and other literature. However, only 294

studies broadly covered the focus of the review. With respect to post-treatment outcome findings there were ten randomised control trials, ten cross-institutional, cross-treatment or comparative studies and a further 32 studies using some kind of control or comparison group. The last was taken as the minimum level of rigour accepted for the study. Therefore, 52 studies of acceptable standard were included for discussion within their review. Of these 52, 41 related to democratic therapeutic communities and 11 to concept-based TCs.

Many of the findings were presented in narrative form but the authors conducted a systematic meta-analysis of some of the studies, using odds ratios. For methodological reasons, the authors were only able to meta-analyse 29 studies in total. These had been conducted between 1960 and 1998 and included eight of the identified randomised control trials. Where there was a choice of outcome measures and control groups, emphasis was placed on conservative criteria, such as reconviction rates rather than psychological improvements, and on non-treated controls. This odds-ratio summary showed that 19 of the 29 studies exhibited a positive effect, with a 95% level of confidence. It is important to note that this meta-analysis included the Canadian study referred to above (Rice *et al.*, 1992) which is of a regime not recognisably a TC (according to most authorities' definitions of a TC) and the findings of which are essentially negative. The overall positive findings of this systematic review obtained in spite of the inclusion of this study.

A fixed effects meta-analysis was performed on the results of the 29 studies (eight RCTs including 2,737 participants) from which it was possible to abstract the data of treatment success or failure (variously defined). The pooled odds ratio was 0.57 (95% confidence intervals 0.52 to 0.61) and the pooled estimate from the randomised trials alone was 0.46 (95% confidence interval of 0.39 to 0.55). None of the randomised trials in the meta-analysis were conducted on personality-disordered offenders – participants were young offenders (two trials), psychiatric inpatients (one trial), “male delinquents” on probation referred for psychiatric assessment (one trial), drug-involved offenders (four trials).

Despite the reasonably large number of participants in these studies and the reasonably precise results, there are considerable difficulties in interpreting the results of this review because of the heterogeneous nature of the participants, the control conditions and the outcome measures. There appears to be considerable heterogeneity between the results of the individual trials but this was not formally assessed, nor does it appear to have been explored by the review authors.

In general, the studies included in this review found therapeutic communities to be beneficial although the specific effects in specific patient groups remain unclear. In fact, this review covered both areas likely to be incorporated in the definition of DSPD (offending and personality disorder) but did not require studies to have assessed both. They do not therefore allow confident conclusions that could directly inform policy in patients with DSPD.

The authors of the systematic review concluded that future research on the effectiveness of TCs for personality disorders should include further randomised control trials but should also include more complex, cross-institutional studies “in the field”, together with further cost-offset studies to complement those already in existence.

Evidence since 1992

High secure

HMP Grendon is a category B prison that has been in operation for more than 40 years. It runs as a series of therapeutic communities for the treatment of offenders based on democratic TC lines as developed by Maxwell Jones (Jones 1952; Shine, 2000). Only male inmates are treated. Typically the inmates have been convicted of serious offences (often violent and/or sexual as opposed to property offences) and are serving a prison sentence of at least four years. The PCL-R scores for Grendon show a mean of 24, which is slightly above the mean score for the dispersal prison population (Shine and Newton, 2000). Twenty-six percent score above the threshold for psychopathy of 30 according to the PCL-R (Hobson & Shine, 1998). A very detailed description of

the therapy at Grendon, the overall service and its situation within the Prison Service is provided in an "Accreditation Document", *Regulating Anarchy: the Grendon Programme* (Shine & Morris).⁶

Taylor (Taylor, 2000) conducted a continuation of a four-year follow-up study by Marshall (Marshall, 1997). This paper gave details of a seven-year follow up of a group of inmates of Grendon compared with a waiting list group and also a group from the general prison population. These studies follow over 700 patients admitted to Grendon between 1984 and 1989, 142 on a waiting list but never admitted to Grendon, and around 1,400 prisoners from a general prison population. Marshall found that those in the admitted group were significantly less likely to re-offend than the waiting list group ($p < 0.1$). However, the significance of the result was slightly reduced once the difference in criminal histories between the groups had been accounted for. The author also suggests that transfer back to a general prison population from Grendon could lead to higher re-conviction rates. Another finding was that Grendon might have a specific impact on sexual or violent offenders, particularly repeat sexual offenders or older violent offenders. Whilst Taylor generally found these effects to be replicated after seven years, the rates of reoffending were insignificant at the ten per cent level. Rates of reconviction for specifically violent offences did show a significant difference at the ten per cent level after seven years by length of stay. However the author notes the small numbers in these groups. People who had convictions on two or more occasions were more likely to reoffend in the waiting list group than people admitted to Grendon with a similar history. The authors conclude that Grendon appears to select people who have a high risk of reoffending, possibly due to their personality disorders, but they did find some treatment effect, particularly for those who stayed for at least 18 months, life sentence prisoners and repeat sexual offenders. It should be noted that for those who stayed for under a year there was no treatment effect.

Newton (Newton, 2000a) conducted further analysis of the same groups and notes that the reconviction rates are reflected in age of the prisoners with young prisoners treated at Grendon not showing the same treatment effect (difference in reconviction rates) as the older prisoners. This was not accounted for by a difference in length of stay. They were, however, unable to account for these differences except through speculation. Newton (Newton, 2000c) explored the characteristics of the group who had been admitted to Grendon, using the results of earlier psychometric measures taken, and found that those who were reconvicted tended to have had significantly higher scores on the EPQ and HDHQ than those who were not reconvicted.

Newton (Newton, 1998) tested 94 men on reception at Grendon for EPQ and HDHQ and found that mean scores on discharge were significantly closer to normal than the baseline scores had been, but again reflect that the change was greatest for those men who stayed for over a year, with the exception of the psychoticism scale.

Interestingly, ethnic minority prisoners admitted to Grendon are just as likely as white prisoners to progress on to one of the TCs after assessment and are no more likely to drop out of treatment (Newton, 2000). However, recent figures reveal that the main ethnic minority groups are under represented in Grendon by approximately one third (Newton, 2000).

A qualitative approach to exploring therapeutic achievements has been described (Genders & Player, 1995). These researchers, following an extensive period of evaluation, identified a "therapeutic career model", which had five stages - (1) recognition - definition of problems; (2) motivation - expression of desire to change; (3) understanding - recognition of inter-connected and related aspects of life; (4) insight - identification of solution to problem; and (5) testing - putting into practice new ways of coping. They thus identified therapy as constituting a graduated process whereby specific and related stages of development were achieved within certain periods of time. Usefully they discuss the complex issue of how to identify a "Grendon success". Theirs is an extremely interesting application of qualitative methodology to an institution and its members but did not include an outcome study.

Other outcome research at Grendon, based on Yalom's therapeutic factors, has indicated that measures thought by inmates to be particularly therapeutic included catharsis and the

⁶ This is a working document with aspects being reviewed and re-drafted. It was issued, in part, to stimulate discussion about the validation and accreditation of psychological therapies more generally. In the document there is a conceptualisation of the different demands that external agencies have on this prison TC.

development of socialising techniques. Imitative behaviour, recapitulation for family group, relationship to staff and authority, information guidance and quality of life in the TC were rated relatively low (MacKenzie, 1999).

Sex offenders in Grendon have been subject to separate study (Thornton, Mann, Bowers, *et al.*, 1996). Results show that men who spent longer in the TC showed more appropriate attitudes to women and children. Those inmates receiving a dedicated sex offender TC approach which ran a cognitive-behavioural programme, had made significantly more progress with minimisation, relapse prevention skills and rape myths than had sex offenders in Grendon TCs who were not part of the dedicated sex offender TC. Sex offenders admitted to Grendon with at least two previous sexual convictions showed a significantly lower reconviction rate than waiting list control groups of prisoners who had also had at least two previous convictions for sexual offences. There was no significant difference for men with one or no previous convictions (Thornton *et al.*, 1996).

Inpatient

Open residential TCs

Therapeutic communities such as Henderson and Cassel Hospitals are residential treatments in which participation is voluntary. We refer to them here as “open residential TCs”. Although both “open residential TCs”, there are some differences between the hospitals in the criteria set for eligibility for treatment and reported in these studies.

Dolan, Warren & Norton, (1997) studied 137 consecutive patients referred to Henderson Hospital for treatment of severe personality disorder. This study added to the existing outcome studies on Henderson Hospital, which deploys a democratic TC approach based on the model developed at Belmont Hospital (later itself becoming Henderson Hospital) by Maxwell Jones (Jones, 1952) (see Dolan and Coid, 1993; Warren and Dolan, 2001). Therapy is carried out via a highly-structured daily programme of group meetings and through participation in sociotherapy. Responsibility for much of the day-to-day running of the community is shared among patients and staff. This collaborative and democratic style, whereby the community itself is invested with an important decision-making function, forms a cornerstone of therapy. This TC’s programme of treatment and operation has been described in detail over a number of years (Norton, 1992a; Rapoport, 1960; Whiteley, 1986). In recent years it has developed a ‘before’ and ‘after’ Outreach service, which to date has not been fully evaluated. In addition, the recommendations of the Reed Committee (Reed, 1994) that more units like Henderson Hospital should be developed have, at least in part, been satisfied more recently. Two further hospitals, based on the Henderson democratic therapeutic community model, Main House in Birmingham, and Webb House in Crewe, were opened in 2000. These have not yet been evaluated although the service development, which was a unique initiative from the Department of Health, is currently being evaluated.

Dolan, Warren, Menzies, *et al.*, (1996) follow 29 patients through for one year after treatment at Henderson hospital and compare the cost to health services for the year post, pre and during treatment at Henderson Hospital. The study did not exclude those who terminated treatment early and the average length of stay of these patients (of whom 24 had were traceable on follow-up) was 231 days. The cost offset found was £12, 658 between pre and post treatment year. The costs of providing treatment should, therefore, be recouped in two years by these savings. The authors also note that it is probable that the year prior to treatment was an exceptional year in terms of service usage. It should also be noted that there were some small discrepancies between ex-patients reports of service usage post treatment and their healthcare providers’ reports (usually the ex-patient acknowledging some private care). It is also possible that the five untraceable patients may have had an increased service usage over those who were traced. This however remains speculation and with increasing emphasis on the cost-effectiveness of treatments this study demonstrates a positive treatment effect at the very least in fiscal terms.

Dolan, Evans & Wilson (1992) administer the SCL-R-90 to patients on assessment for treatment at Henderson Hospital and at six months post discharge. An initial cohort of 95 participants was reduced to 62 (33 females) who responded at follow-up. The treatment duration ranged from 4-57 weeks with an average of 28 weeks. The SCL-R-90 was completed an average of 8.2 months after discharge. Statistical analysis took into account the reliability and the clinical significance (by

comparison with a reference normal population) of changes using the formula derived by Jacobson and Truax (1991). The authors found that 55 per cent of those who responded had reliably improved whilst 32 per cent showed a clinically significant improvement. This supports the evidence of the 1996 papers and suggests that the improvement found in service usage stems from a genuine improvement in symptomatology rather than some other factor.

Chiesa & Fonagy (2000) evaluated the effectiveness of hospital-based treatment of personality disorder, comparing two models of psycho-social intervention. Although not using the term therapeutic community, Cassel Hospital, where the treatment took place, is renowned as one of the pioneering sites for this approach and the study did not isolate a particular aspect of the treatment and so can be taken as a study of the therapeutic community. The study design was prospective and compared a one-stage treatment model (in-patient treatment with no after-care) (n=44) with a two-stage model (shorter in-patient admission followed by outreach therapy) (n=46). The inclusion and exclusion criteria for this study coincided with the criteria for receipt of treatment at the Cassel hospital. Those with previous criminal convictions, previous diagnoses of schizophrenia or a continuous stay in a psychiatric facility for more than two years are ineligible for treatment. These criteria differ from those applied by Henderson Hospital. Fifty per cent of the participants remained in treatment and the study. Allocation of clients to each model was not random but based on geographical position of the client's home address. Outcome was assessed using SCL-90, SAS and GAS. Group differences were marginal for the SCL-90 GSI score but both SAS and GAS were more improved in the group who had received the two-stage model of treatment. The authors suggest that a long-term phase model that combines hospital-based and community-based strategies has advantages over a purely inpatient model for the treatment of borderline personality disorder. The latter is well described in the TC literature (e.g. Main, 1983). This is another study that supports the usefulness of a carefully planned follow-up treatment and shows an associated success rate.

Day hospitals and partial hospitalisation TC⁷

Krawitz (1997) describes the evaluation of "a day and semi-residential psychotherapy setting", which is informed by "therapeutic community principles". It is probably more accurately described as a TC 'approach' rather than a TC 'proper' (Clarke, 1965).

This appeared to be a well-organised and integrated treatment programme, involving a number of ingredients and incorporating a range of treatment philosophies. The quality of the therapist-patient relationship is viewed psychodynamically and seen as fundamental and crucial. It should be noted that, although there was an emphasis on feminism and gender role analysis formed an integral part of therapy, including allocation of power, rewards, labour and available roles, it was not stated what proportion of their sample were women. There was, however, recognition of ethnicity as being important. Overall the programme was described in rich detail, given the context of the paper. This study did not include a comparison group but used a pre-post design. At 24 months post treatment, the SCL-90 and GAS scores showed improvements on baseline ratings. Ninety-three per cent of the participants were included in the follow-up.

Hafner & Holme (1996) evaluated the influence of TC treatment on psychiatric disorder. The programme incorporates the well-established TC principles of: democratisation; permissiveness; reality confrontation; and communalism. The use of alcohol or psychotropic drugs is not permitted within the TC. The maximum stay is six months and residents must maintain their own outside accommodation, where they are expected to spend weekends when the community is closed. Group therapy, based on 'Yalom', is seen as a crucial ingredient. At three-month follow-up of 48 patients (23 female), scores on Brief Symptom Inventory and HDHQ were significantly reduced.

Substance abusers diagnosed with anti-social personality disorder, it was concluded, could benefit from treatment in a TC combined with outpatient care (Messina, Wish & Nemes, 1999). The outcomes were reduced substance abuse and improvements on the IAP. This study highlights the potential benefit conferred by attention to follow-up treatment of those with anti-social personality disorder.

⁷ Psychoanalytically oriented day and partial-hospitalisation studies are reviewed in the section on psychodynamic psychotherapy.

Koistinen, Ruonala, Kiminki, *et al.*, (1992) studied outcome in terms of rehospitalisation. This was assessed for all patients attending a Finnish day hospital. The authors conclude that the day hospital programme can be useful for a variety of patients, including those with personality disorders but that it does not stop rehospitalisation. In fact, service usage subsequent to treatment may itself represent a successful outcome, since it can be an appropriate use, rather than misuse, of such resources, which prior to treatment may not have been the case.

Some studies included TCs but were primarily aimed at assessing a psychodynamic treatment. These are reviewed in the section on psychodynamic psychotherapy.

Highlighting findings for women

A number of studies, particularly those in secure settings, contained only male participants. This should not be taken, however, to imply that TCs are an inappropriate treatment for women. In the studies of mixed gender samples, no gender differences in outcome were reported. Neither, though were they explicitly explored. The relative efficacy of TCs for women and men cannot be established from the current evidence.

Highlighting findings for minority ethnic groups

Ethnicity appears to be a relatively neglected area. However, HMP Grendon findings suggest that once referred, non-white male inmates are no less likely to progress to the TC treatment phase and no less likely to remain in treatment. The day hospital TC programme described by Krawitz (1997) (reviewed also in the section on psychodynamic psychotherapy) was designed to be sensitive to ethnic issues associated with being Maori. Ideally, the TC method is well-placed to examine ethnicity as part of its ongoing self-reflective practice (Dolan, Polley, Allen, *et al.*, 1991).

Summary

There are still few methodologically robust studies in the outcome of TC treatment. The meta-analysis of TCs, although including personality disordered and mentally disordered offenders, was not confined to studies that fitted strictly within the brief of this treatment review. There were no randomised controlled trials of therapeutic community treatment identified by this review. There are methodological hurdles to be overcome with applying the randomised control trial method to therapeutic communities. The long time-scale of TC outcome research, and its associated high use of research resources, though not an excuse for weak experimental methodology, must be borne in mind when evaluating the relevant literature.

There are problems with defining a therapeutic community, making it difficult to know whether all relevant material is captured for a review of this kind. There is a need for a level of description that provides adequate detail to allow comparison of studies and, of course, replication of the TC.

However, the therapeutic community has been evaluated with offence related outcomes as well as with outcomes relevant to personality disorder pathology. The evidence for the TC approach has also been meta-analysed, the highest form of evidence in the EBM hierarchy.

It would seem from the literature that a TC modality (as argued by Kennard) could represent a safe vehicle with which to experiment with different treatment methods and combinations, for example HMP Grendon's identification of a sex-offender specific treatment within its general therapeutic community (Thornton *et al.*, 1996).

Within the non-offending personality disordered population, there is suggestive evidence that a combination of inpatient treatment with follow-up treatment after discharge may produce greater improvements in Borderline clients than inpatient treatment alone (even if this lasts as long as the combined approach). Within the prison literature, there is a suggestion that those who are discharged directly from the therapeutic community fare better, in terms of reconviction, than those who spend time back in a non-therapeutic prison before release. The time immediately post-discharge from a TC would seem to be an important factor in treatment effectiveness.

Table 3.1 Summary table of therapeutic community treatment

Setting/last follow-up point	Author (date)	Study type	Sample: diagnosis, N, gender	Controls: diagnosis, N, gender	Treatment	Attrition	Outcome measures/ results
Prison post treatment	Marshall (1997)	3a	Approx 700 male prisoners admitted to Grendon. Male	142 waiting list controls, 1,800 general prison population controls. Male	Grendon TC. Length of stay varies from <1yr to >18m	Excluded lifers. No other attrition rates given.	4 year follow-up - reconviction. Trend towards lower reconviction in treated group but not significant. Longer spent at Grendon = lower re-conviction rates. 18mth stay = 1/5-1/4 less reconviction. Some treatment effect for sexual and violent offences (trend, not significant)
Prison post treatment	Taylor (2000)	3a	Same as Marshall (1997)	Same as Marshall (1997)	Same as Marshall (1997)	Some lifers excluded (from 104 to 44 at 7yr point)	Seven year follow-up Replicates Marshall (1997) Higher reconviction in waiting list group but not sig. Treatment effect for over 18m stay, lifers and repeat sexual offenders.
Prison during treatment	Thornton (1996)	4	n=42-52, sex offenders resident in Grendon at the time of the survey. Male	None - within group comparison - regression against length of stay and treatment received.	Grendon TC.	10%	Those with a longer stay better scores on attitudes towards women and children (but not rape myths or sexual entitlement). Those on the specialised sex offender wing scored better on minimisation, relapse prevention skills (not victim empathy)

Setting/last follow-up point	Author (date)	Study type	Sample: diagnosis, N, gender	Controls: diagnosis, N, gender	Treatment	Attrition	Outcome measures/ results
Prison during treatment	Thornton (1996)	3b	n=156, sex offenders admitted to Grendon. Male	n= 38 men on waiting list for Grendon but released before admitted.	Grendon TC.	?	Reconviction of sexual offences. The effect of treatment on reconviction is dependent on previous convictions rather than treatment received (fewer of those with 2 or more previous convictions who went to Grendon were reconvicted than those who remained on the waiting list. Whilst fewer of those with less than 2 prev. cons who remained on the waiting list were reconvicted than those who went to Grendon). N.B v. small sample sizes
Prison during Treatment	Newton (1998)	4b	n=94 residents of Grendon. Male	none	Grendon TC	46% lost to retest	Posttest at discharge from the TC. Improvement in scores on ENP and Criminality scales of the EPQ. Also improvements in Total, intropunitive and extrapunitive hostility on HDHQ and in locus of control. 31% showed reliable, clinically significant change on N of EPQ.
High secure post/ during treatment	None						
Medium secure post / during treatment	None						
Inpatient post treatment	Dolan <i>et al.</i> (1992)	4b	95 patients admitted	None	Therapeutic Community Average stay 28w (4-57w) Henderson Hospital	65% completed (33f)	Follow up at average of 8.2m post discharge. 55% improved reliably on SCI-90-R 32% showed clinically significant improvement
Inpatient post Treatment	Dolan <i>et al.</i> (1996)	4b	29	None	TC Average stay 231 days Henderson Hospital	Five patients were untraceable	Follow-up until 1y post treatment. Measured service usage pre and post treatment. Found £12, 658 cost offset

Setting/last follow-up point	Author (date)	Study type	Sample: diagnosis, N, gender	Controls: diagnosis, N, gender	Treatment	Attrition	Outcome measures/ results
Inpatient post treatment	Dolan <i>et al.</i> (1997)	4b	70 SPD M/f not stated PDQ4	67 not admitted patients, no difference between groups in PDQ4 measures	TC mean 7m for admitted group Henderson Hospital	598 completed referrals, of which 137 completed forms at baseline and 1yr follow-up	One year follow up 61% of admitted group had improved reliably vs 36% of non-admitted group. BSI positively correlated with length of stay.
Inpatient post treatment	Hafner & Holme (1996)	4a & b	48	None	TC in Australia. Mean stay – 64 days, max. – 6 months	48/59 at discharge, 32/48 at follow-up	Significant reduction in BSI and HDHQ at discharge. Further reduction at 3 month follow-up. Significant reduction in hospital admission rate – 1 year post-discharge.
Inpatient post treatment	Messina <i>et al.</i> (1998)	2	168 anti-social PD and substance misuse SCID I & II	172 Substance misuse without anti-social PD	Abbreviated TC 10m +/- 2/12	330/412 (23 could not be contacted, rest refused/ DNA)	19/12 post discharge follow-up APD not related to treatment completion Reduced substance use. IAPF
Inpatient during treatment	Chiesa & Fonagy (2000)	2	44 70% BPD, 17% avoidant, 12 % paranoid, 50% mood disorder, 50% anxiety disorder. SCID DSMIII	46 = controls TAU group. From same population as study group	X2 weekly psychoanalytic sociotherapeutic programme then outpatient group and 6/12-community outreach. Cassel Hospital 8.8 month inpatient mean 9.7 month outpatient mean	53% overall stayed in treatment	Conclude that 2-stage treatment is better than just inpatient for BPD at 12m into treatment. SCL90, GSI – slight group difference. SAS - better in 2 stage group GAS – better in 2 stage group
Inpatient/outpatient post Treatment	Krawitz (1997)	4b	32 severe PD, 19% BPD	None	Day and semi-residential psychotherapy. Therapeutic experiences outside formal therapy integral. Mean duration – 4 months	1 drop out	Marked improvement on all clinical ratings (incl. GAS, GSI of SCL-90) post treatment, sustained at 2 year follow-up

Setting/last follow-up point	Author (date)	Study type	Sample: diagnosis, N, gender	Controls: diagnosis, N, gender	Treatment	Attrition	Outcome measures/ results
Outpatient post treatment	Koistinen (1992)	4a&b	73 psychiatric patients (26 with PD, 18/26 female)	None	Daily individual and group therapy for between 5 and 444 days (mean duration – 76 days)	23 of original cohort of 96 - . more with PD in drop-outs than in study.	Within 3-year follow-up, 9 of 26 PD patients re-hospitalised (3 for less than 1 month, 6 for 1-3 months). In 2 years prior to treatment, - 11/73 patients were in hospital for 1-3 months, 16/73 for 3 months to 2 years and 4/73 for >2years – however no breakdown for diagnosis.
Outpatient during treatment	None						

Cognitive, behavioural and cognitive-behavioural treatments

Introduction

This chapter includes studies of a range of treatments that focus on cognition and/or behaviour. Whilst the distinctions between different approaches are not always clear-cut, the chapter is divided into sections on cognitive-behavioural (CBT) approaches, underpinned by various theories, Dialectical Behaviour Therapy (DBT), and Cognitive Analytic Therapy. Social Skills Training and specific targeted programmes such as Reasoning and Rehabilitation are also included in this chapter.

Cognitive-behavioural treatments for personality disorder: the evidence before 1992

Dolan & Coid, (1993) noted that there are several interventions addressing the behavioural components of psychopathy. They found that the majority of studies showing good outcomes were with young adults (Stermac 1986; Valliant, 1991). Only one study showed improvements in behavioural measures that were retained at follow-up for adults (Colman 1969; Jones 1977). These studies were mostly of short-term interventions (e.g. five weeks) and showed no long-term benefit. Valliant & Antonowicz (1991) note that, although some symptom change could be demonstrated, no change was evident in assaultive behaviours. They suggested that this was because violent behaviours are admired in prison settings and that, therefore, such behaviours, and the thoughts associated with them, are harder to change. Dolan & Coid emphasise the “dearth” of studies of CBT for psychopathy. At this time they did not find any controlled trials of CBT with anti-social or psychopathic people, male or female. The present review covers a broader spectrum of personality disorder as recognition that it is not only the anti-social and psychopathic personalities that can be dangerous.

It is important to note that cognitive and behavioural approaches are designed to ameliorate associated aspects of personality disorder not to treat the disorder of personality itself and how such approaches are often used in combination or in the context of other treatments such as “milieu” treatments. Dolan & Coid also noted that it was rare to find a CBT treatment developed specifically for people with very “severe” personality disorders, although some programmes may well target behaviours that are displayed by psychopaths.

At the time of the Dolan and Coid (1993) review, the evidence regarding social skills training was primarily composed of preliminary studies though positive results were suggested. Also, there was suggestive literature that anger and aggression could be modified. However, the quality of the evidence was poor. There were only three case studies and studies had short follow-up.

Dolan & Coid concluded that there was “only limited evidence” for the long-term effectiveness of cognitive and cognitive behavioural treatments for psychopathic disorder in adults. The search conducted did not identify any review papers specifically on the effectiveness of cognitive behavioural treatment for personality disorders. Reviews that covered psychological treatments including CBT are covered at the end of this chapter (see ‘Other recent reviews of the treatment of personality disorder’).

The present review

Thirty-eight outcome studies evaluating some form of cognitive-behavioural, cognitive, behavioural or related treatments were retrieved by the search strategy and included for full review.

As with the other chapters summarising the evidence for each treatment, each of these subsections is organised by treatment setting with prison and high secure psychiatric settings first. Within each section, the studies reviewed are described in descending order of hierarchy of evidence, with experimental studies first.

CBT

High secure

Experimental studies

There were no experimental studies of CBT in high secure populations found by this review.

Observational studies

In a report of two slow-open groups for men in a high security hospital in the UK, Quayle and Moore (1998) present the results of two pre and post studies. The groups were of mixed diagnosis and, on the basis of clinical need, eight men were assigned either to an Interpersonal Relationships Group which focused on the “foundations of adaptive interpersonal relationships” (it is not clear whether the group was primarily discursive) and ran weekly for seven months, and ten to an anger management group which is described as based on cognitive behavioural principles and ran for nine months. The post-group assessments were conducted within three weeks of the course ending, however, the patients were still detained in the special hospital environment. With respect to diagnoses, the paper reports the mental health act section under which the men were detained. Three of the men in the interpersonal relationship group and eight in the anger management group were detained under the psychopathic disorder classification. As group allocation was based on clinical need it can be seen that the psychopathic patients were more likely to be given anger management training than interpersonal relationship therapy.

Unfortunately the outcomes are not broken down by diagnosis, presumably because of the implication for sample size. However, the results show little significant change. In the IPR group, non-parametric tests show significant improvements in assertiveness, levels of controlling-ness and responsibility taking, assessed using the IIP. Within the anger management group, there were few significant changes on the self-reported measures of SRAS (Simple Rathus Assertiveness Schedule) or an in-house inventory assessing responses to potentially provocative situations. However, there was a significant improvement in self-reported assertiveness and staff ratings of relationships with peers also showed significant improvement. The authors inspected the individual change for each patient, however, and concluded that the group mean approach to assessment was misleading in this study since, at an individual level, there was great variation in scores over time. In addition, the meaning of changes in score can differ. Exploring the scores and clinical anecdotes about one patient suggested to the authors that an increased acknowledgement of the patients’ anger was an improvement rather than deterioration. The authors concluded that many factors other than the interventions in this study may have contributed to the observed statistically and clinically significant changes in these patients. Clearly, the generalisability of the results from this study in terms of the question of this review is highly questionable. The results are not broken down by diagnosis, there are no control groups and there is a very small follow-up period. However, the study is one conducted in high security in the UK and is an example of research conducted in this area.

Hughes, Hogue *et al.* (1997) studied a group of sex offenders held in a UK special hospital under the classification of psychopathic disorder. Dual diagnosis did not exclude patients from the treatment or the study but very low intelligence, overt psychosis or dependence on heavy doses of medication did. In addition, patients who scored above 30 on the PCL-R were excluded from the treatment and motivation to participate was seen as an essential for admission to treatment. The patients met criteria for an average of three personality disorders each, using PDQ-R (Hyler, Reider, Spitzer, *et al.*, 1987) and the mean score on PCL-R (Hare, 1991) was 21. The study does not state the gender of the patients but it is likely that they were all male in this setting. The treatment was not designed to target sex-offending behaviours but to effect “appropriate and specific patient change” and comprised three elements: a therapeutic “milieu” on the ward (designated and specifically set up for psychological treatment), group therapy designed to change cognitive, emotional and skill functioning, and individual support and treatment “as appropriate”. The study was naturalistic so the degree and type of treatment varied according to clinical need. Nine patients participated in at least two groups and 31 outcome measures were used including assertiveness, emotional control, cognitive skills, self-esteem, problem solving and emotional awareness. The small sample sizes led the authors to derive a global direction of

change score by scoring change on each measure such that +1 indicates change in the predicted direction and -1 indicates change in the opposite direction from that predicted and zero indicates no change. These scores were then summed and divided to produce a mean score. There was a statistically significant positive change for the whole group. Two patients had an overall negative change and one a zero change. PCL-R scores on admission were negatively correlated with change although the negative correlation was significant only for factor 1, not factor 2. Change did not correlate significantly with any other descriptive baseline measure. The authors concluded that the study provides support for a positive impact of treatment on cognitive and interpersonal functioning in this patient group.

Gacono (1998) presents two case studies in which the Rorschach test and PCL-R were used to inform treatment planning. Therapists were blind to the results of these tests, which were conducted prior to treatment as part of the routine assessment process. The first case, Steve, with a PCL-R score of 23 (moderate) participated, voluntarily, in an offender treatment programme. The programme incorporated group treatment based on Reality Therapy principles. The programme included sections on Rational Behaviour Training, criminal thinking, anger management and relapse prevention. In addition Steve attended individual counselling contemporaneously. At a later, unspecified time Steve also had nine months of psychodynamic counselling focusing on grief and identity work arising from his experience of sexual abuse as a child. Rorschach tests were repeated at ten months into treatment and scored at both times independently and rater reliability accounted for. The follow-up Rorschach test suggested that Steve had improved in various ways: increased organised resources, no decreases in controls, increased coping resources and capacity for delay. There is a suggestion of increased empathy. The second case had a lower PCL-R score of 15. This case received similar treatment but did not have the nine months of psychodynamic counselling but did have 16 months of supportive psychotherapy including assertiveness training and problem solving. Again, various improvements were suggested by the Rorschach test on retest for this case such as in self-esteem and reality testing. Although confidence in emotion management had increased, depression and anger were still "problematic". As so often with case reports it is difficult to do justice to the detail and to represent the qualitative richness in a summary such as this. The treatments offered in these case examples were all psychological, a mixture of cognitive, skills training and psychodynamic approaches. The authors did not mention any medication treatment, which may also have been used in combination. Similarly, there were no comparison cases. The authors concluded that these cases, both rated as improved by their therapists, were examples of treatment successes due, in part to the use of the PCL-R and Rorschach to make a careful assessment of the most appropriate treatment resources to offer these two offenders.

Inpatient

Experimental studies

A small RCT is described by Fisher & Bentley (1996). The study evaluates two alternative approaches to group treatment with substance abusing personality-disordered patients in two settings: inpatient and outpatient. The participants were mixed in that approximately half and half met criteria for Cluster B and C diagnoses. The majority of the patients were male. Within Cluster B the most common diagnosis was Anti-social PD and within C, Avoidant PD. Participants in the outpatient setting had significantly more years of alcohol, cocaine and marijuana use but fewer had previous psychiatric treatment or lifelong depression. There were also differences in marital and legal status. There is very little information about the no treatment comparison group.

Treatments were thrice weekly, 45 minute groups over 12 weeks. Groups based on the "disease-and-recovery model" and Cognitive-behavioural model were compared with each other and with a no treatment comparison. The Addiction Severity Index was used to assess alcohol and drug use, social and family relations and psychological functioning at pre- and post-test. The length of follow up is not stated. Within the inpatient sample, the study found no significant changes, with the exception of social and family relations. This change was significantly greater in both treatment groups than in the comparison group. The outpatients, however, benefited significantly more from the CBT based group on measures of alcohol use, social and family relations and

psychological functioning. This study is one of the few (of those that reported the ethnic composition of their participants) in which the majority (60%) of participants were black.

Outpatient

Experimental studies

Alden & Capreol (1993) carried out a randomised study of three different cognitive-based group treatments for avoidant personality disorders without significant Axis I comorbidity but with differing types of interpersonal problems. The treatments were evaluated against a waiting list control group which received no intervention other than the pre and post-test assessments. Seventy-six outpatients selected from 187 referrals for treatment were first categorised into two groups of interpersonal problems in avoidant personality disorders on the basis of IIP-C (Alden, Wiggins & Pincus, 1990) score. One group (cold-avoidant) reported having interpersonal problems centred around difficulties expressing warmth and establishing intimate relationships. A second group (exploitable-avoidant), was identified on the basis of feeling that they were often taken advantage of by others and tried hard to please others.

Participants were then allocated to treatments randomly but with consideration for having equal numbers of males and females in each group and in each treatment condition. Two (IIP-C group) by four (treatment condition) analysis of variance using residualised change scores showed a significant modification of treatment effect by IIP-C group.

Those in the “exploitable-avoidant” group responded to all three types of treatment, Graduated Exposure (GE) in which an analysis of the individual’s problems was followed by the mastery of progressive relaxation techniques and then the development of social targets to be approached between sessions; Skills Training, in which patients received the GE treatment and training in interpersonal process skills; intimacy focused Skill Training, in which the ST regime was conducted in the context of developing intimate friendships, in terms of self-reported shyness but not behavioural observation, showing outcomes better than those in the waiting list control. However, those in the “cold-avoidant” group showed greater improvement than the control group only to the GE programme.

The authors concluded that the kinds of interpersonal problems experienced by patients affect their response to different types of treatment and that the specific pattern of interpersonal difficulties should be routinely taken into consideration when patients are being allocated to different treatments. Although this was a thoroughly conducted study and the authors conclusions seem fairly drawn from the data there are two points to note in particular. First, the group of patients with an expressed difficulty with intimacy failed to respond to the treatments that were specifically aimed at improving intimacy. Second, the significant and positive results are all based on the self-report data. Although the overall MANOVA using residual gains for all five outcomes was significant and included the behavioural ratings, which were conducted at pre- and post-test, no significant results were found for the behavioural observations in the individual analyses. In fact, for the cold-avoidant group, the behavioural rating for those in the GE condition is the worst behavioural rating given for the group in any of the conditions, which would seem to be at odds with the self-report results. The authors did not address this non-significance of the observational data. The authors did caution against making assumptions about the generalisability of the findings because of the retrospective nature of the study and the selected nature of the sample, which may mean that results may not replicate to other samples of AVPD patients.

Cottraux, Note, Albuissou, *et al.*, (2000) found that after six weeks of randomly allocated cognitive therapy or supportive therapy, there were no significant differences in the proportions of socially phobic outpatients of mixed sex (75% of whom also met criteria for Avoidant Personality Disorder) who were judged to be improved (although many validated scales were administered the criterion for improvement is not defined in the paper). However, social phobia was significantly more improved in the cognitive therapy group at the six-week point. By twelve weeks, the CT group were significantly more improved on social phobia, disability, avoidance and quality of life.

Those patients who were allocated to supportive therapy were then given the treatment received by the group allocated to CT after the twelve-week period of supportive therapy was completed. When the equivalent time points were compared for the two groups (last follow-up, 24 weeks post treatment) no group differences were found on any of the 13 psychometric instruments administered. Although the attrition rate was considerable, as is the case with so many of these studies, the final group sizes were better than in many of the other more influential studies of CBT reviewed in this chapter (CT group n=24, ST group n=23). The study also uses a randomised design and a considerable follow-up post treatment. Corrections were used for the multitude of variables studied. Although this study suggests that CT is more effective than ST for social phobia, the flaw admitted by the authors that the amount of input in each group is considerably different is important. The CT group consisted of eight sessions lasting one hour over six weeks followed by six weeks of six two-hour sessions per week of social skills training and the patients were given manuals for reference. In comparison, the ST condition consisted of one half-hour session every fortnight over a twelve-week period.

Hofmann, Shear, Barlow, *et al.*, (1998) present a secondary analysis from a large randomised controlled trial of imipramine and CBT for panic disorder exploring the relative effects of these treatments on personality disorder characteristics as measured by the WISPI. The randomisation procedure is not clear as the study is described as *double-blind* which is not possible with a psychological treatment. Assessments were made at pre treatment, after the 11th session and again after a six-month maintenance session. Both the imipramine and the CBT group showed significant reductions in all personality disorder characteristics between baseline and the second assessment with the exception of schizoid personality disorder and anti-social personality disorder, respectively. There were no significant changes for either group between the second and the third assessment point, however, with the exception of schizoid personality disorder in the CBT group.

The patients in each arm of the study were divided into responders to treatment and those who did not respond to treatment on the basis of interviewer ratings of current state. Interviewers were blind to group assignment. Manova analyses suggested a trend for those who responded to CBT to show greater improvement in personality disorder characteristics than those who did not respond to CBT treatment. There was no difference in change in personality disorder between the responders and non-responders to imipramine treatment. Regression analyses failed to find significant ability of baseline personality disorder characteristics to predict treatment response.

The authors concluded that both treatments had a positive effect on all personality disorder characteristics. However, they admitted that only one scale was used to assess personality disorder and that this was self-report and also a dimensional scale (without cut-offs to discriminate the presence or absence of disorder). Indeed, the dimensional subscales were scored between one and ten, with ten being the most disturbed and inspection of the mean pre-treatment scores given suggests that this group was not very severely disordered in terms of personality disorder characteristics.

Evans, Tyrer, Catalan, *et al.*, (1999) present a randomised controlled pilot study trial of manual assisted cognitive-behaviour therapy (MACT) of patients presenting to an emergency service with an episode of deliberate self-harm and Cluster B "personality difficulty" (Tyrer & Johnson, 1996a), measured using PAS. MACT treatment focused on self-harming behaviours and was conducted over six sessions at unspecified time intervals. Eighteen patients entered and completed the treatment and research in the MACT group and 16 entered, ten completed treatment and research in the TAU group. There are no demographic details of the sample given so it is not clear what proportion were women, for example. There were no restrictions on the treatment given in TAU with the exception of MACT. There were no significant differences between the treatments in terms of the number of patients who made a suicidal act in the six-month, post-presentation follow-up period, nor the rate of self-harm episodes in that time. The only significant between-treatment difference was found for depression measured using HADS, which was reduced more in the MACT group. There were trends towards greater time to parasuicidal act in the MACT group. The authors concluded that this treatment may be a useful approach. However, there were higher resources required than treatment as usual.

Saunders (1996) present an RCT of feminist driven CBT versus process oriented psychodynamic treatment, both conducted in a group format with male perpetrators of domestic violence attending an outpatient family therapy treatment. One hundred and thirty six of the 235 eligible men agreed to take part and attended at least 16 of the 20 sessions on offer. MCMI scores were only available on 126 of these men and 40 per cent of these met criteria for anti-social personality disorder and 33 per cent dependent personality disorder (it is not stated whether there were any men with both disorders). Using women partners' reports as the principal outcome measure this randomised study found no significant differences in the effects of the two treatments, both showing recidivism rates (defined as further violence) of between 45 per cent and 50 per cent at between two and 4.6 years post treatment follow-up. The authors stated that this is within the range of recidivism reported by other studies. However, the lack of a "no treatment" control makes this result hard to contextualise. Only "completers" and those who were considered successful by therapists were included in the analyses. The study explored treatment by diagnosis interactions and found that those with increased scores on the anti-social personality dimension of MCMI were more likely to do better in the feminist CBT arm of the trial than the PPT arm (36% vs 53%) and that those meeting diagnosis of dependent personality disorder were more likely to fare better following PPT than CBT intervention (33% vs 52%). Meeting diagnosis of ASPD did not interact with treatment effect, however, and neither did dimensional score on the dependent scale. The authors concluded that different treatments were appropriate for male batterers with different diagnoses and that although the randomised aspect of the study was compromised by the attrition rates, the results were encouraging for the effectiveness of treatment for domestic violence.

Longabaugh, Rubin *et al.* (1994) describe a study which was originally designed to assess treatment outcome for anti-social personality disordered alcoholics (n=31) versus alcoholics without anti-social personality disorder (n=118). Both groups of patients were randomised to two kinds of cognitive behavioural therapy. One of the treatments was focused on individuals, although conducted in a group setting, and concentrated on a functional analysis of the antecedents and consequences of drinking over a period of approximately five months plus a booster session at one year post treatment initiation. In the second treatment condition, patients received only six sessions devoted to functional analysis and the remaining sessions concentrated on the patient's relationships, including involving significant others in the treatment sessions. The Time Line Follow-Back Procedure was used to assess the amount of drinking by day. Three measures of drinking were derived from this procedure: average drinks per day, percentage of days abstinent and average drinks on a drinking day. The study did not find a treatment effect or an effect of diagnosis on average drinks per day at 18 month follow-up. However an interaction between diagnosis and treatment was found for the average number of drinks on a drinking day with anti-social patients having the lowest score if they were treated with the individual CBT condition (n=12) and the highest if they were treated with the relationship enhancement version (n=19). Non-anti-social patients did not differ in their drinks per drinking day as a function of the treatment condition in which they found themselves. This study also assessed support from the patient's social environment for abstinence and found that such support led to lower levels of drinking (on all three indices) in the non-antisocial group but higher levels in the anti-social group. The authors conclude that anti-social personality disordered alcohol abusers can be as effectively treated as non-antisocial alcohol abusers but that it is important to select the right treatment for them and that the outcome differs depending on what index of improvement is used because ASPD patients achieved more abstinent days than non ASPD at 12-18 months post treatment initiation and ASPD patients treated in the extended CBT drink less intensely (have fewer drinks per drinking day) than either ASPD patients treated in the second condition or non ASPD patients treated in the extended CBT condition at six months following treatment follow-up.

In a similar study, Kalman, Longabaugh *et al.* (2000) attempt to replicate the finding that anti-social alcoholics will respond differently to cognitive behavioural and relationship focused treatments. However, in this study slightly different treatments were given to the patients. For example, the individual therapy in the first study was actually conducted in a group setting whereas in the replication study it was delivered individually. In addition the study was a multi-site trial and the cognitive behavioural therapy condition included a 12-step programme delivered by one of the centres. Different measures were used to categorise patients in the studies – in this the socialisation sub-scale of the California Personality Index was used whereas the Anti-social Personality Disorder subscale of the DIS was used in the previous study. In short, with groups of

42 “sociopaths” and 107 “non sociopaths” no significant interaction was found between diagnosis and treatment group. Although the authors did not discuss it there was also a greater representation of women in both the sociopathic and non-sociopathic groups in this study than in Longabaugh.

Project Match Research Group, (1997) report the results of two parallel randomised controlled trials comparing treatments for alcoholics, a proportion of whom met criteria for anti-social personality disorder, as assessed by the computerised version of the DIS. The treatments allocated were cognitive behavioural coping skills therapy, motivational enhancement therapy and 12-step programme, each treatment lasting 12 weeks. The two trials were conducted with outpatients and with aftercare patients leaving an inpatient period of treatment. The final sample included in analysis was 1,596 patients, approximately 76 per cent of whom were male (the characteristics of the sample who entered the trial, not completed it are reported). The trial showed positive improvements in terms of percentage of days abstinent and drinks per drinking day for all treatments. In the aftercare trial, percentage of days abstinent reduced from 20 per cent pre treatment to 90 per cent twelve months after the end of treatment; in the outpatient trial improvement was from similar baseline to 80 per cent post treatment. The authors found very little evidence of differential treatment effect. The study demonstrated few matching effects but did find an interaction between what the authors call “sociopathy” and time such that increased anti-social personality disorder scores were associated with worse drinking outcomes in the early stages of the follow-up period but not in the later stages. More precise details of the proportion of the sample meeting criteria for anti-social personality disorder and of the outcomes for this group are not available in the paper. Anti-social personality disorder was the only personality disorder assessed for so the proportion of patients meeting other personality disorder criteria is not known either. However, patients were excluded from entering the trials if they were actively sui- or homicidal at the time of recruitment. The authors concluded that there is moderate support for the idea that patients with lower levels of psychiatric severity make more progress with 12-step than CBT but that this effect lessens as severity increases but that, in general the study does not support an approach of matching patients to these treatments since it had good power to detect differences if they were there. For the purposes of this review this evidence is a little hard to interpret with respect to personality disorder as the proportion of the sample who were disordered is not known.

Observational studies

Hengeveld, Jonker & Rooijmans, (1996) report a pilot study of an outpatient group CBT treatment for women who repeatedly attempt suicide in the Netherlands. Of 23 consecutive presentations to the hospital with a suicide attempt, five finally completed at least seven sessions of the eight session and two booster session treatment course and completed the BDI and SCL-90 pre treatment and at the final booster session. Of this group, four were personality disordered and one dysthymic. The four personality disordered patients also had other Axis-I diagnoses – primarily adjustment disorders. There were no significant differences in levels of depression or the global score on the SCL-90, although the mean depression score was lower at post-test. The study is hampered by its small numbers and the attrition rate, which may have contributed to the length of time between the last suicide attempt and the treatment intervention (this ranged from one day to one year). This was given as the reason for dropping out for two of the nine patients who began the treatment. The authors concluded that it is difficult, if not impossible to obtain a large and homogeneous enough group of patients to participate in such group therapy. They also drew conclusions about repetitive suicide attempters such as that those with borderline personality disorder tend to repeat irrespective of the treatment given, which the size of their study would caution against taking too seriously. Their final conclusion was that there is still doubt about the efficacy of CBT for recurrent suicide attempting. Their study, in which the most interesting finding is the drop-out rate, contributes very little to this debate, unfortunately.

Moorhead & Scott, (1999) in assessing the effectiveness of training specialist registrars to provide cognitive therapy, reported some outcome data for a small sample of 20 patients six of whom had at least one personality disorder diagnosis assessed by PDQ-R. Twelve of the patients were women. Five patients dropped out of therapy and four of these had Cluster B personality disorders. As a group (including the drop-outs) however, patients showed significant improvements on each measure. However, only two of the sample who attended therapy had a

PD diagnosis and outcomes are not reported separately for PD patients, neither is there an analysis of the relationship of PD to outcome, so for the purposes of this report this study contributed very little to our knowledge of treatment for personality disorder in particular although the authors suggested that the finding that Cluster B PD was associated with drop out independently of which cohort of patients they were in, suggests that cognitive treatment should be given to this group by more highly trained therapists who are more confident in working with comorbidity.

A study assessing the outcomes of personality disordered, those with personality disorder traits but sub-threshold and those without personality disorder following aftercare after discharge from a chemical dependency unit showed that 50 per cent of those with personality disorder and 62 per cent of those with personality disorder traits maintained abstinence during the four month period of aftercare. This compared with 62 per cent of those without personality disorder (Clopton, Weddige, Contreras, *et al.*, 1993). The authors concluded that the study suggests it is possible to treat personality-disordered substance abusers in a programme designed for substance abusers in general. Of course, the focus of the study was the personality disorder versus no personality disorder diagnosis and so there is no comparison group and we cannot know the effect of the treatment. In addition the number of patients in the study with personality disorder or personality disorder traits was very small, n=14 and n=16 respectively. The authors also highlighted that the diagnoses were made by "clinical impression" retrospectively and suggested that a prospective study with longer follow-up was needed to clarify this issue.

In a study of affect consciousness, Gude, Monsen & Hoffart (2001) found a three phase cognitive-behavioural treatment over a period of 15 months for avoidance with a group of 44 patients with Cluster C personality disorder (or sub-threshold Cluster C disorders) reduced scores on the Cluster C personality disorders of avoidant and dependent and in overall Cluster C score. However there was no change in obsessive-compulsive personality disorder.

Barber & Muenz, (1996) allocated (it is not said how) to either cognitive behavioural treatment or interpersonal therapy, patients with depression and either avoidant personality disorder or obsessive-compulsive personality disorder. They found suggestive evidence that cognitive therapy was more helpful for those with avoidant personality disorder whilst interpersonal therapy was more suited to those with OCDPD when clinician-rated outcomes were used to assess the relationships using both dimensional and then categorical approaches to the Personality disorder scale of the PAF. However, the interaction of gains was not evident when the self-reported outcomes were examined. Unfortunately, the study also found a significant interaction of marital status with personality type. However, the interactions between personality type and treatment mode remained evident.

Coon, (1994) presented a single case study of the use of a schema-focused CBT therapy with a male client of middle age with avoidant personality disorder and dysthymia. Over 22 sessions of treatment reductions in BDI scores and subjective distress ratings (SUDS) were observed in the client although avoidant traits still remained. The authors concluded that schema focused approaches can be useful with personality dysfunction but that further research was needed as this case study could also be demonstrating a latency effect of the personality disorder.

Variants of CBT and combinations of CBT and other psychological treatments.

High secure

Experimental studies

There were no experimental studies in this category.

Observational studies

Donnelly & Guy, (1998) attempted to evaluate an adapted R&R programme given in the State Hospital, Carstairs. Twelve male patients were given a ten-session programme over ten weeks with elements including offending behaviour, anger management, problem solving and moral dilemmas. Measures administered pre- and post-test included assessments of impulsivity, state

and trait anxiety, social relationships, alternative thinking and ward atmosphere. No significant changes were found on any measures. However, the authors noted anecdotally that improvement in three of the patients was commented on by the clinical team. It is very difficult to interpret the results of the study for many reasons, not least because the numbers were very small and the diagnoses mixed. The study is included as it is in a high secure setting and the authors argue that personality disorders may be underdiagnosed in Scottish high security. However, diagnoses were not made specifically for this study and only five of the twelve were documented as having a coexisting personality disorder. The majority of the participants had psychotic illnesses, either schizophrenia or drug induced psychosis. The authors concluded, as they must, that further investigation was necessary because this study was inconclusive. They did, however, note some methodological points, which are relevant to consideration of studies of treatment in this area. They noted that medication effects needed to be carefully taken into account when evaluating results of a psychological intervention and that the measurement of cognitive and attitudinal change in mentally disordered offenders was hampered by a dearth of measures standardised on this population.

There were no other studies of the Reasoning and Rehabilitation approach in other settings or of other types, produced by our search.

CBT and assertiveness training

In- and outpatient

In this study 61 patients with a diagnosis of major depression or dysthymia were allocated on the basis of clinical need to CBT or CBT combined with assertiveness training (Ball, Kearney, Wilhelm, *et al.*, 2000). Treatment was a total of 15 hours over five weeks. The patients were categorized in terms of their personality disorder status into those with Cluster A (n=0), Cluster B (n=14) Cluster C (n=40) and no personality disorder (n=7). Patients were assessed at baseline, end of treatment and at follow-up, which was between one and three years post-treatment using the Beck Depression Inventory, the Automatic Thoughts Questionnaire and the Hopelessness scale. Those in the combined CBT/AT group were also assessed with the Beck Anxiety Inventory and the Social Reaction Inventory. Repeated measures ANOVA analyses (with time to follow-up as a covariate) showed that those in the CBT group reduced in depression scores from scoring in the severely depressed range to the mildly depressed range by follow-up. Follow-up scores on the ATQ were close to those reported for a sample of recovered depressives. Scores on the hopelessness scale at follow-up fell between those reported for a group of depressives and those reported for normal control group. Those allocated to CBT/AT treatment only scored in the moderately depressed range at baseline but also had improved significantly to score in the mild range at follow-up. No significant differences were found over time on the BAI and HS scores remained in the increased risk of suicide range. Similarly, there was a significant decrease over time but the final scores on the ATQ also remained more pathological than those reported for normal controls. It is unfortunate that this paper does not indicate the distribution of personality disorder types in the treatment groups. However, overall, analyses indicated that BDI scores improved over time for all personality disorder groups. However, in the Cluster C group but not the Cluster B group, there was some indication of a worsening of depression between end of treatment and follow-up. A similar pattern was found for the no personality disorder group whose scores decreased between baseline and follow-up but increased between end of treatment and follow-up. The PD groups had higher mean pre-treatment scores than those without PD.

The authors concluded that the study suggested that short-term CBT-based treatments can be effective in treating depression in the context of personality disorder but that the presence of personality disorder does impede the response to both CBT and AT. They recommended that further studies would be able to identify those least likely to respond to brief, group-administered treatments.

Social skills training

Stravynski, Belisle, Marcouiller, *et al.*, (1994) present a randomised controlled trial of social skills training. Thirty-one mixed sex outpatients with Avoidant Personality Disorder, no Axis-I disorder and unmedicated, were randomly assigned to eight one-and-a-half-hour social skills training

sessions (SST only) (n=14, five women) or to four of these sessions plus four additional sessions conducted in real life situations, such as in shopping arcades (SST plus *in vivo*) (n=17, eight women). Twenty eight participants began and completed treatment and data was available at all time points for eleven people (six in the SST only group and five in SST plus *in vivo*). Although the study was designed to assess the relative effectiveness of each treatment, the results can be interpreted as a pre-post design study as outcomes were also given for each treatment. There was no significant difference between the two treatments with the exception that the SST and *in vivo* group had a higher attrition rate, and both produced statistically significant improvements in social adjustment, anxiety, coping with social situations, measured by self-report questionnaires and social relationships measured using a semi-structured interview to assess maladjustment (SSIAM). No significant improvement in depression was reported. However, whilst improvements were shown in both treatment conditions, no conclusions can be drawn about the effectiveness of either treatment in comparison with no treatment or some other control condition.

This study comprised a majority of male participants and data were not analysed by gender. No ethnicity characteristics were reported.

Behavioural programmes

Inpatient

In an uncontrolled, before and after study designed to assess the effects of behavioural therapy for obsessive compulsive disorder on personality disorder status, McKay, Neziroglu *et al.* (1996) report outcomes in terms of personality disorder and obsessive compulsive disorder for 21 inpatients (nine of whom were women). Patients were assessed using SCID-II to have a mean number of disorders of 3.7 with all patients meeting criteria for at least one disorder. The majority of diagnoses made were in Cluster B (76%) followed by C (67%) and then A (48%). Patients were treated with exposure with response prevention (ERP) behavioural methods with a cognitive component in 90 minute sessions, five times a week over a period of four weeks. Patients did not receive medication in addition to the psychological treatment. Eighteen of the 21 patients improved clinically significantly in terms of their obsessive-compulsive disorder as measured by the Yale-Brown Obsessive-Compulsiveness Scale and matched t-tests showed significant improvement between pre- and post-test for the group as a whole. At post test personality disorder was reassessed and the mean diagnoses met were then 2.8, Wilcoxon matched pairs test showing a significant reduction over time. Five of the patients no longer met criteria for any personality disorder. Whilst pre-test number of personality disorder diagnoses was mildly related to OCD outcome (patients with more than four personality disorder diagnoses continued to have significant OCD symptomatology at the end of treatment), post-test number of personality disorders and the change between pre- and post-test were both significantly correlated with OCD outcome. The study provided suggestive evidence that change in personality disorder can be effected by short-term but intensive psychological treatment. The study also suggested that change in personality disorder characteristics is related to other psychological changes. The instrument used to assess PD is a respectable one with reasonable stability and without the failing of overdiagnosis. However, the study did not specify that raters were independent of the treatment, the time period over which the measures are taken is very short and the sample small and not randomly selected. Some post-treatment follow-up would have augmented the credibility of the conclusions as the findings may also be explained by the interference of Axis-I symptomatology with the assessment of Axis-II pathology.

The ethnicity of participants was not reported in this study and results were not analysed by gender.

In a treatment designed to improve other disorder in the context of PD, (Brooner, Kidorf *et al.* 1998) examined the response of 40 drug users with anti-social personality disorder and opioid dependence in methadone replacement treatment. Participants were randomly assigned to a behavioural programme (n=20) and methadone replacement as usual (n=20) after being stratified on the basis of a range of characteristics. The behavioural programme comprised some reward and extinguishing responses to adherence or failure in the methadone maintenance programme. The programme was designed to “provide rapid delivery of positive consequences for abstinence from all drugs and negative consequences for drug use of missed counselling sessions”.

Rewards included take-home methadone doses and choice over number and timing of counselling sessions. Negative consequences involved increased control over methadone doses and counselling schedules by the programme staff. Although there were both negative and positive consequences of behaviour in the control arm of the study, these were less proximal to the event than in the experimental arm. There was drop out prior to the three month point of treatment in both groups. Time main effects were found for short-term treatment response (between intake to the programme and baseline = four weeks) on self-reported drug severity and legal severity. Between baseline and three months into randomised treatment, it was possible to analyse 12 of the experimental group and 15 of the control group cases. A group x time interaction was observed for drug severity with the experimental group having very similar baseline and three month scores and the control group having worse scores at three months than baseline.

In this study 50 per cent of the participants were described as African-American and 50 per cent as Caucasian. Whilst experimental vs control group differences in baseline diagnoses were assessed and no differences identified, differences in ethnicity between the groups were not mentioned and outcomes were not analysed by ethnicity. Eighty one per cent of the participants were male.

Dialectical behaviour therapy

DBT was not included as a treatment for personality disorder in the previously jointly-commissioned Home Office and Department of Health review (Dolan & Coid, 1993). There is one study of this treatment that was not included in their review but was also outside the time period of this review (Linehan, 1991).

Dialectical behaviour therapy is a manualized therapeutic approach developed by Linehan (Linehan, 1993b). The treatment is based on a model and biopsychosocial theory of borderline personality disorder which suggests that those with borderline personality disorder have reduced interpersonal abilities, emotion-regulation, tolerance of distress and abilities to control themselves and that personal and environmental factors obstruct the ability of the individual to use the interpersonal skills they do have. The theory emphasises that dysfunctional behaviour stems from the interaction of environmental factors with biological abnormalities.

Dialectical behaviour therapy has been developed over the past ten years specifically to target the range of dysfunctional behaviours characteristic of borderline personality disorder, which perpetuate emotional distress and interfere with therapy (Shearin & Linehan, 1994). The DBT treatment for outpatients involves four component parts: weekly individual psychotherapy; skills training conducted in groups; consultation and supervision for the therapists delivering the first two components; and telephone consultation as and when required between the patient and therapist. The dialectical aspect of the therapy refers to the balancing of acceptance with change, throughout the therapy, for example.

High secure

Experimental studies

There were no experimental studies of DBT in high secure populations discovered by this review.

Observational studies

Low, Jones, Duggan, *et al.*, (2001) describe a small sample preliminary, before and after study of the effectiveness of DBT for women in a high security setting. Ten female patients (59% of those eligible) who met criteria for borderline personality disorder (seven of these women also met diagnostic criteria for other personality disorders – Axis-I diagnoses are not reported) and who displayed self-harming behaviour, attended a one-year course of DBT treatment. Continuous measures (from ward records) of self-harm were taken at pre-treatment, during treatment and up to six months post-treatment (collapsed into six periods of three months). Significantly lower rates of self-harm than pre-test were found using non-parametric Wilcoxon tests for the second, third, fourth and sixth periods. During the first three months of treatment, there was no significant

reduction and during the first three months post-treatment there was an increase. Overall, all ten women are reported to have shown a reduction between pre and final post-test. No actual figures are reported for the self-harm data so it is not possible to make descriptive comparisons with self-harm found in other studies.

In addition to the data collected on self-harming behaviours, psychological self-report questionnaires were administered at four monthly intervals from pre-treatment to the end of treatment and then a further measure was taken at six months post treatment. The self-report scales were published scales. Significant effects of time were found in a repeated measures ANOVA analysis of the psychological scales for depression (on both scales measuring depression), dissociative experiences, survival and coping beliefs, suicide ideation. Impulsiveness was narrowly non-significant and the other scales were not significant. These included anxiety, irritability (directed both inwards and outwards), reasons for living inventory and hopelessness. The t-tests conducted between baseline and each subsequent assessment point showed that there were significant reductions in dissociative experiences, impulsiveness and depression (as measured by BDI) between baseline and four months and a significant increase in survival and coping beliefs. At eight months, these variables remained significantly improved since post-test and the second measure of depression (IDA) was also significantly improved. At the end of treatment, however, only the survival and coping beliefs, the dissociative experiences and suicidal intent showed significant improvement on pre-test scores. At six months post treatment, only survival and coping beliefs and dissociative experiences were significantly improved on pre-test scores.

The authors admitted the limitations of the study design, which prohibit attributing the changes to DBT, and concluded that although the results are preliminary, they suggest that DBT may be effective as an approach within a high security setting for the treatment of self-harming. Changes in self-harm were, indeed, the most robust changes found in the study and whilst there were some changes within the treatment time in the women's psychological symptoms, few gains were stable and maintained after the end of treatment. It would be very useful to have had a longer period of post-treatment follow-up to see whether the gains in self-harming shown at six month follow-up, which followed a post-treatment dip at three months post treatment, were part of a fluctuating pattern or were a stable longer-term gain.

Inpatient

Experimental studies

A modified variant of DBT is presented by (Springer, Lohr, Buchtel, *et al.*, 1996). A skills training programme named Creative Coping Skills was developed by nursing staff and senior clinicians for short-term use on an acute psychiatric unit in the US. The programme consisted of daily 45-minute groups for ten days. Five sessions were stated to be lessons on emotion regulation and four on interpersonal effectiveness, one on distress tolerance. Patients re-cycled through the programme if they were inpatients for longer than ten days. Patients admitted to the psychiatric unit who agreed to take part in the research and met criteria for any personality disorder were randomly assigned to this treatment (n=16) or to a Wellness and Lifestyles group (n=15) which was, again, designed by staff on the unit to discuss issues of interest to patients and relevant to their lives but not with a psychotherapeutic orientation. The groups were described as less structured than the CC groups. The length of sessions and overall input was the same in both groups. Measures were administered at admission and before treatment, and at discharge. There were no post treatment follow-up assessments. Some of the measures in this study were common to other studies of DBT. Personality disorder was screened using MCMI. Most follow-up measures were also self-report but self-harming incidents and other "acting out" behaviours were monitored using the daily-recorded patients charts. There were multiple progress measures.

Most patients received more than one personality disorder diagnosis usually a combination of Cluster C and A or B according to MCMI. However, the authors noted that there was little agreement between the MCMI and the diagnoses given by the admitting psychiatrist. In the main, ANOVA analyses revealed no group by time interactions. Overall, however, there were improvements in both groups on depression, hopelessness and suicidal ideation. In fact, the

modified DBT group had significantly more episodes of acting out during the period of their hospitalisation than the control group. When only those patients with a diagnosis of borderline personality disorder were analysed separately, the results were not substantially different suggesting that the treatment is equally appropriate for all types of personality disorder. There were no differences in the degree to which patients in either group reported the group as useful, with the exception that those in the CC group were more likely to report that the group had value in terms of helping the participant to handle difficult situations in their later life.

The authors concluded that the study suggested that both groups were equally useful for a group of personality disordered patients admitted to the hospital but that, had parasuicidality been an entry criterion (the mean lifetime number of parasuicides for these patients was around three) clearer group differences may have been detectable because DBT was originally designed for parasuicidal patients. This point may also relate to the attrition rate for the study in which only 31 patients out of a possible 67 agreed and did participate in both the research and the treatment. No analysis of non-responders was presented and perhaps was not possible. The significant outcomes found must be interpreted with caution, as the authors admit, as so many variables were tested and there is no mention of post-hoc corrections.

Observational studies

Conceding that DBT was designed as an outpatient treatment for borderline personality disorder, these authors designed an inpatient treatment based on DBT (Bohus, Haaf, Stiglmayr, *et al.*, 2000). This paper reported the results of a pilot study evaluating the success of the new treatment. Twenty four female admissions to the psychiatric inpatient unit who met DSM-IV criteria for BPD and scored a minimum of eight points on the DIB-R, had at least two episodes of self-harm in the previous two years, and who did not meet criteria for any AXIS-I disorder were studied in a pre- and post-test design. DBT treatment is usually designed to last for one year in phase one. However, in this programme the women stayed on average for three months of treatment. Assessments were made at pre-treatment and four months post treatment. At both points, the assessment was designed to cover the previous month. A battery of eight self-report scales was used to assess progress. These broadly covered parasuicide incidents (observer rated), depression, anxiety, dissociation and feelings of anger. Significantly lower scores were found on all measures at post-test, including parasuicide behaviours. Effect sizes were also calculated for each and averaged to produce 1.04 overall effect size. Individual participants' changes in parasuicide were also reported. Six of the 24 patients did not report any parasuicide in the one month prior to treatment and three of these had self-harmed in the post-treatment period. One other participant had increased parasuicide post-treatment. Four patients showed no change in self-harm. The authors observed that one of these participants had "learned" to self-harm whilst on the ward though it is not clear how this relates to the inclusion criteria for the study, which suggest that each participant had to have at least two parasuicide events. It may be that this participant had made a previous suicide attempt but had not self-harmed without intent to suicide before. Observer-rated measures of depression, anxiety and anger scores were also used but no significant improvements were found on any of these measures. The authors noted that in terms of context to understand their findings, there is no available comparative data on effect sizes for treatments of personality disorders but concluded that the effect shown in this study could be considered "strong". The authors suggested that their study provides provisional support for the feasibility of utilising DBT within an inpatient setting and that a randomised controlled study is warranted.

Outpatient

Experimental studies

Linehan, Heard & Armstrong, (1993) present a follow-up to the original randomised controlled trial of DBT and TAU (Linehan, Armstrong, Suarez, *et al.*, 1991). The previous study was conducted in two cohorts and measures were taken up to twelve months during treatment. In the current study parasuicidal behaviours over the one year post-treatment period were obtained for 39 of the original 47 patients who entered the original trial. Parasuicide behaviours were fewer in the DBT group between 12 and 18 months but these differences were not maintained between 18 and 24

months. Conversely there were fewer days of psychiatric inpatient treatment for the DBT group between 18 and 24 months but no group differences in the earlier period.

Only the second cohort of the trial (DBT n=9, TAU n=11) was assessed on other outcome measures at one year post-treatment. These included treatment history interview, state-trait anger scale, social adjustment scale interview for psychosocial functioning, longitudinal interview follow-up evaluation observer rated GAS, social adjustment scale for overall social performance including work and anxious rumination. These measures were conducted by interview with interviewers blind to treatment condition. DBT patients reported better employment performance (DBT n=5 at 18 and 4 at 24 months and TAU n=5 at 18 and 4 at 24 months) and were also rated more highly on global adjustment (DBT n=7 at 18 and 9 at 24 months and TAU n=7 at 18 and 6 at 24 months) by the blind interviewer than the TAU patients at both follow-up time points. Other significant group differences in changes were found only at one of the follow-up time points. There were no significant results for work performance or anxious rumination at either assessment.

The authors concluded that the treatment gains shown in the first trial were largely maintained at one-year post-treatment follow-up. However, it must be acknowledged that, although randomly assigned, the group sizes were extremely small for the data other than the parasuicide episodes and this makes interpretation of the statistical significance very difficult. The authors also asserted that this was a group of severely disturbed borderline women. However, the definition of severe was used widely in the literature and was not defined here. Caution must be taken in interpreting it in this context where, for example, more than 50 per cent of the women were employed.

In a second cohort of patients recruited for the "original" DBT trial (Linehan, Armstrong, Suarez, *et al.*, 1991), Linehan reports the results for 26 women with borderline personality disorder and histories of parasuicide (Linehan, Tutek, Heard, *et al.*, 1994). Thirteen were randomised to DBT treatment and 13 to TAU. Intent to treat analyses showed that between pre-treatment and the end of treatment (12 months after entry to treatment) the DBT treatment was superior at reducing trait anger (measured using State Trait Anger Scale), overall psychiatric disturbance (GAS) and social adjustment (longitudinal interview follow-up evaluation). There were no interactions between treatment and time for self-report social adjustment (social adjustment scale) or the evaluation of global life satisfaction.

Koons, Robins, Tweed, *et al.*, (2001) report a randomised controlled trial of DBT versus treatment as usual at the women veterans medical centre in the US. However, whilst the trial was a comparison of these treatments, the majority of both groups were also receiving psychopharmacological treatment that was predominantly SSRI. In addition, the trial was not of outcome as follow-up was taken during treatment. From fifty-six referrals to the service twenty women were eligible and completed treatment, providing ten in each treatment group. There were no pre-treatment group differences with the exception of anxiety. Measures were repeated at three months and six months *during* treatment and showed a significantly greater decrease in suicidal ideation and hopelessness in the DBT group than the TAU group. Similar results were found for depression. Clinically significant change was calculated for the Beck Depression Inventory and showed that 60 per cent (six patients) had changed clinically significantly in the DBT group compared with two patients in the TAU group. No significant changes were found in anxiety in either group and there were no group differences. In the DBT group there was a greater change in outwardly directed anger but not inwardly directed anger. There were no changes on either in the TAU group. Although a one-way ANOVA showed that the DBT group had reduced association across the three time points measured, there was no group by time interaction for this variable. There were no significant changes in healthcare utilisation for either group. However, the authors acknowledged that pre-treatment rates of hospitalisation were low and the time period studied was only three months. Whilst all women had to meet criteria for DSM-III-R BPD on the SCID-II at pre-treatment to be included in the trial, only three of the DBT patients and five of the TAU patients still met criteria at six months into treatment. The proportion changes were significant for both treatment groups and there was no significant difference between the proportions of each group. There was a higher rate of drop out in the DBT condition than in the TAU condition (17% vs 23% respectively, although this is not tested for significance) an outcome that, in other DBT studies, has been shown to be in favour of DBT.

The authors concluded that this study provided additional evidence for DBT as a successful treatment with BPD women and that it provided support for the possibility of therapists other than Marsha Linehan to effect positive changes in patients using this model. However, there are many limitations to the study, which the authors acknowledged which make it difficult to expect generalisation of this approach to men or to other settings or to a therapeutic situation with entry criteria which differ in any way from those of this study.

Linehan, Schmidt, Dimeff, *et al.*, (1999) present a small, randomised controlled trial of DBT with women with borderline personality disorder and comorbid drug dependency. DBT was modified because of the additional dimension of drug dependence and compared with treatment as usual. Some of the women allocated to the DBT group were also given drug replacement therapy when this was necessary, i.e. for those who were stimulant or opiate dependent. Intent to treat analyses were conducted and those in the DBT group (n=12) were shown to have higher days abstinent from drugs and alcohol than those in the TAU group (n=16) at four months, for the whole year between pre- and end of treatment, and for the 16 month follow-up point. There were no significant differences at eight and 12 months. At 16 months the DBT group showed better social and global adjustment, as rated by interviewers. Both groups showed significant reductions in frequency of parasuicides and state and trait anger. However, the rate of parasuicides at baseline was low. There were no significant differences in levels of service usage between the groups. There was a non-significantly lower rate of drop-out in the DBT group. Slightly better results were found in an analysis of the treated only people, however, this comprised seven patients in the DBT group and eleven in the TAU group. Effect sizes were calculated and considered by the authors to be large for behavioural sciences studies. An analysis of the amount of time spent in therapy between the groups revealed that those in the DBT group received significantly more hours of input than those in the treatment as usual group. This is the most difficult finding for the study as it introduces the possibility that it is the amount of input rather than the type that is important in producing the observed effects. The authors concluded that the study showed further support for DBT as an effective treatment for women borderlines and that, further, DBT could be extended to the treatment of drug dependency in this context.

Shearin and Linehan (1994) summarise the methodology and results of three studies of the effectiveness of this intervention for BPD. In Linehan (1991), female patients attending for outpatient treatment were randomised to group and individual DBT or to treatment as usual. The groups each consisted of 22 women who met criteria for DSM-III BPD and scored seven or above out of ten on the Diagnostic Interview for Borderlines. However, the women also had to have had an episode of parasuicide within the eight weeks prior to entering the trial and one other episode within the previous five years. Random allocation was done after matching for various clinically relevant characteristics such as history of parasuicide and hospitalisation. Patients were assessed at pre-treatment and four-monthly intervals and then again at six and 12 months post-treatment. The study showed that those patients in the DBT group had, in each four-month period during treatment, fewer episodes of parasuicide than the TAU group. They also had lower scores for medical risk of parasuicide than those in the TAU group. The DBT group continued to have fewer parasuicide episodes in the period between discharge and six months post treatment but there was no difference between the groups at the 12-month assessment point. In this trial, a significantly greater proportion of those allocated to DBT actually started treatment after the initial assessment (100% versus 73%). Those patients in the DBT group also had significantly fewer days of psychiatric hospitalization over the year post discharge although, in contrast to the results about parasuicide, there was no difference between hospitalisation rates for the two groups between discharge and six months but over the whole year the DBT group had fewer. This study also assessed depression, hopelessness and reasons for living using self-report scales and found no group differences. A sub-group of these participants was given a more comprehensive battery of questionnaires and were also blind rated by clinicians. The DBT group showed significantly better scores on measures of general adjustment (GAS), global social adjustment, interpersonal relations with friends, employment, overall work performance, financial adjustment, household duties, anger, anxious rumination, emotional regulation, and interpersonal problem solving at discharge. However, only some of these areas were maintained post treatment and the DBT group remained within the impaired range of functioning compared with "norms". In reviewing this study, the authors concluded that these results suggested that those who received DBT were better able to tolerate their distress and to continue to function while distressed. What this study

did not address is *change* in the individuals in each group. It would be more helpful to know about the differences between groups in the sizes of changes effected by the treatment.

There is also an interesting study described in this review testing some hypotheses of the DBT theory looking at the importance of certain aspects of the therapy and using response (reduction in parasuicide) as the evidence. This study gave suggestive support for the importance of the dialectical nature of the treatment and of the underlying ethos of providing the least pejorative explanation of the patients' behaviour. In neither case, however, is anything known about what else was going on in the therapy at the time and whether other components that co-occur could be equally as important.

A small study of 11 and eight randomly assigned participants was designed to test whether the key component of DBT treatment is the skills training approach and therefore, whether this aspect of the treatment was necessary and sufficient to produce the results previously observed. The study found no difference between the group assigned to skills training without the DBT individual therapy and a no-treatment at twelve month follow-up on any variable (outcome measures were the same as those in the first study described above). However, the group sizes were very small and the previous study also failed to find differences at twelve months post treatment so this study did not provide very strong evidence that the skills training aspect of DBT is insufficient on its own but perhaps indicated the need for more work in this area.

In this study, 26 women presenting for outpatient treatment were randomly assigned to DBT versus treatment as usual. An intent-to-treat analysis conducted using ANCOVA (not repeated measures because of missing data points) showed DBT participants reported significantly less anger and had significantly better GAS scores following treatment than TAU patients. However, blind interviewer-rated global life satisfaction did not differ significantly between experimental and control groups. In a second analysis of treatment completers (i.e. not intent-to-treat), a similar pattern was found with DBT patients again having better levels of self-reported anger, global social adjustment and GAS. In addition, in this analysis interviewer-rated Global Social Adjustment was also significant. This study also attempted to take the impact of therapist characteristics on outcome into account and found no differences in the characteristics of the DBT and Treatment as Usual therapists.

Observational studies

Davidson and Tyrer (1996) report a single case series analysis of six patients given short-term cognitive therapy (ranging from nine to 18 sessions). Five of the patients were male, four of these had anti-social personality disorder and two borderline personality disorder. The only female patient had borderline personality disorder. It is not clear how diagnoses were made but patients were also screened for Axis-I disorders and found not to have any. The cognitive therapy provided was all provided by one therapist (the author) and followed a manual approach deriving from the cognitive approaches of Beck, Young and Linehan. Interrupted time series analyses were conducted on the daily records kept by patients about their dysfunctional attitudes and behaviours. Where possible the patient reports were corroborated. These attitudes and behaviours were identified by each patient at the beginning of treatment as targets for change. The authors concluded that the study showed that some changes could be effected in these patients even with short periods of cognitive treatment. However, there were no statistically significant changes over time for any patient and all ratings were self-ratings.

Hoffman & Hooley, (1998) present a single case study of a 30-year old female patient meeting all nine criteria for borderline personality disorder and also with comorbid depression who had had 25 inpatient psychiatric admissions in the previous ten years. The patient's borderline difficulties were conceptualised as being closely affected by difficult family interactions. The patient was treated with DBT in individual sessions and the family were given DBT-FST (DBT, Family Skills Training), which is given in a multi-family group setting. The therapy had a particular emphasis on Expressed Emotion. Amongst other outcomes, which included increased friendships and the gaining of part-time employment, the patient stayed out of hospital for the longest period recorded since her first psychiatric admission.

Kern, Kuehnel, Teuber, *et al.*, (1997) provide two case studies of females with borderline personality disorder. In the first case a 40 year old woman with an inpatient psychiatric history described as “almost continuous” and extreme self-harming behaviour, which included ingestion of foreign objects and poisonous liquids such as drain cleaner was given modified DBT (Linehan, 1993a). In this case in comparison with the twelve month period before the patient’s transfer to this treatment, the twelve months in which she was receiving DBT showed a “dramatic” reduction in the number of incidents of swallowing foreign objects (from 12 to six), the number of times “extreme measures” (use of a plastic face guard to prevent the patient putting things in her mouth and the use of five-point restraints to prevent self-harm) were required (57 to none and 35 to 11 respectively) and the number of days one-to-one observation was required (from 184 days to 52). The reduction in staff costs attributed to this reduction in problematic behaviours was costed at \$52, 800. In the second case, a 27 year old woman with a low IQ (75) and a history of more than 50 previous admissions and, again similarly extreme levels of self-harming behaviours, was given a behavioural treatment plan in which she was expected to attend all ward activities without exception. Positive reinforcement for improvement in social skills included pats on the back and praise. This patient was seen to engage with ward activities within the first few months of the plan and the use of five-point restraints was also reduced.

These cases are examples of approaches to women with borderline personality disorder who are dangerous primarily to themselves.

Cognitive Analytic Therapy

Cognitive Analytic Therapy (CAT) is a psychotherapy devised by Anthony Ryle through “the use of repertory grids to measure and describe change in psychodynamic psychotherapy” (Ryle, 1997). As the name implies, CAT integrates cognitive and psychoanalytic ideas. In a similar way to TC treatment, CAT emphasises the active involvement of the patient in the treatment and a collaborative style of relationship between the therapist and patient (Ryle, 1997). For example, patients are given reading materials explaining some aspects of the therapy and instructions on self-monitoring. The emphasis in this therapy is on description rather than interpretation, which, it is thought “acknowledges the patient’s experience and provides a basis for increasing the capacity for self-reflection”. CAT is usually delivered within a prespecified time limit, usually 16 weeks. The aim of the early sessions and an emphasis of the therapy as a whole is to describe, accurately, the patient’s styles of relating and thinking. Although not originally designed only for borderline patients, CAT has been adapted specifically for borderline patients and a theoretical model in which the symptoms of borderline personality disorder are seen to reflect the partial dissociation of personality into “self-states”.

High secure

Experimental studies

There were no experimental studies found in this setting by this review.

Observational studies

In two case studies of males meeting criteria for borderline histrionic and anti-social personality disorder, as measured by PAS, Ryle (1995) provides some information about outcome at one year post 22 sessions of CAT treatment. In both cases the patients no longer met caseness for personality disorder. The authors concluded that the self-states sequential diagram (SSSD) is useful in describing patients and charting treatment course and can also aid in the therapist being able to avoid being drawn into counter-transference problems unhelpfully.

Pollock & Kear-Colwell, (1994) present two case studies of women in a medium secure environment with convictions for stabbing “boy friends”. Kelly’s personal construct theory was used to create repertory grids exploring the abused-abuser dimension. Both women had been given diagnoses of borderline personality disorder, one also had a mood disorder and one was in the medium secure facility following two years in special hospital care for the stabbing offence. Both women had severe histories of sexual abuse and high levels of self-harming and anger. The authors drew similarities between the two cases suggesting that in both cases the grids provided

evidence that the women viewed themselves as guilty offenders who were abusive, rather than abused victims. In both cases there was a difficulty acknowledging their victimisation and attempts to do so led to increased guilt. The authors suggested that both women could be seen to have “neurotic dilemmas” in terms of Ryle’s conceptualisation of the procedural sequence object relations model which meant that they had only a limited range of roles they were able to play in their interactions with others.

Following CAT therapy, which was aimed at increasing the women’s understanding of their reciprocal roles in their relationships, grids were repeated. Follow-up is only reported in detail for one of the case studies who repeated the grid at eleven months into therapy. The grid showed that the elements of “self-as-I-am” and “self-as-offender” were spatially more distant and both were further from “myself-as-victim” than in the initial grid. This in turn was more distinct from “person-who-feels-guilty” than previously and “myself-as-I-am” became more positively associated with being “trusting, guilt free, law abiding and not harmful”. The authors commented that similar results were found for the second case. No negative outcomes were mentioned.

The grid outcomes were supplemented by behavioural observations (although how these were obtained is not stated), which showed that one case had not self-mutilated at all in a four-month period and had her Mental Health Act Section lifted. The second case had been discharged into the community. Both women had re-entered intimate relationships without evidence of disturbance “over a significant period”. Unfortunately, the period of follow-up was not stated so there was no indication of the lasting nature of these impressive changes. The authors concluded that it is very important for the therapist to collaborate with the patient in establishing their position on the abused-abuser continuum before beginning treatment as incorrect assumptions about this can lead to dramatic increases in distressing guilt. They suggested that once that is done therapy may be able to work on a rational analysis of the individual’s actions and guilt. They also concluded that this approach warrants further exploration with both male and female offenders.

Pollock and Belshaw (1998) present two case studies illustrating the use of CAT therapy with personality disordered offenders. One case was male, the other female. Both cases had complex diagnoses, respectively, borderline personality disorder with histrionic and psychopathic features and factitious disorder, sexual masochism and paedophilia; and borderline, passive-aggressive and histrionic personality features with morbid jealousy, panic disorder, recurrent depressive episodes and substance abuse. Both cases had previously received CBT therapies without success and the female case had also tried group analytic therapy unsuccessfully. The two cases differed considerably in terms of their offending. The male pursued younger males by engaging with them socially, then binding and gagging them and subjecting them to torture, sexual and physical assault, whereas the female shot her husband without any prior criminal history. The male patient was treated in medium security (having previously been treated in maximum security) and seen once weekly for 24 weeks. At two years follow-up the patient had made progress towards independent living in a hostel and the frequency of his self-injury was very much reduced. However, the patient continued to report overwhelming masochistic fantasies. The female patient was treated for a similar length of time and frequency but in an outpatient setting, as part of probation conditions. Two years after treatment, the patient had entered an intimate relationship without any evidence of the difficulties in her marital relationship. However, again, this patient reported continuing to have distressing fantasies, although they were controllable. These two case studies provide interesting descriptions of the utility of CAT in forensic settings with personality disorder. However, the usual difficulties with generalising from case study reports apply. There are no comparisons made with similar cases receiving different treatment or with other cases that perhaps received similar treatment but did not achieve such positive outcomes. In addition, in this study, the two-year post-treatment follow-up allows for many other effective interventions or experiences which are not controlled for or discussed in this paper to have influenced the patients’ progress. The selection of patients to report is not discussed and there is no information on which to judge the representativeness of these patients of the group of personality-disordered offenders.

Outpatient

A small prospective, pre- and post-design study conducted at the CAT clinic at Guy’s hospital in UK, explored the six and 18-month outcomes for a group of 27 patients (60% women) with BPD

(Ryle & Golyukina, 2000). Treatment was given for an average of 24 sessions plus four follow-up meetings with the therapist. The study used the PAS to assess personality disorder at baseline and six month, post treatment follow-up. Patients were categorised as “improved” or not on the basis of whether they continued to meet criteria for BPD at follow up. Fifty per cent of patients were improved in this way and 50 per cent unimproved. Significantly more of the improved group were employed in the year prior to treatment, fewer of them had histories of self-cutting and they had lower DSM index of severity scores. Analyses of covariance (pretreatment scores) showed changes on various other measures using BDI, IIP, SCL-90, SQ, with greater improvement in the improved group. Further improvements were found in both groups at 18-month follow-up.

Kerr, (1999) presents a single case study of 29 sessions of CAT over 36 weeks with a “young” man with a diagnosis of borderline personality disorder. The treatment is described by the author as “only partially successful”, with the patient continually demanding to be admitted to hospital, and treatment being terminated at this point, and this is attributed to the severity of the man’s disorder and his missing sessions of treatment. However, other therapists identified some small improvements in the patient such as an easing in their relationships with him and an increase in his insight into his own behaviour. Neither was the patient admitted to a psychiatric hospital during the period of his CAT therapy. The authors noted that a significant outcome of conducting CAT with this patient was the increased understanding within the clinical team of the difficulties of working with this disorder and ways of containing the splitting and anxiety provoked in teams by such patients.

Summary

Within high security settings, the evidence found in this review for CBT approaches does not augment that found by previous reviews (Dolan & Coid, 1993; Bateman & Fonagy, 2000; Perry, Banon & Ianni, 1999b). No improvement has been made in research methodologies employed in high secure settings since the last joint review of treatment (Dolan & Coid, 1993) and there is no evidence for drawing different conclusions. The four studies identified do not provide grounds for generalisability. Similar conclusions must be drawn with respect to CAT. However, these studies at least suggest that it is possible to provide CBT and CAT in high secure settings.

With respect to DBT, there are some preliminarily positive findings in a high secure setting with respect to reducing self-harming incidents and dissociation in women patients. This is very limited evidence although it is the more encouraging given the supporting evidence for this approach in other settings. In particular, there is a clinical implication of the finding in this study that there was an initial post treatment worsening of self-harm which “spontaneously” improved at the next follow-up point. What isn’t known is whether this is a snapshot of a cyclical pattern of self-harm or whether the improvement is stabilised at longer follow-up. For the studies of DBT in other settings (mostly outpatient) the evidence mostly concerns changes between the beginning and end of treatment. The evidence for longer-term (over one year post-treatment follow-up) improvement shows poor maintenance of changes in parasuicidal behaviours and, equivocally, some improvement on more general measures of social or global adjustment.

At lower levels of security the evidence for CBT approaches is more encouraging and the study methodology is of higher quality (the majority of RCTs in this chapter were conducted in outpatient settings and were of CBT and DBT). One study that assessed violence (domestic violence) (Saunders, 1996), suggested that CBT might be appropriate for domestic violence offenders with high anti-social scores, whereas a psychodynamic approach is more effective with offenders scoring highly on dependent PD. Interactions between anti-social personality disorder scores and drinking outcomes are suggested by this literature although there is little robust support for the relative effectiveness of CBT or other treatment approaches in effecting outcomes. Evidence shows that alcohol and substance misuse can be affected by treatment in anti-social personality disorder. The only study of Reasoning and Rehabilitation with personality disordered clients showed no effects.

Limitations

None of the studies of CBT-type therapies assessed recidivism or violence as an outcome, with the exception of Saunders (1996), although some studies did assess anger, and for all studies in

high security the last follow-up point was whilst patients were still in the therapeutic institution, even though they were no longer receiving the treatment explicitly under study. None of these studies controlled for medication effects and it is highly likely that most of the participants were also receiving psychotropic medication.

Only three of the studies reviewed, two of CAT, (Ryle, 1995; Ryle & Golyukina, 2000) and one of CBT for panic disorder (Hoffman, Shear, Barlow, *et al.*, 1998) assessed personality disorder status as an outcome. In both of the CAT studies, reduction in diagnosis of BPD was reported. However, the evidence currently available for this treatment is too weak to form the basis of policy-making. In the CBT treatment study both CBT and imipramine reduced scores on all personality disorders except schizoid and anti-social.

Having suggested that DBT treatment seems to have some positive support, caveats about this evidence need to be reiterated. Most of the evidence is from outpatient settings. The studies are only conducted with women, therefore, the appropriateness and effectiveness of this treatment for men is unknown; the gains shown by this treatment have not been demonstrated in the longer term (one year post treatment) and few of the studies use corrections for multiple testing. In the main, the outcome variables used to assess the effectiveness of DBT have concerned cognitions, such as coping beliefs, mood, usually depression, and parasuicidal behaviours and hospitalisation. DBT's strength is in reducing dissociation and self-harming behaviours, it is not a treatment for interpersonal violence or for core personality disorder. With the exception of one study assessing effectiveness with BPD comorbid with substance abuse, no studies of DBT have evaluated the treatment with different diagnostic groups. Although rigorous assessment is made of the BPD diagnosis, studies do not assess for the presence of other Axis-II disorders. The extent of multiple diagnoses is, therefore, largely unknown. The DBT studies support findings in other studies (see particularly the chapter on psychodynamic psychotherapy) that the symptoms or behaviours explicitly targeted by treatment are those that show the greatest change. In some cases, of course, this may be more an effect of the author's measurement choice. However, in the DBT studies multiple measures were used and many did not show improvement. Further research into this treatment is required.

This review was designed to identify "promising" treatments. To complete this task the definition of promising has to be comparative and a low threshold has to be set at which "promising" does not meet the ideal requirements of a "evidence-based". There is little from the studies of CBT that suggest that any one approach is more promising than any other in terms of research evidence. DBT is marginally ahead, although the study conducted with patients in high security suggests that DBT (or CBT in general) may not be suitable for patients with limited cognitive capacity. Perhaps the most promising point is that those treatments which have clearly defined treatment goals and very clear protocols (or manuals) such as DBT also seem to have the clearest research methods (even if the results from them are difficult to interpret at times). An important point that is often made in the clinical literature but is also often lost is the key element of consistency and clarity of approach with personality disordered patients, who have difficulties with limits, knowing the limits of socially acceptable behaviour, for example. Underpinning that is a clear understanding by the staff team of the task to be undertaken and a lot of opportunity for them to process their interactions with personality disordered patients. Another strength of the DBT approach is that supervision of staff is *part of* the therapeutic model.

Highlighting findings for women

All the evidence reviewed in this chapter regarding Dialectical Behaviour Therapy (DBT) pertains to the treatment of women. This treatment is, as yet, untested in male patients. DBT treatment was developed specifically for women with borderline disorder. There were no studies revealed by the search strategy that assessed the effectiveness of this approach with men. This does not mean it has not been used on males. One or two studies of other treatments (CBT, CAT) only concerned women. None of the studies with mixed participants assessed the outcomes by gender.

Highlighting findings for ethnic minorities

Two of the studies of DBT mention the ethnicity of the participants. In both of these 75 per cent or more are described as “white” or “of European descent”. Neither study attempts to analyse results in terms of ethnicity. In Fisher and Bentley’s 1996 study of substance abusers the majority of participants were “black”. None of the studies of treatments assessed outcomes by ethnicity either. Very few of the studies gave a breakdown of the ethnic composition of their participants and in the majority of those that did, by far the majority of the participants were white. There were no studies of treatments in this section, which declared that they had been specifically developed, or specially adapted for particular ethnic or religious groups. There is no data from which inferences can be drawn about the differential appropriateness of these treatments to people of differing ethnic backgrounds.

Table 3.2 Summary table of cognitive behavioural treatment

Setting/last follow-up point	Author (date)	Study type	Sample: diagnosis, N, gender	Controls: diagnosis, N, gender	Treatment	Attrition	Outcome measures/ results
Prison post treatment	None						
Prison during treatment	None						
High secure post treatment	(Hughes, Hogue <i>et al.</i> 1997)	4b	9 All males? All psychopathic disorder + mean 3 PD diagnoses each. PCL-R scores over 30 were excluded	None	Group CBT within a therapeutic milieu. Individual "treatment" added as needed At least 2 groups attended	60% completed	Follow-up period not stated. 31 outcome measures collapsed into standardised direction of global change score. Significant net positive change. PCL-R factor 1 score - very related to change
High secure post treatment	(Quayle and Moore 1998) ⁸	4b	8 males (3 psychopathic disorder, 5 MI)	10 males (8 psychopathic disorder, 2 MI)	Group CBT Interpersonal Relations (IPR) vs Anger Management (AM) 7-9 months Young Men's Unit, Broadmoor Special Hospital, UK	?% of entrants completed	3 wks post disch, IPR Group: trend towards reduction on all subscales of IIP and improvements on assertiveness responsibility controlling. AM Group: increased assertiveness No change on in-house Anger Inventory or staff ratings of peer relationships. Group mean changes concealed wide variation in individual change over time
High secure post treatment	(Gacono 1998)	4c	2 males PCL-R scores, 23 & 15	None	Various CBT programmes e.g. anger management, relapse prevention ?16 months		? follow-up period. Rated as improved by therapists. Rorschach changes consistent with expected treatment changes.
High secure during treatment	Donnelly & Guy (1998)	4b	12 males (8 schizophrenia, 3 drug included psychosis, 1 depression, 5 comorbid PD)	None	CBT and R&R State Hospital 10 weeks		IVE - no difference, SCS - no difference, STAI - no difference, ATT - no difference, WAS - no change, although some individual differences.
Medium secure post / during treatment	None						
Inpatient	(Fisher and	1	19 inpatients, 24%	19 outpatients	Disease and recovery model	38= 86% of	? Follow-up Time by treatment

⁸ This one paper compares the results from two pre-post studies of two different group treatments.

Setting/last follow-up point	Author (date)	Study type	Sample: diagnosis, N, gender	Controls: diagnosis, N, gender	Treatment	Attrition	Outcome measures/ results
post treatment	Bentley 1996)		whole group women, 50% whole group Cluster C PD (AVPD), 50% Cluster B (ASPD)		(DR) (group) vs CBT (group) vs no treatment (NT) 3x45mins pwk for 12 wks	entrants	by setting analyses using ASI. Outpatients benefited more from CBT than DR or NT on ¼ ASI indices. Inpatients improved only in family and social relations but in both treatment groups
Inpatient during treatment	Springer <i>et al</i> (1996) ⁹	1	15 PD MCMI-II	16 PD MCMI-II	Exp- Creative Coping skills-based on DBT control-wellness and lifestyles 10 days +	46% completion	Both groups improved equally. BDI HS ASIQ CCQ
Inpatient post treatment	(McKay, Neziroglu <i>et al.</i> 1996)	4b	21, 43% women PD + OCD	None	Behavioural treatment for OCD 4 wks (7.5 hrs pw)		At discharge SCID-II 3.7 pd diagnoses reduced to 2.8
Inpatient post treatment	(Ball, Kearney <i>et al.</i> 2000)	4b ¹⁰	30, 73% women with histories of depression, 89% of total (n=61) personality disorder	31, 77% women with histories of depression	CBT vs CBT + Assertiveness Training 5 wks (3hrs pw)		Discharge and 1-3 yrs post discharge CBT only: BDI improvement severe to mild ATQ improvement HS reduction CBT + AT: BDI improvement severe to mild ATQ reduction HS reduction BAI no sig diff
Outpatient post treatment	(Kalman, Longabaugh <i>et al.</i> 2000)	1	149 sociopath alcoholics CPPI-So, 18%female	107 non-sociopathic alcoholics, 31% female	4 weeks 5/7. Individually focused CBT community reinforcement approach	229-149 (65%)	2 years from start TLFB sociopathic group had more drinking days. No sociopathy by treatment interaction
Outpatient post treatment	(Longabaugh, Rubin <i>et al.</i> 1994)	1	48 anti-social PD alcoholics, 69% male (overall)	181 non-ASPD alcoholics	Individually focused extended CBT, Relationship enhanced CBT, 20 sessions + boosters 1y	149 (31 ASPD) 65% completers/ full information	6 months follow-up from end of treatment. DIS abstinence - ASPs better abstinence rates than non-ASPs ASPs in extended CBT have fewest drinks on drinking day, those in relationship enhanced CT have most.
Outpatient Post Treatment	(Project Match 1997)	1	1,726 75% male anti-social PD alcoholics (% unclear) C-DIS		CB coping skills therapy, motivational enhancement therapy, 12-step facilitation therapy, 952 outpatient, 774 aftercare 12 weeks	90% completers	1 year: little difference in outcome by treatment type. Outpatients without psychopathology had more abstinence with 12-step than CBT. Greater sociopathy was associated with worse outcomes in early but not late

⁹ This study also appears in the DBT section.

¹⁰ Patients were allocated by clinical need

Setting/last follow-up point	Author (date)	Study type	Sample: diagnosis, N, gender	Controls: diagnosis, N, gender	Treatment	Attrition	Outcome measures/ results
							follow-up.
Outpatient post treatment	(Saunders 1996)	1	55, 0% women, 40% anti-social PD. All domestic violent offenders	52 0% women 40% Anti-social PD All Domestic Violent offenders Process Oriented Psychodynamic Group XREF Gill	Feminist CBT, 20 weeks	Completion +16/20 sessions. 62% completion for FCBT, 66% for PPT.	4yrs post treatment, both treatments provided recidivism rates of 45-50%, Questionnaire results: 33% women observed only positive change, 50% observed mixed change, ASPD better in CBT, dependent Pd better in psychodynamic group
Outpatient post treatment	(Alden and Capreol 1993)	1	76, 45% women avoidant PD divided into 2 styles of interpersonal problems	Waiting list control	Three different Group CBT conditions 10 wks (2.5hrs pw)	?	? Follow-up period. Overall treatment effect for each treatment vs control. Treatment by interpersonal problem interaction
Outpatient post treatment	(Cottraux, Note <i>et al.</i> 2000)	1	32, 59% women. All social phobia. 75% whole group avoidant PD	35 57% women All social phobia	CBT & social skills training vs supportive therapy, 12 wks & 12 wks	75 & 66% completers	On disch Greater improvements in CBT group on social phobia (FQ), avoidance, fear (LSAS) and quality of life (QOL)
Outpatient post treatment							
Outpatient post treatment	Evans <i>et al</i> (1999)	1	18 Cluster B PD PAS Deliberate self-harm	16 TAU	CBT/ MACT 2-6 sessions	94% followed-up	6 months post treatment: self-harm - lower suicide attempts in MACT group HADS - only depression scale significant improvement. Observed average cost of care 46% less with MACT
Outpatient post treatment	Stravynski <i>et al</i> (1994)	1	14 (9males). Avoidant PD, not Axis I, not on medication	17 (9 males). Avoidant PD, not Axis I, not on medication. Alternative treatment	Social skills training or SST in vivo 14 x 1.5h sessions	90% completers Attrition rate higher in in vivo group	3 month follow-up. Patients in both treatments improved. Equal on most o/c measures BSI STAI MMPI HAM SSIAM Obs
Outpatient Post Treatment	(Clopton, Weddige <i>et al.</i> , 1993)	4b	18 PD 24 traits of PD Clinical impression retrospectively	49 chemical dependency, no PD	4-month drug rehab aftercare programme		70% of inpatients completed aftercare PD as likely as controls to remain abstinent
Outpatient	(Gude, Monsen	4b	47 Cluster C	None	Daily schema-focused		94% completers, 12-15m follow-

Setting/last follow-up point	Author (date)	Study type	Sample: diagnosis, N, gender	Controls: diagnosis, N, gender	Treatment	Attrition	Outcome measures/ results
post treatment	<i>et al.</i> , 2001)		personality disorder (87.5%) and agoraphobia 75% female SCID-II		programme, 5w agoraphobia treatment, 6w personality focused treatment, 12-15m homework phase. Modum Bads Nervesanatorium, Norway		up. Affect-consciousness-interview. Sig reduction in Cluster C PD scores 21.3% PD (4 new)
Outpatient post treatment	(Hengeveld, Jonker <i>et al.</i> , 1996)	4b	10, 100% female, 7 BPD recurrent suicide attempters	None - recruited as entered hospital	8 weekly sessions + 2 boosters, Group CBT, Leiden University Hospital	50% completers	10 months BDI – no sig difference at start and end of sessions SCL-90 no sig differences. BPD suicide attempters do not respond to this treatment
Outpatient post treatment	(Moorhead and Scott 1999)	4b	20, 60 % female PDQ-4, 90% at least one PD	None	Cognitive therapy 3-38 h (median =20h)	75% completers	4/5 dropouts had Cluster B - more difficult to engage in CT. All outcomes showed significant change: BDI DAS hopelessness scale ATQ STAI-S
Outpatient post treatment	(Barber and Muenz 1996)	4b	250 depressed with avoidant PD (n=21) or OCPD (n=13) both (n=14) HRSD PAF		Cognitive therapy. Interpersonal therapy		20% included in final analysis HRSD: OCPD improve more relatively with IPT. AVPD improve relatively more with CT BDI - no significant interaction between group and treatment
Outpatient post treatment	(Coon 1994)	4c	1 male avoidant PD and dsythymia clinical judgment	None	Schema focused CBT Family group 22 sessions		1y follow-up. BDI (19-3 at follow-up). SUDS - Decrease in subjective distress
Outpatient post Treatment	(Hoffman, Shear <i>et al.</i> , 1998)	1	Patients with panic disorder, 59.8% female, CBT treatment (n=74)	82 treated with imipramine	CBT panic control treatment – 11 sessions	CBT – 24% Imipramine – 38%	Significant reduction on personality disorder characteristics pre- and post-treatment – greater reduction for CBT group
Outpatient post treatment	(Hoffman and Hooley 1998)	4c	1 female BPD clinical judgment	None	CBT/DBT 2x 6 months, The New York Hospital		Patient stayed out of hospital for longest period in 10y. Part time employment
Other post/ during treatment	None						

Table 3.3 Summary table of dialectical behaviour therapy

Setting/Last Follow-up point	Author (Date)	Study Type	Sample: diagnosis, N, gender	Controls: diagnosis, N, gender	Treatment	Attrition	Outcome measures/ results
Prison post/ during treatment	None						
High secure post treatment	(Low, Jones <i>et al.</i> 2001)	4b	17 women borderline PD + self-harm, 70% also other PDs	None	DBT (modified) One year	59% included in outcome analyses	6 mnth post disch. Self-harm reductions for 80% women Improvement: IDAS depression but not BDI score. Dissociation survival & coping: no improvement: RLI BHS BSSI BDI IS
High secure during treatment	None						
Medium secure during treatment	None						
Medium secure post treatment	None						
Inpatient post treatment	(Springer, Lohr <i>et al.</i> 1996) ¹¹	1	15, 68% women for total group n=31 multiple PD diagnoses (MCMI)	16	DBT (modified – creative coping skills group) 10 days vs Wellness and Lifestyle group		On discharge both groups: BDI improved, HS improved, ASIQ improved, STAI EI ILCS CCQ. Patients rated the CCS group as more helpful
Inpatient post treatment	(Bohus, Haaf <i>et al.</i> 2000)	4b	24, 100% women BPD, those with Axis-I were excluded, 79% antidepressant free	None	DBT (modified) University Hospital for Psychiatry & Psychosomatics, Frieberg, Germany		1 month post-discharge, 19 outcome measures improvements: LPC SCL-90 BDI STAI DES No diff: HAMA HAMD STAXI
Inpatient post treatment	(Kern, Kuehnel <i>et al.</i> 1997)	4c	2 women BPD	None	DBT (modified) 12 months		On discharge Clinical observation Various behavioural improvements e.g reduced use of restraints, less self-harm

¹¹ This study also appears in the CBT section.

Inpatient During Treatment	None						
Outpatient post treatment	(Davidson and Tyrer 1996)	4c	12, 42% women BPD or ASPD	None	CBT with “elements” of DBT 9-18 sessions	50% completed (5male, 1female)	Patient chosen markers of change. Fluctuations over time but no sig diffs over time for any patient
Outpatient post treatment	(Linehan, Heard <i>et al.</i> 1993)	1	20 women BPD + parasuicide	21 women BPD + parasuicide	DBT vs TAU	83% data on suicidal behaviours 77% data on other variables (n=9, n=11)	6 months and one year post discharge. 6mnths DBT group better improvement than TAU on: No parasuicide episodes, no episodes medically treated. Gains not maintained to 1yr f-up
Outpatient post treatment	(Linehan, Schmidt <i>et al.</i> 1999)	1	12 women BPD + substance abuse	16 women BPD + substance abuse	DBT (modified) + drug vs TAU + drug ? treatment length		12 months. Time Line Follow-Back DBT group higher proportion of drug abstinence days. 16mnths DBT better social and global adjustment no diff: medical and psychiatric interventions
Outpatient post treatment	(Linehan, Tutek <i>et al.</i> 1994)	1	13 women BPD + parasuicide	13 women BPD + parasuicide	DBT vs TAU		On discharge (12 months) DBT better than TAU on trait anger, GAS and social adjustment. No diff: self-report social adjustment, global life satisfaction
Outpatient during treatment	None						
Other during treatment	(Koons, Robins <i>et al.</i> 2001)	1	10 women BPD	10 women BPD	DBT vs TAU Women Veterans Comprehensive Health Center (primary care), USA		6mnths into treatment 20 women represent 71% of group entering trial. DBT better than TAU on hopelessness, suicidal ideation, anger. Parasuicide, <input type="checkbox"/> hospitalization, BPD no diff
Other post treatment	None						

Table 3.4 Summary table of cognitive analytic therapy

Setting/Last Follow-up point	Author (date)	Study type	Sample: diagnosis, N, gender	Controls: diagnosis, N, gender	Treatment	Attrition	Outcome measures/ results
Prison post / during treatment	None						
High secure post / during treatment	None						
Medium secure during treatment	Pollock & Kear Colwell (1994)	4c	2 females BPD One also mood disorder Clinical Judgment	None	CAT 11 months +		Until 11months into treatment. Repertory grid - generally more +ve, self harm decreased
Medium secure post treatment	None						
Inpatient post / during treatment	None						
Outpatient post treatment	Ryle (1995)	4c	2 male BPD HISTD ASPD PAS	None	CAT 18 months		6m and 1 yr. Case one: decrease in substance abuse and violence. No caseness for PD Case two: no PD
Outpatient post treatment	(Ryle and Golyunkina 2000)	4b	39, 60% of completers women BPD	None	CAT 24 sessions + 4 follow-ups	70% follow-up	6m and 18m 50% patients no longer BPD, greater improvements in this group on all other neurotic measures. 18m showed further improvement in all patients on neurotic measures
Outpatient post treatment	(Kerr 1999)	4c	1 male BPD	None	CAT 36 wks (29 sessions)		6 weeks. No rehospitalisation during therapy time but multiple admissions immediately afterwards. Judged by therapist as "partially successful" outcome
Outpatient during treatment	None						

Other During Treatment	Pollock & Belshaw (1998)	4c	2 (1 male) BPD with histrionic and psychopathic features Clinical Judgment	None	CAT 24 weeks (once/week). One medium secure. One probation		Case one decrease in self-harm, moved to hostel. Case 2 discharged 'with few problems'. Positive outcomes for both in some RRP's and self-states.
Other Post Treatment	None						

Psychodynamic psychotherapy

Introduction

This chapter reviews outcome studies of psychodynamic psychotherapy with personality-disordered patients. Psychodynamic psychotherapy is the treatment of a patient or patients in the context of a therapeutic relationship in which the emotional involvement of a trained therapist is a clearly recognised factor. A psychodynamic approach to personality disorder emphasises personality structure and development. The theoretical assumption is that behaviours and actions have a personal meaning to the individual as a result of their thought processes and emotional states. According to psychodynamic theory, personality disordered individuals who commit anti-social and/or dangerous acts have only restricted access to, and ability to think about and process, their subjective mental states. They are, therefore, more prone to act impulsively and aggressively (Cordess, 2001). Psychodynamic psychotherapy distinguishes itself from other forms of psychotherapy by paying particular attention to unconscious and partially conscious, as well as conscious, mental states. These are explored as they appear in the therapist-patient interaction. In particular, psychodynamic psychotherapists working with offenders (sometimes referred to as forensic psychotherapists) pay particular attention to the possible re-enactment of elements of the offending behaviour within the therapeutic relationship. Addressing how the patient thinks, feels and acts through the vehicle of the therapeutic relationship provides them with a cognitive and emotional understanding of themselves and their interpersonal relationships. In other words, their insight is increased which allows for the development of increased self-control and empathic understanding of themselves and others. These alternative skills allow the personality disordered person to take individual responsibility for their actions and decrease their reliance on maladaptive ways of responding to their emotional and cognitive states, which have previously resulted in anti-social and dangerous acts.

This chapter reports outcome studies of psychodynamic psychotherapy of brief and long-term duration, conducted individually or in groups across a wide range of settings. Studies which identify psychodynamic psychotherapy as the primary treatment in inpatient or day patient settings are included here. However, studies which include psychodynamic psychotherapy as a component of treatment in a therapeutic community are reported in the section on Therapeutic Community Treatment, while studies looking at the effectiveness of cognitive analytic therapy are in the Cognitive Analytic Therapy section.

Psychodynamic psychotherapy: the evidence before 1992

In their review of the literature, (Dolan & Coid, 1993) reported few studies of the independent use of psychotherapy for psychopathic patients. They concluded that the effectiveness of short-term outpatient therapy had, at the time, only very limited support. They identified two studies that showed longer-term gains and these were of enforced group treatments with male offenders (Reckless, 1970; Carney, 1977).

Inpatient and prison studies

Stein & Brown, (1991) ran what they describe as an interpersonal and psychoeducational group with violent patients held in a maximum secure hospital. However, the group included a high percentage of psychotic patients (53%) as well as the 20 per cent with anti-social personality disorder and 16 per cent with other personality disorders.

Therapeutic factors found to be important in mediating change in other groups (Yalom, 1975) were not found to be useful in this group. The authors concluded that these patients' personality characteristics restricted their ability to form a cohesive group. However, the heterogeneity of the sample should be noted.

Maas, (1966) developed a group treatment programme, which combined 'actional procedures' derived from psychodrama techniques with group psychotherapy. Forty-six 'sociopathic' women prisoners were randomly allocated to either a treatment group or control group. At the end of 26

therapy sessions the treated group showed a significant improvement in personal identity and consistency in reactions to others. Maas concludes that 'actional procedures' may be a useful adjunct to group psychotherapy.

One of the few studies of group psychotherapy in offenders which used a matched control group is that of Jew, Clanon & Mattocks (1972). Male personality disordered offenders received psychoanalytically-oriented intensive group therapy for eight hours for 18 months. Participants were matched on factors related to recidivism with men imprisoned at the same time who did not receive therapy. Although the rate of parole reconviction in the first year was significantly lower for the treated group, at four years the difference was no longer significant. Jew *et al* suggested that a lack of support for the paroled men may have contributed to their reoffending. Some 24 years later (Reiss, Grubin *et al.*, 1996) conclude that social integration into the community after discharge may help prevent future reoffending.

In a naturalistic study, Kozol, Boucher & Garofalo (1972) described group and individual treatment for dangerous psychopathic offenders (mainly sex offenders). Reoffending data at 43 months found a slightly higher recidivism rate in the group judged to be non-dangerous and released earlier. There were no standardised measures of diagnosis or psychological change in this study. Participants seem to have been deemed as psychopaths because they were incarcerated.

Outpatient studies

Many early studies describe the provision of psychotherapy group work for violent and or behaviourally-disturbed men and women who may or may not have a personality disorder. Studies are uncontrolled and lack any standardised criteria for diagnosing personality disorder relying on unsupported clinical judgement (Sadoff, Roether & Peters, 1971; Lion & Bach-Y-Rita, 1979; Reckless, 1970). Studies emphasise the difficulty of maintaining treatment unless participants are self-referred voluntary patients or some enforcement could be brought to bear. Other studies report decreased rates of recidivism after outpatient group psychotherapy. Although Cook, Fox, Weaver *et al.* (1991) report decreased recidivism after treatment, their group consisted entirely of non-violent sex offenders, many of whom may not have had a personality disorder.

In a controlled trial Woody, McLellan & Luborsky (1985) reported outcome in a sub-group of patients with anti-social personality disorder from a trial of psychotherapy for opiate-dependent men. Although all participants who received psychotherapy improved significantly compared to the group who only had drug-counselling, patients with anti-social personality disorder with depression showed more improvement than those with anti-social personality disorder alone. Although Woody concluded that it is not beneficial to use psychotherapy to treat opiate-dependent patients with anti-social personality disorder, treatment was remarkably brief (11 sessions), limiting the generalisability of this result.

In their review, (Dolan and Coid 1993) concluded that most studies have serious methodological problems, not least of which is the poor description of participants so that it is frequently unclear as to whether some offenders would meet a diagnosis of personality disorder.

Studies looking at treatment outcome for other personality disorders have mainly been uncontrolled and concentrated on patients with BPD. McGlashan (1986) retrospectively followed 89 BPD patients for a mean of 15 years after inpatient psychotherapy, finding improvements in symptoms and behaviour, however standardised diagnosis was made retrospectively. In a 20-year follow-up of 502 patients with BPD long-term prognosis was good with approximately 66 per cent of patients functioning normally (Stone, 1993). Most studies emphasise the necessity of a long follow-up period, as the benefits of therapy may not be apparent upon discharge. However, studies also fail to rule out other confounding variables in the follow-up period, which could lead to change, i.e. natural history of the disorder or subsequent treatment. With respect to the format of treatment, other authors have concluded that there is no compelling evidence to recommend group over individual therapy for BPD (Higgitt & Fonagy, 1992).

The evidence since 1992

Prisons

Experimental studies

There were no experimental studies conducted in prisons identified by this review.

Observational studies

The case profile of an offender patient with a clinical diagnosis of hysterical personality disorder who attended an analytic art therapy group in a therapeutic community prison, HMP Grendon is described by Teasdale (1998). The aim of the case profile was to illustrate how therapy allowed the patient to investigate his interpersonal relationships and the antecedents to his criminal actions. The only reported outcome was that he was eventually moved to a lower security prison. The paper recommended that art therapy should be part of the treatment of personality-disordered offenders.

Remission as evidenced by improved functioning and no further offending in a 'sexual psychopath' who underwent three years of psychoanalytic treatment while detained for crimes of assault and rape is described by Martens (1999). Few details of diagnosis, treatment or outcome are presented except that for several years of his sentence he was uncooperative with any form of treatment. The paper illustrated the point that in this case the offender was not receptive to treatment initially and that consequently the availability of treatment needed to be maintained.

High secure

Experimental studies

There were no experimental studies of psychodynamic treatment of personality disorder in high secure psychiatric settings identified by this review.

Observational studies

The treatment and outcome of 49 male forensic patients all involuntarily detained in conditions of high security were described by Reiss (Reiss, Grubin *et al.* 1996). All participants had a legal classification of psychopathic disorder and, in addition, 61 per cent were diagnosed as having a personality disorder. The most prevalent personality disorders were borderline and anti-social. However, the group also included patients with schizoid, paranoid and narcissistic personality disorders. The mean Psychopathy Checklist (PCL-R) score was (19.6 +/- 9.6 sd). Treatment duration averaged 4.6 years (+/- 2.6 sd) and consisted of group (for 92%) and individual (for 53%) psychodynamic psychotherapy. In addition, most of the patients also attended structured groups, i.e. social skills, assertiveness and anger management. Various aspects of functioning were rated for two periods, two years following admission and two years before discharge. Follow-up lasted on average 4.7 years (+/- 3.0 sd). Data were collected from case-notes and Home Office files however no standardised measures of outcome were used. Various aspects of functioning were rated which included general social functioning, problem sexual behaviour, violent behaviour and episodes of seclusion or special care. Post discharge into the community ratings were made for social interaction, employment, accommodation, substance abuse and overall social outcome.

Within the group there was diverse personality pathology. In addition, 16 per cent of the sample had an Axis I diagnosis of mental illness. The most serious index offence was non-sexual violence for 69 per cent of the men and a sexual offence for 14 per cent with a further 10 per cent having committed arson. Many patients came from a highly disturbed family background and had poor social functioning prior to admission. Within treatment, patient's social activity ratings showed a significant improvement over time, 24 per cent rating good initially, increasing to 67 per cent finally. At the end of the follow-up period, 76 per cent of patients had been discharged from high security with 28 (61%) reaching the community. Ten patients (20%) re-offended, eight in the community and two while inpatients at regional secure units, offences were three homicides and four sexual offences. The mean time from discharge to the community to re-offending was two

years. Twenty-five of the 28 community patients had good social interaction and 10 had overall good social outcome. None of this latter group re-offended. A previous history of sexual offending, prior to the index offence, was related to re-offending as was the subject's IQ. None of the factors examined significantly related to overall social outcome in the community. Factors related to re-offending in the community were childhood factors such as being in foster-care, fighting or bullying aged under 12 years and previous convictions for assault, actual bodily harm, or for sexual offending. The latter was the strongest predictor of subsequent re-offending. Two factors, better employment record and relationship history before admission, were negatively related to subsequent offending. The limitations of the study were that standardised measures were neither collected at the outset nor follow-up to define the patient population. Often case-notes did not contain all the required information. In addition, the small sample size limited the identification of prognostic factors. These methodological problems limit the study's conclusions that young patients from seriously disturbed backgrounds, with severe psychopathology can improve through treatment on a unit offering a range of psychological therapies and that successful social integration into the community after discharge, may help prevent future offending.

Inpatient

Experimental studies

There were no experimental studies of inpatient treatment.

Observational studies

A prospective before and after inpatient study of 66 voluntary patients in an open psychiatric ward aimed to measure the efficacy of hospital treatment on patients with severe personality disorder is reported by Antikainen, Lehtonen, Koponen, *et al.* (1992). The patient group is described as having severe psychosocial problems. Sixty-five per cent had had previous hospitalisations and 40 per cent had undergone psychodynamic psychotherapy as outpatients. Of the 66 participants only 32 per cent reached a primary DSM-III-R diagnosis of personality disorder, with borderline personality disorder (BPD) predominating. The other patients were described as having either depressive or adjustment disorders. Although they did not strictly meet a DSM-III-R diagnosis of personality disorder the authors state that they met the structural criteria for Kernberg's wider category of borderline personality organisation (BPO) (Kernberg, 1978). The main therapeutic intervention was individual dynamic psychotherapy, 45 minutes twice a week for an average of 25 sessions.

Treatment was evaluated using the Beck Depression Inventory (BDI) and the Hamilton Depression Rating Scale (HDRS), administered at the beginning and end of treatment. Only the HDRS scores showed a significant decrease post-treatment. Although the authors concluded that a relatively good treatment outcome in patients with borderline and other personality disorders can be achieved in therapeutically active hospital treatment period lasting two to four months the study has several limitations. It is uncontrolled and the majority of the study group did not meet a DSM-III-R diagnosis of personality disorder. The treatment regime was poorly described and outcome was assessed in one domain. The in-house outcome scales used to measure subjective psychiatric complaints, attitudes and current object relations were not adequately described or validated.

A follow-up paper using the same patient group aimed to identify factors predicting treatment success (Antikainen, Koponen, Lehtonen, *et al.*, 1994). The variables which predicted good outcome were related to the patients' subjective rating of their symptoms and their attitude towards their symptoms and treatment. Variables related to background, previous treatment and severity of disorder did not differentiate between patients in terms of good or poor outcome. The limitations of the earlier study apply. The importance of describing and validating study specific outcome measures must be stressed as these were the only measures that predicted change. However as they were poorly described and un-validated no firm conclusions can be drawn.

Hull's study (Hull, Clarkin & Kakuma, 1993) examined the course of 40 hospitalised female patients with BPD diagnosed by DSM-III-R criteria. Treatment comprised individual psychoanalytic

psychotherapy three times a week. In addition to individual psychotherapy patients had a highly structured schedule of day-to-day therapeutic activities. Treatment focused heavily on examining interpersonal relationships and clarifying the nature of the patient's difficulties. In addition, many patients had a co-morbid Axis I diagnosis. All patients completed the SCL-90-R on a weekly basis and the Global Symptom Index (GSI) scores for this were calculated. In addition, the three factors which underpin BPD, a) identity/interpersonal problems, b) problems with affect i.e. labile affect, anger and suicidality and c) problems with impulsivity, were tested to see which, if any, factors were useful in predicting self-reported symptoms. The identity and interpersonal problem factor hypothesised by Kernberg (Kernberg, 1976) to be at the centre of the borderline patient's pathology was found to be a powerful predictor of treatment outcome. The study concluded that the severity of the borderline patient's identity and interpersonal problems was predictive of the course of treatment over six months of hospitalisation. The study's limitations were that it relied on self-report measures of symptoms using a single rating scale and did not have a control or comparison group.

Clarkin's follow-up study (Clarkin, Hull, Yeomans, *et al.*, 1994) investigated the relationship of anti-social traits to treatment response in the 35 patients from Hull's study (Hull *et al.* 1993). Outcome was measured using the GSI score of the SCL-90-R. In addition, each patient also completed the Personality Assessment Inventory (PAI). This self-report instrument generates dimensional score for borderline, paranoid and anti-social features. The scales for anti-social features on the PAI were used to measure general levels of anti-social traits. The anti-social behaviour sub-scale predicted treatment course with patients who reported more anti-social behaviours having an increasing symptom course. Although this was a study of BPD patients without co-morbid anti-social personality disorder it appears that co-existing anti-social traits and anti-social behaviour predict a worse treatment response in this group.

Najavits and Gunderson report on the symptomatic outcome and predictors of outcome at three year follow-up in a prospective, observational study of 37 female patients with BPD (Najavits & Gunderson, 1995). All patients were inpatients treated with individual psychodynamic psychotherapy as their main treatment modality. The majority of the participants were also receiving pharmacological treatment and some had additional family treatment or group therapy. (For additional details see Gunderson, Waldinger, Sabo, *et al.* (1993) and Sabo, Gunderson, Najavits, *et al.* (1995).) BPD was diagnosed using the DIB. Out of the 37 participants recruited initially, only 20 remained at three-year follow-up, an attrition rate of 46 per cent. Eight assessment measures were used at four time points, the end of treatment and one, two and three years post treatment termination. Outcome was measured using the DIB, the HSCL-90 (Hopkins Symptom Checklist-90) the GAS (Global Assessment Scale), a patient self-report problem scale and satisfaction rating scale, along with a self-report questionnaire, which included questions about drug and alcohol use, and the SAS (Social Adjustment Scale).

Using the DIB, the majority of patients followed an erratic course of improvement over three years. There was also a group that showed a course of steady improvement. A couple of patients followed an erratic course of decline but no patient showed steady decline. The GAS scale showed that by three-years post treatment the majority of BPD patients had moved from a poor to a fair level of functioning. Patients improved significantly in several outcome areas with no significant deterioration. Due to the large attrition rate, small initial sample size and lack of control group, the results can only be interpreted tentatively. Of note was the fact that depression and anxiety symptoms, as measured on the HSCL-90 predicted worse outcome at three-years. Other studies have shown that depression and anxiety are some of the most enduring symptoms of BPD (Gunderson & Chu, 1993). Since these symptoms are chronic and may predict a poorer outcome the authors noted that targeting these symptoms early in treatment might be helpful. These study results differed from some early reports that concluded a lack of short-term improvements for BPD (Gunderson, Carpenter & Strauss, 1975). However, more recent outcome studies (Stevenson & Meares, 1992) have shown that the use of therapy specific for BPD patients provided in a focused and coherent way, may well account for improved outcome in the short-term.

Schimmel reports a case study of a patient with BPO who presented with recurrent brief psychotic episodes (Schimmel 1999). The treatment was 18 months of twice-weekly individual psychodynamic psychotherapy. For the first six months the patient was a resident in an in-patient TC and for the final 12 months the patient attended the psychotherapy outpatient day programme

of the TC. Follow-up was for three years. Outcome was clinical improvement and lack of further hospitalisations for three years. The patient exhibited violent and impulsive behaviour during treatment necessitating a transfer to a secure unit for several days. A graded series of facilities was available: TC, secure unit and a self-care house for the patient's treatment which he could be moved between depending on his clinical state. This range of resources ensured the continuity of therapy. The paper concluded that clinical management based upon a psychodynamic understanding of the borderline patient's presentation was likely to best fit the individual patient's needs. It is a pity that the diagnosis and outcome measures were not more reliably assessed and validated. As a single case study this cannot provide generalisable evidence.

Day hospital and partial hospitalisation programmes

Experimental studies

Piper's prospective study of 18 weeks day hospital treatment is a randomised control trial using a design of treatment versus control (delayed treatment) (Piper, Rosie, Azim, *et al.*, 1993). Only 62 per cent of the experimental participants had an Axis II diagnosis, mainly dependent personality disorder (22%) and BPD (14%). The rest were distributed between the other personality disorders. Most participants also had an Axis I disorder, the most common being major depression. After initial assessment patients were matched in pairs according to lifetime Axis I diagnosis, age and gender and then randomly allocated to either enter the 18-week day treatment programme immediately or the control group which was scheduled to begin after an 18-week delay. Seventy-nine patients completed treatment, with a drop out rate of 42.3 per cent, the drop out rate from the control group was 31.5 per cent. Analyses were based on the first 60 matched pairs of patients who completed the treatment and control conditions.

There was no significant difference in the two groups between Axis I or Axis II diagnosis and overall the matching and random assignment procedure was quite successful in producing two similar samples. The main treatment was intensive, group orientated psychodynamic psychotherapy for seven hours a day, five days a week for 18 weeks. Groups ranged from large to small psychotherapy groups and varied in format from unstructured, insight-orientated groups to structured and skill-orientated groups.

Seventeen outcome variables were measured grouped as follows, a) interpersonal functioning b) self-esteem c) psychiatric symptomatology d) life satisfaction e) defensive functioning. Outcome variables were assessed immediately after the treatment and delay periods and at eight months follow-up.

Treated patients showed significantly greater improvement than controls in seven of the 17 variables representing four out of five areas of functioning, i.e. interpersonal functioning, social dysfunction, family dysfunction, mood, self-esteem and life satisfaction as well as severity of disturbance associated with individual treatment objectives. At eight months follow-up, these benefits were maintained. The authors conclude that the results provided support for the efficacy of the specialised day treatment programme for patients with both affective disorder and long-standing personality disorder.

In a second paper these authors (Piper, Joyce, Azim, *et al.*, 1994) examine the ability of seven patient characteristics to predict success, defined as remaining in and benefiting from the day hospital treatment programme. The sample used was 99 treated patients, 60 from the immediate treatment and 39 from the delayed treatment from the sample of 120 matched patients in the 1993 trial.

Two patient personality characteristics, psychological mindedness and quality of object relations, emerged as the strongest predictors of success. The patient's initial level of symptomatic disturbance was not a significant predictor. In these studies outcome was assessed by a comprehensive battery of standard and individualised measures. Psychological mindedness was defined as the ability to identify dynamic (intrapsychic) components and to relate them to a person's difficulties. The outcome variables were reduced to four core factors, general symptomatology and target objectives, social maladjustment and dissatisfaction, pathological dependency and positive interpersonal functioning. Psychological mindedness was directly

related to favourable outcome for three outcome factors, social maladjustment and dissatisfaction, pathological dependency and for general symptomatology and target objectives. Patients with more mature object relations remained in the programme and had a favourable outcome for two outcome factors, general symptomatology and target objectives and social maladjustment and dissatisfaction. A limitation of this study is that substantial amounts of variance remain to be explained.

In a controlled trial, 38 patients with BPD, were randomly allocated to a psychoanalytically-informed day hospital, i.e. partial hospitalisation programme or to treatment as usual which was standard psychiatric care (Bateman and Fonagy 1999). Study patients were a group of severe borderline personality disordered patients who frequently harmed themselves, attempted suicide, exhibited severe levels of depression and high levels of symptomatic distress and demonstrated co-morbidity for affective disorders.

Patients treated with partial hospitalisation for 18 months showed significant improvement in both symptomatic and clinical measures. Treatment was effective for men and women. Improvement in psychiatric symptoms and suicidal acts occurred after six months but a reduction in the frequency of hospital admissions and the length of inpatient stays was only clear in the last six months. In contrast to Linehan's studies¹² (Linehan, Armstrong, Suarez, *et al.*, 1991; Linehan, Heard & Armstrong, 1993) this study included both men and women and demonstrated that improvements in depressive symptoms and decreases in self-mutilating acts were maintained throughout 18-month follow-up. The results suggested that offering a less structured and less intensive programme than partial hospitalisation was inadequate treatment that failed to reduce the risk of suicide, diminish symptoms or ultimately decrease the numbers and duration of hospital stays. A limitation is the small study numbers. Drop out was low (12%) and improvement occurred later in treatment emphasising that admission to day hospital needed to be relatively long-term.

In a follow-up study of their RCT, Bateman and Fonagy (2001) aimed to see whether the gains made following the completion of the psychoanalytically orientated partial hospitalisation programme were maintained over 18 months compared with patients treated with standard psychiatric care. In this study 44 patients who participated in the original study (including the dropouts) were assessed every three months after completion of the treatment phase.

Patients who completed the partial hospitalisation programme maintained the improvements they had made across a wide range of outcome measures. In addition they also showed a statistically significant continued improvement on most measures in contrast to the patients treated with standard psychiatric care who showed only limited change. More self-mutilating acts and suicide attempts were committed during follow-up by patients in the control group than patients in the treatment group. Service utilisation in the partial hospitalisation programme decreased after discharge compared to the control group. Self-report measures of symptomatic distress improved in the treatment group as did their level of social and interpersonal functioning.

The authors concluded that the long-term follow-up of patients treated in an 18 month psychoanalytically-orientated partial hospitalisation programme showed not only that the substantial symptomatic and clinical gains made during treatment were maintained but that there was also additional improvement.

Observational studies

An uncontrolled before and after observational study (Krawitz 1997) assessed the outcome of 31 patients with a diagnosis of severe personality disorder who had a past history of opiate dependence, time in prison, years of self-harm and had not responded to previous treatment, in a part residential, part day programme. By DSM criteria 81 per cent had a Cluster C personality disorder and 19 per cent Cluster B. The treatment model offered psychodynamically based psychotherapy informed by cognitive behavioural and therapeutic community principles. Skills-based learning, such as anger management, was also included in the treatment programme, along with psychodrama and art therapy. In addition the authors describe broadening the

¹² Outcome studies of Dialectical Behaviour Therapy are reviewed in the section on DBT.

traditional psychodynamic base to provide a type of therapy which is acceptable and meaningful to women and ethnic minority groups (Maori and the poor). They described integrating gender-role analysis and paying attention to the social context of women. Social analysis was also used as a therapeutic tool, exploring the impact of violence, sexual abuse and poverty and where relevant, the impact of belonging to a non-dominant group such as women, Maori and welfare beneficiaries.

The service was set in an ordinary residential house that took eight adult patients and, where appropriate, their children. Patients attended as day patients or lived in for 3 ½ days a week and returned home for the remaining half of the week. Every eight weeks the patients returned to their homes for one whole week. There was a daily formal therapy routine, starting with unstructured group psychotherapy and progressing through more structured groups such as psychodrama, to an afternoon CBT based therapy group. The mean duration of therapy was four months and dropout rate was low. The outcome measures used were the GAS, the GSI of the SCL-90-R and a patient rated goal attainment scale. All clinical rating scales demonstrated significant improvement following treatment that was sustained at two-year follow-up. There were also improvements in health resource usage, with a decrease in measured costs to the health system after therapy. Limitations of the study were that it was uncontrolled and there was no independent researcher collecting data. The study concluded that the results demonstrated the clinical efficacy of psychotherapy in this setting and suggested that psychotherapy outcome can be evaluated at reasonable financial cost in many settings.

Wilberg's (Wilberg, Karterud, Irnes, *et al.*, 1998) paper describes a combination group treatment for personality-disordered patients in a day treatment programme lasting on average 20.2 weeks. The main treatment modality was group-analytically oriented and cognitive behavioural groups. The study was a naturalistic prospective design with observations before and after treatment. Eighty-seven per cent of participants had a research diagnosis of personality disorder, the most frequent diagnosis was BPD in 70 participants and avoidant personality disorder in 69. Because of co-morbidity, participants were divided into clusters where Cluster A accounted for 13 per cent, Cluster B for 31 per cent and Cluster C for 26 per cent. Many participants also had Axis I disorders. The attrition rate was 22 per cent as 40 patients were discharged prematurely. Of note is that drop-outs included five of the seven patients with anti-social personality disorder and the discharged patients were more likely to have misused substances in the month prior to admission. However, neither the GSI of the SCL-90-R nor the IIP scores could predict the people discharged. Outcome was measured using the GSI of the SCL-90-R, the circumflex version of the inventory of interpersonal problems (IIP-C) and GAF scores. Changes in the GAF, GSI and IIP-C scores from pre-test to post-test all showed significant improvement. The effect sizes for those who completed treatment were also calculated for GAF and GSI scores, the largest effect size was for non-personality disordered participants.

One of the aims of the study was to see whether a specialised group orientated day programme could be extended to patients with more severe personality disorders and they therefore compared their participants and results with Piper's study group (Piper, 1996). Wilberg *et al* described their group as more disturbed and poorer functioning compared to Piper's group. The effect size of the IIP was comparable, although the effect sizes for the GAF and GSI were somewhat lower in this study. This study was hampered by the lack of a control group that limited the firm conclusion that the improvements were treatment effects. However they concluded that the overall positive change found at group level for patients pointed towards a treatment effect.

A retrospective study compared a group of 105 patients who received psychodynamically orientated day hospital treatment for more than four months with a group of 27 drop-out patients who left treatment before four months. Outcomes at three to ten years after treatment were compared with a group of 50 students, with no previous psychiatric history, matched with the patient and drop-out groups for age and gender (Sandell, Alfredsson, Berg, *et al.*, 1993). The diagnostic criteria for the patient group could have been clearer but they seemed to have all satisfied a BPO diagnosis and most of them were clinically judged to have BPD. A standardised study specific questionnaire was mailed out to the patient and drop-out group. The authors reported that the patients who had remained in treatment for longer than four months had a level of functioning which fell between the normal student comparison group and the drop-out group. However, there are several difficulties with this study. One is that no pre-therapy measures were available and therefore the degree of therapy-induced change is unknown. Consequently it is

difficult to interpret the clinical significance of the follow-up findings. Although attempts were made to standardise the questionnaire against the comparison groups of norms, as this is a study-specific questionnaire and the treatment regime is not adequately described, it is difficult to draw any substantial conclusions from this paper or to make any meaningful comparisons with other outcome studies.

Wheelis and Gunderson (Wheelis & Gunderson, 1998) describe selected material from the psychotherapy with a woman with BPD to illustrate common issues that occur in treatment of a suicidal patient with self-destructive behaviour and substance abuse. Eventually the patient interrupted treatment and the authors proposed that for such patients an integrated treatment approach using cognitive and psychoeducational as well as dynamic treatment should be considered.

Outpatient studies

Experimental

An RCT of 110 participants with a diagnosis of BPD assessed the effect of an experimental, time-limited group treatment for patients with BPD, compared with the control condition of individual dynamic psychotherapy (Munroe-Blum and Marziali 1995). The hypothesis was that patients treated with interpersonal group therapy (IGP) would make greater improvements than individuals treated as usual. IGP is designed to address the personality traits typical of BPD manifest in problematic interpersonal interactions. The primary techniques have been adapted from Dawson's Relationship Management Model (Dawson, 1988). The goals of IGP include providing an environment that permits re-enactment, observation and thinking about problematic interpersonal interactions and their consequences while providing opportunity to test and modify expectation of self and others. The second objective was to look at the response of the total study cohort. After attrition the groups consisted of 17 treatment and 31 control participants. Treatment consisted of 30 sessions of 1.5 hours of IGP over 35 weeks. The control group received individual dynamic therapy twice a week according to Kernberg's model (Kernberg, 1975) without a time limit. Outcome measures assessed behaviours using the objective behaviours index and psychiatric symptomatology using the BDI, the SCL-90-R and the SAS. Analysis at 12 and 24 months, on 84 per cent of the participants, demonstrated no significant difference in outcome on the major dependent variables. However, the total study cohort showed significant improvement on all major outcomes. The authors concluded that although there was no outcome difference between the treatments the cost effectiveness of group treatment should be further considered and evaluated.

Winston previously reported a study of 32 patients with personality disorders, predominantly in the Cluster C category, which demonstrated significant improvements of treated patients compared with control participants (Winston, Pollack, McCullough, *et al.*, 1991). This study (Winston, Laikin, Pollack, *et al.*, 1994) was a continuation of the earlier study involving a larger patient group. The study assesses two manualised forms of brief psychotherapy. Short-term dynamic psychotherapy based on the principles developed by Davanloo (Davanloo, 1980) and brief adaptive psychotherapy (Pollack *et al.* 1991). Treatments lasted approximately 40 weeks and the results were compared to a waiting list group. In general, short-term dynamic psychotherapy is a more active and confrontational therapy than brief adaptive psychotherapy, although both treatments are psychodynamically based and use many standard brief-psychotherapy techniques such as that of Mann (Mann, 1973), Malan (Malan, 1976), Sifneos (Sifneos, 1979) and Davanloo (Davanloo 1980). The two treatments varied in technique and focus. Short-term dynamic psychotherapy focuses on confronting defensive behaviour and eliciting effect within the treatment setting so that repressed memories and ideas are fully experienced in an integrated affective and cognitive framework. Brief-adaptive psychotherapy is more of a cognitive therapy that focuses on the patient's major maladaptive patterns and their elucidation in past and present relationships, especially in the patient-therapist relationship. The goal is to enable the patient to develop insight into the origins and determinates of the pattern so as to produce more adaptive interpersonal relationships.

In total 81 patients were randomly assigned to either the treatment or waiting list groups. The study inclusion criteria specifically excluded patients with a history of violent behaviour or

destructive impulse control. There was no significant difference between the groups in terms of personality disorder diagnosis, mainly Cluster B and C, or co-morbid Axis I diagnosis. However, significantly more women were in the treatment group compared to the waiting list group. Three self report outcome measures were used, the GSI of the SCL-90-R, the SAS and a rating of target complaints (Battle, Imber, Hoehn-Saric, *et al.*, 1966). The target complaint method requires the patient to rate severity of the three main problems for which he or she is seeking treatment.

Only the treatment groups showed significant change on the outcome measures. There was no significant difference between the two treatments, compared to the waiting list condition. In addition, for 38 of the treated patients, target complaints were re-evaluated an average of 1.5 years after treatment ended and were not significantly different from those at the termination of therapy.

Observational studies

Wilberg's (Wilberg, Friis, Karterud, *et al.*, 1998) study is a prospective naturalistic study of the follow-up status of patients with BPD treated in a day hospital treatment programme which offers individual and group treatment using therapeutic community principles. The paper investigated whether the addition of an outpatient group psychotherapy post-discharge to a group of patients (the G group $n = 12$) was advantageous over a treatment as usual situation where patients just received the day hospital treatment without subsequent outpatient group therapy (the non-G group $n = 31$). However, both the G-group and the non-G group also received treatment as usual in the community after discharge. In the non-G group this ranged from no treatment to twice-weekly psychotherapy and some patients in the G-group also received other outpatient treatment in addition to or after the group therapy. Patients stayed in the weekly outpatient group therapy for an average of 12 months.

Outcome measures used were the GSI of the SCL-90-R, and the HSRS as well as assessment of employment, social contact, suicide attempts and treatment during the follow-up period. Compared with the non-G group, G group patients had significantly higher HSRS and a significantly lower GSI scores, a low rate of re-hospitalisation and suicide attempts and a high rate of remission from substance use disorders at 34-month follow-up. However, the G group also had a significantly higher HSRS score when both groups were discharged from the day hospital. The number of months in work in the year before admission for those in outpatient group therapy predicted better HSRS at follow-up and outpatient group therapy contributed significantly to a lower GSI. The authors concluded that a treatment model combining day treatment and outpatient group psychotherapy may be favourable for selective patients with BPD. However, as the study was not randomised differences between the G group and the non-G group must be interpreted with care, especially as there were selection biases inherent in the way the G group was selected.

Magnavita's (Magnavita, 1994) case study applied Davanloo's model of intensive short-term dynamic psychotherapy (Davanloo, 1980) to a patient with passive-aggressive personality disorder and charted treatment progress over six months. The study used neither specific diagnostic criteria for diagnosing personality disorder nor standardised measures to record outcome. Improvement seemed to be largely through patient's self-report.

Primac's case study reports 16, fifty-minute sessions with a patient who is described as having a compulsive personality (Primac, 1993). No diagnostic criteria were given and outcome was measured by a qualitative method for measuring change in psychotherapy, which involved an analysis of positive change on verbal measures. The positive changes found on verbal measures were thought to indicate a moderate change in the patient's personality structure.

Budman, Cooley, Demby, *et al.* (1996) report on a time-limited (18 months) group therapy for 49 outpatients, 34 (69%) of which had a definite or probable diagnosis of personality disorder based on the personality disorder examination (PDE) (Loranger, 1988). The most prevalent diagnosis was BPD; other participants had avoidant, obsessive-compulsive, dependent or histrionic personality disorders but not anti-social. Patients were allocated to four outpatient groups that met for one-and-a-half hours a week over eighteen months. The group therapy offered was described as interpersonal orientated, time-limited therapy. In this model it is assumed that the

group will, over time, become a safe environment for the presentation and identification of maladaptive interpersonal behaviours and a testing ground where the person can experiment with modification of such behaviours. Attrition was high at 51 per cent. Of the dropouts 11 (22%) had a personality disorder, most often borderline. A battery of outcome instruments was applied consisting of eight self-report measures, two clinical interviews and one clinical assessment. Combinations of the instrument were administered every three months up to 18 months. The battery included the SCL-90-R, the IIP, the SAS self-rating version, a self-esteem scale, a personality factor inventory and the patient evaluation of treatment scales. The clinical interviews included a repeat of the PDE at 18 months and the target problem measure. The clinical assessment instrument was the GAS, as recorded by the therapist.

Of the patients remaining at 18 months, the mean number of personality disorder criteria on the PDE met by each patient was significantly reduced compared to pre-treatment level. On some outcome measures, the IIP, the SCL-90, the self-esteem scale, the SAS and the GAS, clear improvements were made over the course of treatment. However, the dropout rate was high with less than half completing, there was no control or comparison group and 31 per cent of participants did not have a personality disorder diagnosis. In the light of these problems it is difficult to reach any firm conclusions from this study.

McCallum's paper investigated the response of 190 patients to an intensive 18-week, evening outpatient group treatment programme (McCallum, Piper & O'Kelly, 1997). The theoretical orientation of the programme emphasised psychodynamic principles with influences from systems, milieu and social learning theories, as well as biological psychiatry and was aimed at supporting adaptive functioning. The programme lasted for four hours, five evenings a week and consisted of several types of groups. The patients were functioning well enough to work or study in the daytime.

Of the 190 patients who started the programme 154 (81%) completed. Seventy-two per cent had a personality disorder diagnosis, avoidant, paranoid, dependent and BPD. The outcome battery assessed several areas of functioning: interpersonal relationships, self-esteem, psychiatric symptomatology, personalised target objectives and satisfaction with treatment. Sources of evaluation included the patient, the therapists and an independent outcome assessor. Follow-up occurred at four and 12 months. Analysis showed that patients' scores had significantly improved on each outcome variable with an effect size of 1.10, which would be regarded as large in the psychotherapy literature.

An additional aim of the study was to test the usefulness of a predictive model that looked at the relationship between psychological mindedness and psychodynamic work accomplished. Psychological mindedness was assessed by the psychological mindedness assessment procedure (PMAP) of McCallum & Piper (1987); McCallum & Piper (1990); McCallum & Piper (1996) and McCallum & Piper (1997). Results indicated that psychological mindedness was significantly related to psychodynamic work in the programme and work was related to the patients' general impressions of the usefulness of the programme. The authors concluded that their model was of use in predicting patient's response to treatment.

A follow-up paper explored whether characteristics associated with three personality disorders had a differential influence on patient's response to treatment in the 18-week programme (McCallum & Piper, 1999). The study explored whether a diagnosis of paranoid, borderline or dependent disorder was related to psychological mindedness, capacity for psychodynamic work in the groups and overall outcome. Seventy-seven patients who had completed the evening group treatment programme were chosen because they represented the three personality disorder Clusters A, B and C respectively. The predictor variables examined were psychological mindedness as assessed by the psychological mindedness assessment procedure (PMAP of McCallum & Piper 1987, 1990, 1996 and 1997); the group process variable and outcome were measured by the battery administered in the original clinical trial (McCallum, Piper *et al.*, 1997). An additional outcome measure of benefit was assessed by using a rating of overall usefulness of therapy provided by patients and therapists. Results indicated that psychological mindedness had a differential influence on psychodynamic work and outcome for the three disorders. The three disorders were not significantly related to psychological mindedness but work was related to

outcome regardless of the disorders. The authors cautioned that these were only exploratory findings.

The effectiveness of well-defined outpatient psychodynamic psychotherapy for patients with BPD was evaluated by Stevenson and Meares (Stevenson & Meares, 1992). This paper was the first of a series of three papers (Meares, Stevenson & Comerford, 1999; Stevenson & Meares, 1999) reporting on this cohort. Initially 48 participants were recruited. During the first 12 months eight dropped out, as seven continued in therapy they were excluded and three could not be contacted at one-year follow-up leaving a final cohort of 30, (19 female, 11 male). All were diagnosed according to DSM-III criteria using the DIB, treated with psychoanalytic psychotherapy at twice a week, over 12 months and followed up a year later. The treatment approach was based on a psychology of self and strong efforts were made to ensure that all therapists adhered to the treatment model. Outcome measures included the number of DSM-III criteria weighted for frequency, severity and duration that the patient still fulfilled. In the Cornell Index (Weider, Wolff, Brodman, *et al.*, 1948) a self-report rating of symptoms was used and objective behavioural measures were collected *en bloc* for the year preceding and for the year following therapy. Measures included episodes of violent behaviour, use of drugs (legal and illegal), number of medical visits and use of medical facilities, episodes of self-harm, time away from work, number of hospital admissions, and time spent as an inpatient.

The participants showed statistically significant improvement from the initial assessment at one-year follow-up on every measure. Most frequently observed changes were reductions in impulsivity, affective stability, anger and suicidal behaviour. There were highly significant reductions in violent behaviour, the use of drugs, rate of self harm, medical visits, time away from work, hospital admissions and time as an inpatient. In addition, 30 per cent of the participants no longer fulfilled the DSM-III criteria for BPD at the end of treatment and this improvement persisted for the follow-up year. The authors concluded that their findings suggested that a specific form of psychotherapy, supervised in a focused and coherent way was helpful to this group who normally do not do well at follow-up.

At the time of the 1992 study a waiting list comparison group was not available, however, since the clinic is unique. The authors reported that inevitably a waiting list grew. In their later study a cohort of 30 treated BPD patients at one-year is compared with a group of BPD patients who had been on the waiting list for over a year (Meares, Stevenson *et al.* 1999). This group was receiving treatment as usual. The authors concluded that those who received psychotherapy were significantly improved in terms of DSM scores. Thirty per cent of patients no longer fulfilled DSM-III criteria for BPD, while the untreated patients were unchanged. In terms of follow-up treatment effects were maintained at one-year and five-year follow-up (Stevenson *et al.*, 1995). These authors also contrasted their outcome at follow-up with DBT trials (Linehan, Heard *et al.*, 1993), see Dialectical behaviour therapy section.

Stevenson uses the same cohort to present a preliminary cost-benefit study of the effect of the twice-weekly outpatient psychodynamic psychotherapy (Stevenson and Meares 1999). The authors gathered information relating to number of hospital admissions, time spent in hospital, self-harming behaviour and outwardly directed violence, frequency of medical attendance, drug use (prescribed and other) and time away from work, and recollected this data in the year following treatment. Every measure showed a significant reduction in the year following treatment when compared with the preceding year. There was a significant decrease in the DSM scores at the three assessment points, zero, 12 months and 24 months. The cost analysis only looked at inpatient admissions and direct costs. Patients were divided into high service users, (average inpatient cost more than \$10,000 for the year) whose costs decreased dramatically after psychotherapy and low users whose costs also decreased for the 12 months after therapy. They concluded that, contrary to the often held impression that BPD is a bottomless pit, consuming whatever therapeutic resources are offered without adequate result, this study suggested that offering an appropriate course of treatment to BPD sufferers is cheaper than the solely providing "resuscitative or similar crisis interventions when required."

Monsen (Monsen, Odland, Faugli, *et al.*, 1995a) report the functional outcome in terms of interpersonal relationships, social conditions and the use of resources of a seven-year prospective outcome study of patients with personality disorder and psychosis. Of the 25 patients 23 (92%)

had a DSM-III diagnosed personality disorder at the beginning of treatment. In ten participants (40%) this was described as severe although criteria were not provided. In addition, 24 of the 25 participants also had a DSM-III Axis I disorder (major affective disorder, anxiety disorder and psychosis).

The majority of patients had previously had short-term psychotherapy. Treatment consisted of individual psychodynamic psychotherapy. The treatment model drew much from the theories of psychodynamic self-psychology (Kohut, 1994) where more successful integration of affect states into the personality organisation leads to long-lasting and stable patterns of change. Recognising and processing affects should increase the individual's capacity to better regulate social, interpersonal and intimate relationships. Data were collected at the beginning of therapy, two years later at termination of therapy and at five-years. Twenty-one patients (84%) completed follow-up although some patients did not complete the outcome measures at the end of therapy.

This paper reports the psychosocial changes. More detailed data on the global outcome as measured by the HSRS and SCL-90 are provided in a sister paper (Monsen, Odland, Faugli, *et al.*, 1995b). Using a validated semi-structured videotaped interview to measure "affect-consciousness" (Monsen, Odland, Faugli, *et al.*, 1995c) the capacity of these patients to tolerate intimacy and process affects significantly improved during therapy and this improvement was maintained at follow-up. Patients also significantly improved with respect to some symptomatic scales on the Minnesota Multiphasic Personality Inventory (MMPI); these changes were stable over follow-up. In addition, there were significant changes in psychosocial outcomes such as the level of self-support that increased during therapy and follow-up, and the complexity of work and education undertaken by the subject group. The authors reported a general improvement in social economic status and a reduced use of ordinary health and social services. The global psychosocial outcomes, as measured by the HSRS and the SCL-90 also significantly improved so that 76 per cent of the sample reached a level of psychosocial functioning and adaptation that was defined as "no-caseness". A 72 per cent reduction in Axis II psychopathology was found at termination of treatment. This change remained highly stable at follow-up. Limitations of the study are that there was no control group and some pre-test observations were absent making it difficult to estimate change in the global level of functioning. However, the authors felt that in comparison with studies with similar follow-up intervals, the high level of functioning achieved by participants in their study could not be explained by natural history and maturation.

Cookson's (Cookson, Espie & Yates, unpublished) uncontrolled, observational study provided once weekly, outpatient psychodynamic psychotherapy for one year to a group of 19 patients. All 19 patients met Kernberg's criteria for BPO, in addition 17 met personality disorder criteria using the International Personality Disorder Examination (IPDE) (Loranger, Janca & Sartorius, 1997). Several patients had more than one personality disorder. Outcome was assessed at three months, 13 and 20 months post treatment across a variety of domains using the Borderline Syndrome Index (Conte, Plutchik, Karasu, *et al.*, 1980), the Personality Diagnostic Questionnaire (PDQ-4) (Hyler, Skodol, Oldham, *et al.*, 1992) the Multi-impulsivity Scale (MIS) (Evans, Searle & Dolan, 1988) and the Brief Symptom Inventory (Derogatis & Melisaratos, 1983).

The BSI, the PDQ-4 and the Brief Symptom Inventory all showed significant differences between the assessment score and scores at the three month, 13 months and 20 months follow-up points. There was a highly significant difference between the assessment mean and follow-up means on the MIS scale. Further analysis revealed that the main differences occurred between assessment and three months follow-up. The improvements were maintained up to 20 months after the end of treatment. A decrease in the Brief Symptom Inventory is thought to represent a decrease in the symptomatic distress felt by the participants. The authors concluded that the treatment group significantly decreased in its severity of borderline pathology, evidenced by a significant decrease on scores on the BSI. Finally, impulsive feelings and behaviours were found to have decreased in the treatment group. The limitations to the study are that it is uncontrolled and without any comparison group. In addition, the distribution of other personality disorders within the sample is not given and patients with more severe personality pathology such as paranoid and dissocial disorders were judged too ill to be treated in this outpatient model.

In a before and after study the effect of brief dynamic psychotherapy was assessed in a group of 45 outpatients, 15 of which had personality disorders (Hoglund, 1993). The personality disorders

were a mixture of dependent, avoidant, histrionic, narcissistic and borderline personality disorders. Treatment lasted an average of 27.5 sessions of brief psychodynamic psychotherapy. A technical manual was used, modified after approaches described by Sifneos (Sifneos, 1979) and Malan (Malan, 1979). The outcome was measured by the GAS, a post-treatment global score of Target Complaints change (Sloane, Staples, Allan, *et al.*, 1975), and five seven-point scales modified after Sifneos (Sifneos *et al.*, 1980), measuring overall dynamic change, interpersonal relations, self-esteem, new cognitive learning, new emotional self-understanding or insight and problem-solving capacity.

Two years post therapy the sub-sample of patients with personality disorder (n=15) showed significantly less symptomatic and dynamic change, compared with a sub-sample of patients without personality disorders. At four-year follow-up the differences in mean changes between the two sub-groups were non-significant. However, for patients with personality disorders the number of treatment sessions was significantly related to acquisition of insight two years after therapy and to overall dynamic change four years later. For patients with personality disorder the length of treatment seemed to be more essential for long-term dynamic improvement than patient characteristics such as suitability, cluster category or the initial health sickness rating. Very small long-term dynamic changes were observed after brief focus treatment approaches for patients with personality disorder. Long-term dynamic changes were observed after those treatments that lasted 30 sessions or more. The study indicated that for patients with personality disorders 30 or more treatment sessions were important for acquisition of insight, which was important for further dynamic change. It seems that the process of personality change was not set in motion by brief therapy. This study supports the work of Horowitz (Horowitz, Marmar, Weiss, *et al.*, 1986) who reported that for individuals with more personality disorders a brief (12 session) focused therapy format was insufficient to raise or stabilise their functioning at higher adaptive levels.

An outpatient study examines whether a specific form of dynamic therapy, time-limited supportive-expressive therapy is effective for two particular Cluster C personality disorders, avoidant and obsessive-compulsive (Barber, Morse, Krakauer, *et al.*, 1997). Out of 38 participants, 14 had a diagnosis of OCPD and 24 a diagnosis of APD. Each group was given 52 sessions of time-limited supportive-expressive psychotherapy in an open naturalistic trial. The psychotherapy was based on Luborsky's (Luborsky, 1984) model. The outcome measures used included the HDRS, the BDI, two anxiety inventories, the IIP and GAF score.

All but one of the obsessive-compulsive personality disordered patients stayed for the entire course of treatment; attrition rate for the avoidant personality disordered patients was high with only 13 of them remaining in treatment, a 46 per cent drop-out rate. Change was measured by examining whether patients still met diagnostic criteria for their disorder. The results revealed that patients initially diagnosed as OCPD lost their personality disorder diagnosis significantly faster than did avoidant personality disorder patients. By the end of treatment 39 per cent of APD still retained their diagnosis compared with 15 per cent of OCPD. In the light of the high drop-out rate for APD, the uncontrolled design of the study and the fact that the study did not address the effect of Axis I and Axis II co-morbidity more rigorous studies would be needed to assess treatment effect.

Time-limited psychodynamic psychotherapy applied short-term on an outpatient basis over 25 sessions to a group of 75 patients, only 24 of whom had personality disorder, was evaluated (Junkert-Tress, Schnierda, Hartkamp, *et al.*, 2001). Although the diagnosis of personality disorder conformed to ICD-10 criteria no further details of personality disorder types are given. Out of the original 87 patients recruited, 12 terminated treatment early. Again no detail is provided as to whether these were patients with personality disorder or from the other group of study patients, those with somatoform and neurotic disorders. Unlike the study of Winston (Winston, Laikin, Pollack, *et al.*, 1994) this study is naturalistic and does not have a waiting list control group. The majority of the patients were women, 55 out of the 75. Outcome measures used were patient's self-rating measures using the SCL-90-R and the Intrex Introject Questionnaire, (Benjamin, 1974; Benjamin, 1984) which is a well-validated instrument which measures patient's self-concepts. A rating on the GAF scale was also given.

A decrease of symptomatic distress as measured by SCL-90-R was found at the termination of therapy for the entire sample, as well as for each diagnostic group. However, at six-month follow-

up GSI levels did not show any significant difference for the personality-disordered group compared to their level at termination of therapy and the GSI remained this way over the follow-up period of one-year. Although the personality disordered patients' concept of themselves improved during therapy, these results slipped slightly during follow-up and did not reach significance at any time. The GAF scores for personality disordered patients also improved during therapy and at 12-months follow-up but this was a non-significant trend. The study concluded that those patients with somatoform and neurotic disorders benefited the most from short-term dynamic psychotherapy compared to the personality-disordered group. The study is uncontrolled, contains almost no detail of the diagnostic criteria used, type of personality disorder and none of the outcome measures reach statistical significance for the personality disordered patient group. In short, it is a rather unconvincing study of the application of short-term dynamic psychotherapy.

Highlighting findings for women

It is not that psychodynamic psychotherapy is a preferential treatment for women but because many studies investigated the effectiveness of psychodynamic psychotherapy in BPD that the subject group recruited in some studies has been entirely female (Hull, Clarkin & Kakuma, 1993; Najavits & Gunderson, 1995).

The only study that specifically discusses gender in relation to the treatment intervention is Krawitz (Krawitz 1997) who described integrating gender-role analysis and paying attention to the social context of women. Social analysis was also used as a therapeutic tool and where relevant included the impact of belonging to a non-dominant group such as women.

Highlighting findings for ethnic minorities

The majority of studies do not provide details of ethnicity. Where ethnicity details are provided the overwhelming majority of the patients were Caucasian (96% in Reiss *et al.*, 1996). Krawitz (Krawitz, 1997) describes broadening the traditional psychodynamic base to provide a type of therapy that is acceptable and meaningful to ethnic minority groups, in this study Maori. Where relevant, therapy also incorporated the impact of belonging to a non-dominant ethnic minority group.

Limitations

The main limitation is that there is a lack of high quality trials on patients with anti- or dissocial personality disorder or who are personality disordered offenders. Those that do focus on a forensic and dangerous population have methodological problems (Reiss *et al.*, 1996) or are case studies. Many studies focus on BPD while others specifically exclude participants with anti-social personality disorders. Many of the methodological problems in personality disorder research described by Roth & Fonagy (Roth & Fonagy 1996) exist in the literature reviewed for this chapter and will be briefly summarised.

Although the majority of studies use DSM-III Axis II to define and identify participants, diagnostic criteria overlap between disorders within the DSM. As Bateman and Fonagy point out (Bateman & Fonagy 2000) identifying cases on the basis of the three personality disordered clusters is flawed, as there is poor reliability between clusters and no evidence of their stability. Furthermore, it is difficult to compare findings from studies using theory-orientated Axis II identification such as Kernberg's Borderline Personality Organisation with those using identification of cases by other methods, i.e. legal identification of psychopathic disorder or PCL-R scores.

There is a well-established literature on the co-morbidity between DSM personality disorders in individuals. However, many outcome studies do not address the nature of co-morbidity in their population. Hull and Clarkin's study illustrates how anti-social traits influence treatment outcome for BPD patients. In addition co-morbidity exists between Axis I and Axis II disorders. Interactions between personality disorder and Axis I conditions can either exaggerate or obscure treatment effects. Woody (Woody, McLellan & Luborsky, 1985) demonstrated this interaction for anti-social personality disorder and depression. Few studies control for or take account of the interaction between Axis I disorders and personality disorders.

There are few high quality experimental or quasi-experimental studies using randomisation as well as a lack of non-randomised controlled studies. A control group is necessary to clarify that any outcome changes in the treatment group are a result of the specific psychotherapy intervention. However, there are particular difficulties with implementing RCTs for assessing psychodynamic treatment (Roth, Fonagy & Parry, 1996) which include expense, ensuring low attrition rates, finding an appropriate control group, ensuring adequate length of therapy and follow-up time relatively free of inter-current, subsequent treatment and other confounders.

The wide range of outcome measures used limits direct comparison between studies. Although most studies concentrate on assessing symptoms, behaviour, social adjustment and psychiatric status, many different outcome measures and scales are used. Some trials use only a narrow range of measures, looking at one or two outcome domains, i.e. depression, others use in-house, study specific, non-validated instruments. Multi-modal standardised outcome assessment procedures need to be used which assess outcome from different perspectives (the patient, the clinician, independent observers), different symptom domains (cognition, affect, behaviour) and different domains of functioning (offending, social economic, use of services).

Many studies identified have no or only short follow-up periods. Studies assessing the effectiveness of treatment for personality disorder require long follow-up periods to look effectively at whether treatment maintains improvements across a wide variety of outcome domains, i.e. from symptomatic to behavioural improvement in terms of re-offending.

Summary

Summary of studies in high security

There were only two reports of psychodynamically-based treatment in high security: a case report of art therapy in a prison context and an observational study during and following special hospital treatment. One study looked at treatment outcome in a detained and dangerous population who would probably meet the working definition of DSPD. This study showed treatment, the mainstay of which was individual and group psychotherapy, improved social functioning and that those with a good overall social outcome did not re-offend within the follow-up period. However as well as the overall design the study had other limitations, the main one being that no standardised measures of outcome were used (Reiss, Grubin *et al.*, 1996).

There is little evidence for or against the use of psychodynamic psychotherapy for personality disorder in high security.

Summary of inpatient studies

The studies identified were observational studies with a before and after design without control groups. This open design placed them at a low level (level 4) on the CRD study design hierarchy. Lack of a control group means that variables which could not be controlled for were likely to influence outcome such as demographic variables, symptom severity, co-existing Axis I diagnoses and therapist experience making it hard to assess the impact of treatment. In addition the trial sizes are not sufficiently large to generate data sets that could be used to derive conclusions in the absence of random controlled assignment.

Future studies would benefit from more rigorous design, including standardisation of data collection procedures, fuller description of the treatment regimes, validation of study specific instruments, and a more detailed description of the study populations in terms of the co-existence of Axis I and Axis II psychopathology. In addition some studies use narrow diagnostic criteria for assessing personality disorder, such as the DIB, and are consequently liable to miss co-morbid personality disorders, the presence of which may well affect treatment response. The results of studies with high attrition rates (Najavits and Gunderson 1995) should be interpreted with care.

Summary of day hospital and partial hospitalisation studies

Two studies were RCTs (Piper, Rosie *et al.*, 1993) and (Bateman and Fonagy, 2000) and met CRD level 1 criteria. No studies in dangerous personality disordered populations were identified. Most studies focused on BPD and outcome was assessed in terms of psychiatric symptomatology, level of functioning and improvements in self-harming acts. Overall quality was improved by the presence of RCTs that generated promising results from psychodynamic psychotherapy applied in the context of a psychoanalytical day hospital. Of note is that treatment appeared to be equally effective for men as well as women with BPD as many treatment outcome studies for BPD have been with women. Furthermore Bateman and Fonagy's studies suggest that their psychoanalytically orientated treatment is more effective in the longer term than Linehan's Dialectic Behavioural Therapy (Linehan 1991 and 1993). However, although Piper and Bateman and Fonagy's studies differ in approach and treatment context all these controlled studies have in common a well-structured treatment programme. However, as yet neither treatment regime has been researched with an RCT design in dangerous personality disordered patients. The use of different outcome measures makes comparison between studies difficult; however Bateman and Fonagy's studies present the strongest evidence for psychodynamic treatment programmes leading to improved behavioural and symptomatic outcome in BPD patients. Krawitz's study is of note as it describes broadening the traditional psychodynamic model to provide a type of therapy which was more acceptable to women, ethnic minorities and the socially disadvantaged.

Summary of outpatient studies

The two outpatient RCTs identified are primarily concerned with comparing different formats of psychodynamic treatment. Time-limited group treatment (Munroe-Blum and Marziali, 1995) with the control condition of individual dynamic psychotherapy and two types of short-term psychotherapy (Winston *et al.*, 1994). The data indicated that brief-adaptive psychotherapy and short-term dynamic psychotherapy were effective for patients with certain types of personality disorder and that the two brief therapy approaches did not differ in overall outcome. In addition no difference in outcome was found between time-limited group and individual non-time limited psychodynamic psychotherapy.

The remaining studies were observational in design and only Meares (Meares, Stevenson *et al.*, 1999) used a waiting list comparison group.

Although most studies recruited groups of patients across the personality disorder clusters, some excluded those with anti-social or dissocial personality disorder (Winston *et al.*, 1994; Budman 1996 and Cookson *et al.*, unpublished). None focused exclusively on offenders or anti-social personality disorder.

Uncontrolled studies of short-term outpatient individual psychotherapy (Høglend, 1993; Tress *et al.*, 2001) only contained few patients with diagnosed personality disorder and concluded that this group fared less well at outcome. Budman's time limited group (Budman *et al.*, 1996) suffered from a high attrition rate.

Outcome was largely assessed in terms of psychiatric symptomatology, interpersonal relationships, level of functioning and personality disorder diagnosis. Stevenson and Meares (Stevenson and Meares, 1992) however also reported significant reductions in violent and impulsive behaviour for BPD patients as a result of twice a week psychodynamic therapy. The lack of control or comparison groups in the majority of studies makes direct comparison difficult.

However, it appears that either an intensive programme (McCallum *et al.*, 1997) or more intensive twice a week psychodynamic therapy (Munroe-Blum and Marziali 1995; Stevenson and Meares 1992; Meares *et al.* 1999) provide better results.

Summary of case study evidence

The case studies identified are single case studies of a descriptive nature except for that of Primac (Primac 1993) which uses some quantitative methodology. The design of single case studies means that the results are not meant to generalise to broader populations, however they

may make important contributions to improving clinical technique or signalling treatment developments in selected cases. In general the loose diagnostic criteria and ill-defined outcome measures used in these reports limits their contribution. Some cases, however, do report on dynamic treatment with personality disordered offender patients and two points illustrated are worthy of note. Flexibility of services meant that the patient in Schimmel's case could be moved to a higher degree of security when his mental state deteriorated and that this did not interrupt his therapy and that although some offender patients do not accept therapy initially this does not preclude them wanting and utilising therapy at a later point in their sentence.

Conclusions

Several methodological and design limitations have been identified which limit the quality of the research results (see above). High quality trials of psychodynamic psychotherapy or psychodynamically-informed treatment regimes in dangerous and offender patients are absent from the literature. However high quality studies using psychodynamic treatment in the context of day hospital, or partial hospitalisation programmes for patients with BPD, demonstrate the effectiveness of this treatment. In addition the most robust studies that demonstrate effectiveness have a well structured and coherent psychodynamic treatment regime or programme, which clearly focuses on the particular problems treatment is aiming to improve.

Keeping these limitations in mind the following themes emerged. Psychodynamic psychotherapy, although the main treatment modality was often supported by a treatment programme which included other psychotherapy interventions. In contrast to the traditional once a week frequency in non-personality disordered populations, psychodynamic psychotherapy was often delivered twice or three times a week in personality disordered populations.

In the forensic group factors related to re-offending in the community were childhood factors such as being in foster-care, fighting or bullying aged under 12 and previous convictions for assault, actual bodily harm or for sexual offending. The latter was the strongest predictor of subsequent re-offending. Two factors, better employment record and relationship history before admission were negatively related to subsequent offending. Decreased recidivism also seemed to be associated with improved social functioning and treatment programmes targeting these areas should be further investigated. Attention should also be given to co-existing antisocial traits (Clarkin, Hull *et al.*, 1994) and symptoms of depression and anxiety, (Najavits and Gunderson 1995) as these predicted a worse outcome.

Although the setting of partial hospitalisation programmes would not apply to the securely detained DSPD group the structure and therapeutic components of the treatment programme could be translated to secure environments. Within these treatment regimes two or three sessions a week of psychodynamic psychotherapy are often provided. It seems reasonable to conclude that more severely disturbed personality disordered patients require more intensive treatment compared to non-personality disordered out-patients.

As patients undergo treatment and progress down the security ladder towards community placement the literature suggests that continuity of support and treatment is required and that this may influence re-offending. Coherent and clearly focused treatment programmes as described in the partial hospitalisation literature have been shown to improve specific outcomes in BPD patients and may provide a promising treatment avenue to evaluate in offender personality disordered patients.

Although much has been emphasised in the background literature about the possible advantages of short-term or brief therapies over longer duration psychodynamic psychotherapy the research evidence for this is not strong. Only one outpatient RCT was identified (Munroe-Blum and Marziali 1995) which showed no outcome differences between a 35 week, time-limited group treatment and twice weekly psychodynamic psychotherapy. Perry's (Perry, Banon *et al.*, 1999) review of psychotherapy for personality disorders concludes that most patients with personality disorders do not recover rapidly and those that do may in fact represent false positive cases. They conclude that treatments of less than one year's duration may be treating crises, symptoms of distress or concurrent Axis I disorder rather than core personality disorder psychopathology.

Table 3.5 Summary table of psychodynamic psychotherapy

Setting/last follow-up point	Author (date)	Study type	Sample: diagnosis, N, gender	Controls: diagnosis, N, gender	Treatment	Attrition	Outcome measures/ results
Prison post treatment	Teasdale (1998)	4c	1 male Severe hysterical PD	None	Art therapy 2hr/ week, 44 weeks, Grendon	N/a	Transfer to lower security prison. Clinical judgment.
Prison during treatment	None						
High secure post treatment	Reiss <i>et al</i> (1996)	4c	49 male, legal psychopathic disorder, 61% also PD PCL-R, DSM/ ICD	None	Psychoanalytic psychotherapy, indiv. (53%) group (92%) 4.6y (+/- 2.6) Broadmoor?	2 discharged immediately therefore no records	Followed until discharged from high secure. 76% discharged by end of survey, 61% to the community. 20% reoffended including two murders. Clinical Judgment.
High secure during treatment	None						
Medium secure post treatment	Martens (1999)	4c	1 male. Psychopathic personality DSM-III criteria	None	Psychoanalytic psychotherapy 3yrs	N/a	22y follow-up. Offending and clinical improvement.
Medium secure during treatment	None						
Inpatient during treatment	Antikainen <i>et al</i> (1992)	4b	66 (43% female). Borderline PD=32%, 14% PD and another disorder DSM	None	Psychotherapy ward. Drug as required, milieu, individual and group therapy 88 days (+/- 56 days)	Not stated	BDI – no significant change Hamilton – improved (19.6-11.8 pre/post treatment) Psychosocial improvement
Inpatient during treatment	Antikainen <i>et al</i> (1994)	4b	66 (43% female) Borderline PD=32%, 14% PD and another disorder DSM	None	Psychotherapy ward. Drug as required, milieu, individual and group therapy 88 days (+/- 56 days)	Not stated	BDI – no significant change Hamilton – improved (19.6-11.8 pre/post treatment). Psychosocial improvement. Better outcome if no previous psychiatric admissions, or taking benzodiazepines.

Inpatient during treatment	Hull <i>et al</i> 1993	4b	40 female BPD SCID II	None	Milieu with psychoanalytic therapy 3 x week. 25 weeks	Not stated	SCL-90, GSI, semi structured interview for severity of BPD, SCID-P. Found that level of identity disturbance and interpersonal problems predicted course of treatment over 6/12.
Inpatient post treatment	Najavitis <i>et al</i> (1995)	4b	37 female BPD DIB. Excluded for schizophrenia and substance abuse	None	Psychoanalytic with drug treatment as normal and some patients had additional family or group therapy	54% at end of 3-yr follow-up period	3yr follow-up impulsivity, PD, drug/alcohol use, quality of life/ functional impairment. Largest group showed erratic improvement over 3yrs. GAS showed had moved to better level of functioning. Most measures showed improvement and no significant deterioration. SCL-90, DIB, GAS, BPOQ, SAS, problem scale, satisfaction questionnaire.
Inpatient during treatment	Clarkin <i>et al</i> 1994	4c	35 female SCID II PAI	None	Modified psychodynamic psychotherapy 3x weekly over 25 weeks	Not stated	SCI90R, GSI – improved but not clinically. Patients showed an increase in symptoms over first 4/12 of treatment.
Inpatient post treatment	Wheelis & Gunderson (1998)	4c	1 female BPD DSM criteria	None	Psychoanalytic psychotherapy –‘multi-modal treatment plan’. 2x week inpatient Duration ‘long term’	N/A	Follow-up not stated. Clinical judgment used to judge outcome. Acting out behaviour more managed.
Outpatient during treatment	Bateman & Fonagy (1999)	1	22 BPD SCIDII DIB. Excluded schizophrenia	22 patients referred to the unit who met entry requirements but allocated to general psychiatric service	Psychoanalytic therapy once a week indiv, 3x week group and psychodrama. 18 months Halliwick Psychotherapy Unit	3 pts in control and 3 patients in treatment group dropped out 88% completed	3 monthly intervals during treatment to end of treatment. Partial hospitalization group had significantly decreased on all measures compared with the control group. BDI, SCL90R, Spielberger State/ trait, SAS, IIP. Psychoanalytically orientated partial hospitalization is superior to standard psychiatric care for BPD.

Outpatient post treatment	Bateman & Fonagy (2001) Also see Bateman & Fonagy (1999)	1	22 BPD SCIDII DIB	22 patients referred to the unit who met entry requirements but allocated to general psychiatric service	Psychoanalytic therapy once a week indiv, 3x week group and psychodrama. 18 months	3 pts in control and 3 patients in treatment group dropped out (12%)	18-month follow-up. More self harm and suicide attempts in follow-up by controls than study group. Study group significantly improved versus control group on: BDI GSI IIP SAS. Continued use of medication in both groups.
Outpatient post treatment	Munroe-Blum & Marziali (1995)	1	38 BPD DIB (81% total cohort female)	41 = controls Individual treatment as usual (2/w dynamic therapy)	30 1.5h sessions of interpersonal group therapy over 35 weeks	31 withdrew at randomization Data on 84% of those who completed treatment	24m follow-up. No outcome difference between the groups: OBI SAS SCL90 DBI.
Outpatient post treatment	Piper <i>et al</i> (1993)	1	137. First 60 matched pairs used 20 male, 40 female, Dependent PD (22%) BPD (14%) 38% no PD DIS	89 matched pairs used, 20male, 40 female. Delayed treatment group. Started treatment 18w later	Predominantly psychoanalytic group therapy with some systemic and drug. University of Alberta hospital, 18 weeks.	57.7% completed treatment group, 68.5% completed control group.	31.4w (+/- 23.2w) treated group showed sig. more improvement than control on 7/17 variables. At 8/12 follow-up maintained benefit. Mean effect size for all outcome variables = 0.71. SAS, IBS, GSI, SCL90.
Outpatient post treatment	Piper <i>et al</i> (1994)	1	60 dependent PD (25%) BPD (13%) Overall 29% male Clinical interview for Axis II after DSM	39 delayed treatment group started treatment 18w later	Outpatient day programme, predominantly psychoanalytic with same drug and systemic/ family therapy University of Alberta hospital 18 weeks	61.5 % completed	17 outcome variables as in 1993 paper. GSI, SAS, SCL90, IBS 31.4w (+/- 23.2) follow-up. Psychological mindedness and quality of object relations emerged as strongest predictors.
Outpatient post treatment	Winston <i>et al</i> (1994)	1	93 (73% female) Cluster C/B PD SCID III, PDQ	26 (31% female) waiting list group	Adaptive therapy group Short term dynamic group 40w (+/- 8.6)	87% study group completed	1.5y average follow-up Patients in the groups improved significantly on all measures compared to waiting list group SCL90, SAS, TCS.

Outpatient post treatment	Meares <i>et al</i> (1999)	3a	48 BPD SSI	30 waiting list group of referrals	Psychoanalytic individual therapy. Interpersonal psychodynamic therapy. Westmead Hospital 1hx2/w for 1 yr	84% completed treatment. Only 62.5% in final analysis.	SSI – 30% of treated patient no longer met DSM criteria for BPD. Controls unchanged.
Outpatient post treatment	Stevenson & Meares (1999)	3a	30 (19 female) BPD SSI	None	Psychoanalytic therapy x2/w for 1y, Westmead Hospital	N/A	12m follow-up. CIS fell significantly over 2y. SSI – DSM fell in treatment. Cost savings \$8,000/y.
Outpatient post treatment	Wilberg <i>et al</i> (1998)	3a	49 BPD SCID	12 (11male) day treatment and outpatient group. 31 (22 male) day treatment only.	Inpatient and outpatient vs. inpatient groups only. Ulleval University Hospital, 1-5h/w. 12m average	88% follow-up	34m follow-up. Day treatment group had significantly lower GSI and HSRS at follow-up compared with non-day treatment group.
Outpatient post treatment	Sandell <i>et al</i> (1993)	4a	105 BPD and borderline personality organization. Clinical judgment DSM III.	50 students with no psychiatric history matched for age and sex.	Psychoanalytic, milieu therapy in a day hospital setting. <4/12 = drop-out group. >4/12 = treatment group. Fruangen Day Hospital	Treatment group 75% response rate. Dropouts (80%), controls 90%	Self report questionnaires, postal. 3-10 years follow-up. Patients who remained in treatment had higher level of functioning than drop-outs (but below normal). However wide variation.
Outpatient during treatment	Barber <i>et al</i> (1997)	4b	38 (50% male) obsessive compulsive (14) and avoidant PD (24) SCIDII PDE	None	Time-limited supportive expressive therapy. University of Pennsylvania School of Medicine, 52 sessions	93% OCD completed. 54% avoidant PD completed	Both groups improved across time on measures of PD depression, anxiety, general functioning but OCD lost diagnosis faster. Hamilton depression, Hamilton Anxiety BDI, GAF, Therapeutic Alliance score IIP PDI opinions about treatment expectations of treatment scale.
Outpatient during treatment	Budman <i>et al</i> (1996)	4b	49 (34 with PD), 25 female BPD/ Avoidant PD, OCPD and mixed others PDE	None	Interpersonal time-limited group therapy. Havard Community Health Plan, 1.5 h/w x 18m	43% completed. Of those left 22% had a PD	General improvement maintained over 18m of treatment. Mean of PD criteria on PDE significantly reduced post treatment. Clear improvements on: IIP SCL-90 Se SAS-SR GAS.

Outpatient post treatment	Cookson <i>et al</i> (unpublished)	4b	43 referred – 19 started treatment. BPD and other PDs PDE, PDQ4	None	Psychoanalytic psychotherapy, 50min once weekly sessions, 12 or 6 months	12 completed 12m, 7 completed 6m	20 months follow-up. All measures showed sig. Difference between assessment and follow-up. Treatment helped reduce severity of borderline pathology, decrease symptomatic distress and impulsivity: PDQ4 BSI Brief symptom inventory MIS.
Outpatient post treatment	Hoglund (1993)	4b	45 (14 male). 15 have mixed PD, dependent, avoidant, histrionic, neurotic and BPD. Clinical interview and life history for DSM diagnosis.	30 patients without PD	Brief individual therapy. 9-53 sessions (mean 27.5)	Not stated	2yr and 4yrs follow-up. At 2 years PD group showed less symptomatic and dynamic changes versus non-PD group. At 4yrs the difference in mean change was non-sig. But within PD group, >30 sessions leads to more dynamic change at 4yrs. GAS, target complaints scale.
Outpatient post treatment	Junkert-Tress <i>et al</i> (2001)	4b	87, 24 had PD Clinical judgment/ ICD	None	Short-term psychoanalytical psychodynamic therapy Heinrich-Heine-University, Duesseldorf, 25 sessions	86% completed (55f)	Up to 5y follow-up Patients with severe PD profited according to experts' rating GAF – improved across all groups Clinically non-significant improvement in PD group: SCL90R GAS IIQ IS.
Outpatient post treatment	Krawitz (1997) ¹³	4b	32, m/f not stated DSM	None	Psychoanalytic but with some CBT and TC principles. 4 months	93% completed	Follow-up 24m. All clinical ratings demonstrated marked improvement following treatment. SCL90 effect size 2.33. Gas= 1.66 pre and 24m post treatment.
Outpatient post treatment	McCallum & Piper (1997)	4b	154 -72% of which had Axis II diagnosis	None	Psychoanalytic evening group treatment programme. 4h x 5/7 for 18 weeks	150/190 completed	Scores sig. improved on each outcome variable. Psychological mindedness was significantly related to psychodynamic work in the programme.
Outpatient post treatment	McCallum & Piper (1999) ¹⁴	4b	77, paranoid PD (18), BPD (5) or dependent PD (11); 37 more than one PD interview for DSMIII	None	Psychoanalytic evening group treatment programme. 4h x 5/7 for 18 weeks	Not stated	Measures of group work (self and therapist) and psychological mindedness. Psychological mindedness had differential influence on work and outcome for all three disorders.

¹³ Also reported in the Therapeutic Community Section

¹⁴ This paper presents additional analysis from McCallum and Piper (1997).

Outpatient post treatment	Monsen <i>et al</i> (1995b) ¹⁵	4b	25 (19 female), 92% had PD DSM (instrument not stated), 96% Axis I disorder	None	Psychoanalytic, self psychology style, 25.4 m (+/-12.9)	84% follow-up (n=21)	Follow-up 5.2y (+/- 15.2m) Decrease in MMPI symptoms and improvement in capacity to tolerate intimacy and process affect. Psychosocial improvements.
Outpatient post treatment	Stevenson & Meares (1992)	4b	48 BPD, 30 in data analysis (19 female) DIB	None	Psychoanalytic psychotherapy x2 weekly. 12m	62.5% in final analysis	1-year follow-up. Reduction in no. DSM criteria at follow-up (70% post- vs. 100% pre-treatment). All behaviour measures sig. Improved. Severity index of PD, Cornell Index, behaviour measures, hospital admissions, drug use.
Outpatient during treatment	Wilberg <i>et al</i> (1998)	4b	183 (45males), 87% PD Co morbid Axis I BPD n=70, avoidant PD n=69 SCID	None	Day hospital treatment programme with psychoanalytic, CBT, group therapy. Ullevål University Hospital, Oslo, 20.2w (+/- 3.2w)	55.2% completed	Sig. Change in GAF, GSI and IIP pre and post treatment. Patients gave positive rating of benefit
Outpatient post treatment	Magnavita (1994)	4c	1 male, passive aggressive PD. Clinical judgement	None	Intensive short-term brief dynamic psychotherapy. Thirteen sessions over 6 mths		Clinical improvement and patient self-respect. 6/12 follow-ups. No measures used.
Outpatient during treatment	Primac (1993)	4c	1 female, compulsive personality. Unclear how diagnosed	None	Individual brief psychotherapy. 16 x 50min sessions	N/a	Positive change on Mahl's speech disturbance measure between first and last sessions. Rorschach – rose from 7-0.
Outpatient post treatment	None						
Other post treatment	Schimmel (1999)	4c	1 brief psychotic episode and borderline personality organization	None	2x weekly psychoanalytic psychotherapy in TC as inpatient and on day programme. 18/12 treatment	N/a	3y follow-up. Improvement in patient's clinical state. Withdrawn from medication during treatment. No further hospitalization for three years.

¹⁵ For background information, see Monsen et al (1995a & c).

Pharmacological treatments

Introduction

This review is intended to cover treatment research with PD patients since 1992. Nonetheless, it is important, in this chapter, to set the background by briefly summarising the literature on drug treatment efficacy prior to 1992. A number of helpful reviews were published at the start of the 1990s (Dolan and Coid 1993; Stein, 1992).

Pharmacological treatments for personality disorder: the evidence before 1992

Stein (1992) reflected that research into the effectiveness of drug studies for PD had “sprung into life” during the 1980s with the publication of three major placebo-controlled studies of neuroleptics (and other drugs) involving participants with BPD and/or schizotypal PD (Cowdry and Gardner, 1988; Goldberg *et al*, 1986; Soloff *et al*, 1986). He argued that the primary stimulus for these trials was the improvement in classification and diagnosis of patients afforded by the operational criteria for each PD category within DSM-III-R. Although the findings of these studies were not straightforward, and the Cowdry and Gardner study in particular had a very small sample, he concluded that small doses of neuroleptics may afford considerable benefits for people with BPD and/or schizotypal PD. He further concluded that other drug treatments, such as tricyclic antidepressants (TCAs) for comorbid depression, may be ineffective, while other drugs such as Monoamine Oxidase Inhibitors (or MAOIs) or the anticonvulsant carbamazepine, appeared to have benefits only for selected PD patients within a diagnostic category. In addition Stein noted several attempts that had been made to subdivide BPD into different subsyndromes. He added that most of these proposed subdivisions had little clinical usefulness in terms of predicting the drug to which a particular individual with BPD would respond, and concluded that a pragmatic approach might involve trying a sequence of two or three drugs until a clinical response was obtained.

Stein concluded his review by noting that the “era of uncontrolled studies has passed, and only placebo-controlled trials should now be undertaken”. He emphasised this point by adding that the nature of individuals with PD, who are often highly suggestible, means that open trials would be vulnerable to large placebo effects. The current review shows that this advice has not been heeded: there are still many uncontrolled studies being published, and a relative dearth of quality controlled trials. Similar points were made in Stein, Hollander & Skodol (1995).

Dolan and Coid's (1993) review was of similar scope to that of Stein. In reviewing the evidence on neuroleptics they were able to include the later, larger study by Soloff, Cornelius, George, *et al*. (1993) which is reviewed in more detail later in this chapter. This study revealed little benefit of haloperidol over placebo in an RCT of inpatients with BPD. Regarding antidepressant treatment of PD, using TCAs or SSRIs, Dolan and Coid noted that the studies in their review had been restricted almost entirely to individuals with BPD and argued, as Stein did, that these studies did not demonstrate a marked response.

Dolan and Coid also discussed evidence relating to treatment of PDs with MAOIs, benzodiazepines, anticonvulsants, psychostimulants and lithium. Regarding MAOIs, Dolan and Coid concurred with the comments made by Stein; specifically, that MAOIs may have beneficial effects for some individuals with PD either via their antidepressant action or psychostimulant properties. Regarding benzodiazepines, they commented that the available literature was not of high quality. Turning to anticonvulsants, Dolan and Coid emphasised that only carbamazepine had been shown to improve overactivity, aggression and impulse control. Because this effect was irrespective of PD category, then they suggested that carbamazepine should be targeted at these symptoms and behaviours themselves, rather than at individuals with a specific Axis II disorder. They noted that the beneficial effects of carbamazepine may derive from its mood-stabilising, rather than its anticonvulsant, properties. In discussing psychostimulants, Dolan and Coid concluded they may be useful only in a small group of psychopaths, and are probably contraindicated for individuals with schizotypal features to their PD. Finally, Dolan and Coid

concluded that lithium maintenance treatment was a “promising development” for explosive and impulsive individuals, holding out some hope for those with ASPD.

Reviews and overviews since 1992

The search elicited a number of articles reviewing literature on psycho-pharmacological treatment for individuals with PDs (Coccaro, 1998; Hollander, 1999; Markowitz & Wagner, 1995; Pelissolo & Lepine, 1999; Sanislow & McGlashan, 1998; von Knorring & Ekselius, 1998). Of these, only Sanislow & McGlashan (1998) attempted a systematic review of the literature. Their remit was “treatment outcome of personality disorders” and therefore they included studies of non-drug treatments. They located 28 outcome studies for drug treatments, but only five of these were dated after 1992. All five of these studies are included within this chapter.

Coccaro gave a neat, but rather pessimistic, encapsulation of more than 30 years’ research into drug treatments for PDs: “there are few clear results in terms of clinical outcome ... most (drugs) are nonspecific in mechanism and nonspecific in effect. This is due both to the nonselective nature of the (drugs) and to the heterogeneity of ... personality disordered participants in general (p. 34)”. He did, however, emphasise the potential anti-aggressive efficacy of Selective Serotonin Reuptake Inhibitors (SSRIs) in personality disordered individuals with prominent impulsive and aggressive behaviour, in light of the findings of his own RCT (Coccaro & Kavoussi, 1997).

Hollander (1999) reviewed a small number of drug studies attempting to manage aggressive behaviour in BPD patients. This review presented part of the results from the classic early RCT by Cowdry and Gardner (1988), as being from Soloff *et al.*’s (1993) RCT (reviewed later in this chapter). All the studies that were reviewed by Hollander, appeared either in the reviews by Dolan and Coid (1993) or Stein (1992), or in the current chapter.

Markovitz (2001) structured his review by category of PD. For BPD he summarised the same evidence as Dolan and Coid on lithium and anticonvulsants. His review of traditional and atypical neuroleptics also largely covered the same material reviewed either by Dolan and Coid, or by the present chapter. He did note two (1997) case reports of using the atypical neuroleptic risperidone in BPD that were not uncovered by the present search. For studies using TCAs, MAOIs, or SSRIs with BPD his chapter reviewed the same material as that covered by Stein (1992), Dolan and Coid (1993), and the present chapter. However, he did describe unpublished findings from his own open trial on the antidepressant nefazodone. He noted that 36 of the 57 participants in the trial demonstrated response to the drug, while noting the need for a replication in a controlled trial. Markovitz noted the lack of research with ASPD and schizotypal PD participants.

Pelissolo and Lepine (1999; published in French) discussed at length the methodological issues surrounding drug efficacy research with PD participants: assessment methods (categorical vs. dimensional); how to evaluate change; participant selection; choice of comparison groups; study duration etc. They went on to note that for Cluster C PDs there was a small amount of evidence suggesting some beneficial effects of antidepressants on certain obsessive-compulsive personality dimensions and on avoidant PD. They cited one controlled study (Ansseau, M., 1996; published in French; *Intérêt des antidépresseurs sérotoninergiques dans la personnalité obsessionnelle. Encephale* 22 309-310) which did not appear in the current search. This three-month placebo-controlled study was of the SSRI fluvoxamine in non-depressed participants with obsessional-compulsive personality. The study showed significantly greater reduction in the drug-treated group, relative to the placebo-treated group, in PD scores. They interpreted this finding as being consistent with the results of the open trial by Fahlen, Nilsson, Borg, *et al.* (1995) which was included in the present review. The authors noted the lack of research with Cluster A PDs, and the fact that most studies had been with Cluster B PDs, particularly BPD. They then reviewed the studies that appeared in the reviews by Stein (1992), or Dolan and Coid (1993), plus those covered in the current review. A handbook for clinicians (Trestman, Woo-Ming, deVegvar, *et al.*, 1998) reviewed relatively few studies cited all of which have already been covered, above.

Von Knorring and Ekselius (1998) focused on drug trials with impulsivity as a target symptom. They noted that some of the trials had positive effects while others had negative findings. The studies they noted appeared either in the reviews by Dolan and Coid (1993) or Stein (1992), or in the current chapter, or were studies of individuals with attention deficit hyperactivity disorder (and

thus were beyond the scope of the present review). They emphasised the results of their own SSRI trial, later published as (Ekselius & von Knorring, 1998), and reviewed later in this chapter.

Structure of this chapter

Within this main section of the current chapter, the articles are broken down (where appropriate) by the class/type of drug being used. Although the other sections of this report reviewing treatment types are organised first by setting and then by study type, this chapter is not, for ease of reading. There were only two studies of pharmacological treatment conducted in high secure settings and these are identified in the text. Studies will be broken down into six drug types: selective serotonin reuptake inhibitors (SSRIs); monoamine oxidase inhibitors (MAOIs) and tricyclics; low dose traditional neuroleptics; atypical neuroleptics; opioid drugs; and anticonvulsants. Finally, within drug type, a further subdivision into experimental vs. observational studies (following CRD terminology) will be made.

Empirical articles on treatment outcome in PD patients published since 1992

Selective Serotonin Reuptake Inhibitors (SSRIs)

Experimental studies

Salzman, Wolfson, Schatzberg, *et al.*, (1995) carried out a double-blind, placebo-controlled study of fluoxetine on volunteer participants with “mild to moderately severe” BPD. Diagnosis of BPD, or significant borderline traits without meeting full criteria, was established by a psychiatric screening interview using DSM-III-R criteria, the DIB-R, and SCID-II. Exclusion criteria were: history of psychiatric hospitalisation; recent suicidal behaviour; concurrent secondary Axis II disorder; or self-mutilating behaviour during last four years. After recruitment by newspaper advertisement, 31 participants met criteria for study and 27 enrolled, with 22 completing the study (ten women and three men receiving fluoxetine; four women and five men receiving placebo). After a one-week placebo run-in, drug or placebo was given for 12 further weeks. Participants were evaluated each week by independent observers for depression (Ham-D), mood (POMS), and for anger and aggression by the OAS. The GAS was also administered along with a Personality Disorder Rating Scale specially devised for the study. By comparing pre- and post-treatment outcome scores, the authors noted significantly (or near-significantly) greater improvement for the fluoxetine-treated group, relative to the placebo group, for most of the outcome variables. The effect was most striking for the anger subscale of the POMS. The authors cautioned about the small sample size and the relatively high level of functioning of their sample, but nonetheless called for further controlled trials with larger samples.

Coccaro & Kavoussi, (1997) carried out a double-blind, placebo controlled trial of fluoxetine on an outpatient personality disorder (PD) sample. The participants met DSM-III-R criteria for PD and scored high on an Anger, Irritability and Aggression Questionnaire (AIAQ). Those with a life history of schizophrenia, mania, or delusional disorder, along with those with current major depression or current alcohol/substance abuse, were excluded. Sixty-four participants entered the two-week placebo run-in phase of the study where aggression and irritability were measured using the Overt Aggression Scale-Modified for Outpatients (OAS-M). Forty participants, those with high scores on the OAS-M ratings during the run in phase, were randomised into the 12-week treatment phase (27 had the active drug). Retention was similar for drug- and placebo- treated participants across the trial (52% of drug and 69% of placebo participants were retained by week 12 of treatment). The primary outcomes were assessed at each two weeks of the trial, based on weekly interviews for aggression and irritability using the OAS-M. These scores were significantly reduced in fluoxetine, but not placebo-treated participants, during and after the second month of treatment. These treatment effects were not significantly influenced by gender, depression, anxiety, or alcohol use.

Verkes, Van der Mast, Hengeveld, *et al.*, (1998) used paroxetine in a double-blind placebo-controlled trial with outpatient participants who had made multiple suicide attempts. The study is relevant to the current review because all but seven of the 91 participants met DSM-III-R criteria for one or more PDs (especially Cluster B: 74 participants). Participants were excluded if they met criteria for major depressive disorder, psychotic disorder, organic mental disorder, were

dependent on alcohol or any other substance, or were using antidepressants or antipsychotic medication. Forty-six participants (29 female) were randomised to paroxetine, and 45 (25 female) were randomised to placebo. Participants were able to receive a drug (or placebo) for up to 52 weeks (with additional supportive psychotherapy available fortnightly), although steady drop-out across time meant that only 11 drug and eight placebo participants were still enrolled at 52 weeks. Drop-out differences across the groups were not significant, either in terms of numbers or the characteristics of those dropping out. Time from baseline to first recurrence of a suicide attempt was the primary endpoint and the treatment effect on this variable was analysed using survival analysis methods. After adjustment for number of prior suicide attempts, there was a significant beneficial effect of paroxetine relative to placebo. Participants were helped by the drug if they had previously made fewer than five suicide attempts; the beneficial effect was also significant only for those participants who met fewer than 15 criteria for a Cluster BPD, using the Personality Diagnostic Questionnaire- Revised (PDQ-R), although these were largely the same individuals as those who had made fewer past suicide attempts.

Observational studies

Hull, Clarkin & Alexopoulos, (1993) used fluoxetine to treat a woman with major depression and repeated suicide attempts, within a long-term inpatient unit for severe personality disorders. The participant met DSM-III criteria for paranoid, schizotypal, and borderline personality disorder. She showed little symptom improvement over the first 40 weeks of her hospitalisation, after which the fluoxetine treatment was initiated. Clinical impressions were that the participant responded favourably within a few weeks and was discharged to a half-way house and day treatment programme 18 weeks after fluoxetine treatment began. After discharge, the participant's 58 weekly ratings on the Global Symptom Index (GSI) from the SCL-90-R, which indexes the participant's general distress levels, were subjected to time-series analysis. This revealed a two-stage improvement, with large changes occurring in the second and fourth week of drug treatment. Individual symptoms (SCL-90-R scales) showed differential timings in their response to fluoxetine.

Kavoussi, Liu & Coccaro, (1994) carried out an open trial of sertraline in personality-disordered individuals with impulsive aggression. The study involved 11 outpatient participants who met DSM-III-R criteria for at least one PD, as determined by the Structured Interview for DSM-III Personality Disorders (SIDP). Based on a clinical interview, and using DSM-III-R criteria, individuals were excluded if they met Axis I criteria for schizophrenia, bipolar disorder, alcohol/drug dependence, or organic mental syndrome. Nine of the 11 participants completed at least four weeks of treatment, and seven completed the full eight weeks of the trial. Participants were rated using the OAS-M at baseline and after two, four and eight weeks of treatment, and using the Hamilton Anxiety and Depression at baseline and after eight weeks of treatment (or at the point of premature study termination). Compared with baseline, OAS-M aggression scores showed significant improvement by week two and this continued across weeks four and eight. OAS-M irritability did not drop significantly below baseline until week four and this improvement was sustained at week eight. Of those participants who completed at least two weeks of treatment, mean Hamilton depression and anxiety scores dropped from baseline to termination, the decrease reaching significance for the depression scores. Further analyses of covariance showed that the change in depression or anxiety scores were not responsible for the changes in OAS-aggression or irritability. In addition to urging caution owing to the open nature of the trial and the small sample size, the authors discussed the possibility that the apparent treatment effect might be due to a nonspecific antianxiety or antidepressant effect of the drug. They noted that their participants generally had low levels of anxiety and depression, and stressed that the observed effects on aggression and irritability were not reduced statistically by covarying out changes in anxiety and depression.

Markowitz & Wagner, (1995) used venlafaxine to treat 45 outpatient participants who met DSM-III-R criteria for BPD. They tried this particular SSRI on the grounds that older studies had suggested a role for other SSRIs (fluoxetine; sertraline) and had indicated that individual patients may differ in the SSRI to which they respond. The participants scored seven or higher on the Gunderson Diagnostic Interview for Borderline Personality Disorder and 60 or higher on the Hopkins Symptom checklist (SCL-90). Exclusion criteria were serious medical illness and substance dependence/abuse. All but five of the participants met DSM-III-R criteria for depression.

Participants received venlafaxine for 12 weeks and 39 participants completed the full trial. At the end of treatment SCL-90 scores showed significant reductions in comparison with baseline levels (with all the subscales showing statistically similar reductions). The total number of somatic symptoms noted (e.g., headaches, myoclonus, premenstrual syndrome) decreased significantly from baseline to the end of treatment. The authors concluded that venlafaxine may be useful in treating BPD but argued that controlled trials were needed.

Silva, Jerez, Paredes, *et al.*, (1997) carried out an open-label trial of fluoxetine in a sample of 46 participants (36 women) who met DSM-III-R criteria for BPD and who had scores of eight or higher on Gunderson's Diagnostic Interview for Borderlines-Revised. Participants with Axis-I DSM-III-R diagnoses were excluded. Treatment was for seven weeks and 38 participants finished the trial. The participants were rated weekly using the BPRS, GAF, Hamilton Depression Scale, and a clinical impulsivity scale based on DSM-III-R criteria. Significant improvements after one week of treatment were observed for the BPRS, the Hamilton, the GAF, and the clinical impulsivity scale. Further significant improvements occurred on week four (Hamilton, GAF), week six (GAF), and week seven (clinical impulsivity). While being optimistic about the results obtained, the authors concluded that a double-blind controlled study was urgently needed, using a longer treatment period, and also evaluating other SSRIs.

Friis S, Wilberg T, Dammen T, *et al.*, (1999) reported a study of pharmacological treatment within a day unit specialised in the treatment of PDs. The treatment programme was based exclusively on different kinds of group therapies and has been described in detail elsewhere (see Friis *et al.*, 1999, for references). From a consecutive series of 111 cases admitted to the unit, 102 who remained for at least two weeks were included. Eighty-five of these cases had at least one PD, as diagnosed using the SCID. Pharmacotherapy was administered through a medication group, led by a psychiatrist. As antidepressants (usually SSRIs, and mainly paroxetine or fluvoxamine) were the only medications given to substantial proportion of the cases, the 58 cases who received antidepressants were compared with the 44 who did not receive these drugs. In the subsample of 85 patients who had a mood disorder, 53 received antidepressant medication. In the mood-disordered subsample, there were significantly greater improvements from admission to discharge in the group NOT receiving antidepressants compared with the group receiving antidepressants, on measures of global symptoms (GSI scores) and depression (subscale from the SCL-90R). Further analyses subdivided those participants who had Cluster A or B PDs (called "severe PD" by Friis *et al.*) from those who had Cluster C PDs or no PD. The severe PD vs. no severe PD grouping interacted significantly with the negative effect of antidepressants. Specifically, the tendency for cases treated with antidepressants to have poorer discharge scores (controlling for admission scores) than the cases not treated with antidepressants was significantly stronger amongst the severe PD cases, relative to the cases without severe PD. The significant interaction occurred for depressive symptoms and measures of global health (GAF scores).

Monoamine Oxidase Inhibitors (MAOIs) and Tricyclics

Experimental studies

The studies by (Soloff, Cornelius, George, *et al.*, 1993) and (Cornelius, Soloff, Perel, *et al.*, 1993) using the MAOI antidepressant phenelzine are summarised below under 'Low Dose Traditional Neuroleptics'.

Powell, Campbell, Landon, *et al.*, (1995) reported results from a double-blind, randomised, placebo-controlled drug trial in which the participants were either treated with the tricyclic antidepressant nortriptyline (an adrenergic reuptake inhibitor with serotonergic properties) or the dopamine D2 agonist bromocriptine. In all, 216 detoxified male inpatient veterans with a DSM-III-R diagnosis of alcohol dependence were drawn from Substance Abuse Treatment Units. These participants were sorted into three groups: "pure" alcoholics without major comorbid Axis I or II disorders (N=63); alcoholics with anxiety/affective disorders but no ASPD (N=88); alcoholics with Axis II ASPD with or without other Axis I disorders (N=65). The third group is of interest to the current review. Within each of these three groups participants were randomised to active drug or to placebo. Drug treatment was begun in the third week of a three-week hospitalisation followed by a scheduled eight outpatient follow-up visits over a six-month period. Only 46 per cent of participants (N=99) were deemed to have completed the trial but there was no differential drop-out

across drug treatment or diagnostic subgroup. Drop-outs were significantly higher amongst participants with greater numbers of prior psychiatric hospitalisations, but no other significant relationships with recorded variables were observed. There were 29 participants who completed the trial and who had comorbid ASPD (nine received bromocriptine; 11 nortriptyline; and nine placebo).

Various standardised assessments of alcohol-dependence severity, and of psychiatric symptoms (SCL-90 depression; Beck Anxiety and Depression Inventories), were made at baseline and in the follow-up visits. Analyses of change scores (six-month outcome minus baseline) indicated that the drug effects on outcome measures were significant only for the ASPD subgroup, and not for either of the other two alcoholic subgroups without comorbid ASPD. In particular, amongst the ASPD subgroup, nortriptyline produced significantly larger improvement on the Severity of Alcohol Dependence Questionnaire compared with placebo. ASPD participants taking either drug showed improvements in Beck Anxiety ratings, whereas ASPD participants receiving placebo deteriorated on this index. ASPD participants taking nortriptyline reported significantly fewer drinking days during the six-month follow-up period, and were more frequently abstinent at six months, than the ASPD participants taking placebo. The authors tentatively concluded that nortriptyline may reduce impulsive drinking in alcoholic men with ASPD by virtue of the drug's serotonergic properties.

In further reanalysis of the above surprising findings, Penick, Powell, Campbell, *et al.* (1996) further subdivided the 29 participants with alcohol dependence and ASPD who completed the earlier study. Of these, 15 participants met, and 14 did not meet, DSM-III-R criteria for a current anxiety/mood disorder at intake to the study. Across several measures of drinking outcome, there were significant (or near-significant) differential benefits of the drug treatments in the subgroup with current mood/anxiety disorders, relative to those without mood/anxiety disorders. These drug effects were greater than those observed on measures of anxiety, depression and emotional distress. Therefore, the authors argued that it was unlikely that the beneficial effects on drinking outcomes were an indirect result of the non-specific mood-alleviating (e.g. antidepressant) properties of the drugs.

Observational studies

The search produced no observational studies of the treatment outcomes produced by MAOIs or tricyclic drugs in PD patients.

Low dose traditional neuroleptics

Experimental Studies

A pair of papers (Soloff, Cornelius, George, *et al.*, 1993; Cornelius, Soloff, Perel, *et al.*, 1993) reported a double-blind randomised controlled trial (RCT) looking at the effectiveness of low doses of the neuroleptic *haloperidol*, or the MAOI antidepressant *phenelzine*, as acute (Soloff *et al.*) or continuation (Cornelius *et al.*) pharmacotherapy for BPD. All participants met DSM-III-R criteria for BPD, and scored above criterion cut-off on the Diagnostic Interview for Borderline Patients. Participants were excluded for the presence of schizophrenia, mania, psychotic depression, bipolar disorder, schizoaffective disorder, and chronicity and organicity. Participants also met severity criteria on a number of standardised instruments, designed to select participants with sustained affective and/or schizotypal symptoms. One hundred and eight participants (82 female) were randomised into one of the two drug groups (38 received phenelzine, 36 received haloperidol), or to placebo (N=34), for the acute intervention RCT. 42 participants had pure BPD, but 66 met criteria for both BPD and SPD. The acute trial lasted five weeks, including an initial minimum of two weeks as an inpatient, followed by treatment as an outpatient. Fifty-four of the participants (40 women) were then able to enter the continuation study, lasting a further 16 weeks (22 received phenelzine and 14 received haloperidol). These participants met criteria regarding their improvement in the acute trial. In both trials, outcomes were assessed via standardised measures of global functioning, depression, schizotypal symptoms, hostility, impulsive behaviour and traits, hysteroid dysphoria and borderline dysphoria.

In the acute trial (Soloff *et al.*), there were 32 dropouts for the entire study and patients were required to complete at least three weeks medication to be included in endpoint analysis (this was

achieved by 92 participants). There were no significant differences in attrition between the medication groups at any time. Groups were well matched at baseline on all features except for depression. Outcome ratings were made weekly after the baseline assessment. Group comparisons were made on outcome scores by analysis of covariance using baseline scores as the covariate. Pairwise comparison between medication and placebo revealed significant efficacy for phenelzine against anger and hostility but no efficacy on any other measure (including measures of atypical depression or hysteroid dysphoria), and no significant efficacy for haloperidol (vs. placebo) on any measure. Further pairwise comparisons revealed that haloperidol was significantly superior to phenelzine on measures of hostile belligerence and impulsive-aggressive ward behaviours. There were no interactive effects on outcome related to the presence of other comorbid diagnoses (including SPD).

In the continuation trial (Cornelius *et al.*), there was significant differential attrition of those who were taking the active drugs versus placebo-treated participants (with median survival times in the continuation trial being only five and eight weeks for the haloperidol and phenelzine groups respectively, while the majority of the placebo group completed the continuation trial). There was little evidence of efficacy of continuation therapy with either haloperidol or phenelzine, except for effects on irritability (subscale from the Buss-Durkee Hostility Inventory), and modest effects (for phenelzine) on depression (Hamilton Depression scale).

Battaglia, Wolff, Wagner-Johnson, *et al.*, (1999) reported a prospective randomised, double-blind controlled study comparing the effects of two different doses of the neuroleptic fluphenazine in intramuscular depot form. Fifty-eight outpatient participants, who presented to emergency psychiatric services after a suicide attempt and who had histories of multiple suicide attempts, were randomised into the study. The paper is relevant to the current review as the most frequent diagnosis in the sample was BPD, occurring in 85 per cent of the participants. Of 10,085 cases screened 390 had made three or more suicide attempts. After applying several exclusion criteria, 221 cases were eligible but there were large numbers of patients refusing to participate or not attending appointments. Eventually 30 participants were randomised into the low-dose and 28 were randomised into the ultra-low dose groups (one case was subsequently dropped). A baseline level of self-harm behaviour (SHB) was retrospectively assessed for the six months prior to the study. Participants received their depot injections once monthly for six months and were assessed monthly for SHB by blind raters using the Parasuicide History Interview (PHI). Fifty-nine per cent of the low-dose group, and 54 per cent of the ultra-low dose group, failed to complete the full six months of the study, although drop-out vs. completing participants were very similar in pre-treatment SHB rates. Both groups showed a significant reduction in SHB, c.f. baseline, in the treatment period, but there was no significant difference in the reductions between the two drug groups. The results were the same when limited only to serious incidents of SHB. Although these results are potentially promising, the design does not rule out the possibility of a placebo effect.

Observational studies

The search revealed no observational studies concerning treatment outcome of low dose traditional neuroleptics in PD patients.

Atypical neuroleptics

Experimental studies

The search revealed no experimental studies concerning treatment effectiveness of atypical neuroleptics in PD patients.

Observational studies

Chengappa, Baker & Sirri, (1995) reported a single case study of a female participant with long-standing severe BPD. Treating psychiatrists concurred that her diagnosis met DSM-III-R criteria and the disorder had not responded to treatment with antipsychotics, antidepressants or fluoxetine. The authors noted a dramatic improvement in impulsivity, and self-harm/self-destructive behaviours following three-months inpatient treatment with clozapine and, 16 months after discharge, the improvements were maintained.

Frankenburg & Zanarini, (1993) conducted a preliminary study of the neuroleptic clozapine with 15 participants who met DSM-III-R criteria for BPD. The participants were recruited as part of a larger study of clozapine for treatment-resistant psychoses, and thus all concurrently met criteria for DSM-III-R psychotic disorder not otherwise specified (atypical psychosis). Seven of the participants met DSM-III-R criteria for schizotypal personality disorder (SPD). None of the participants had met DSM-III-R criteria for major depression or a psychoactive substance use disorder in the month prior to baseline interview. All 15 participants had a childhood history of prolonged and severe abuse. The participants were given a baseline interview using standard diagnostic instruments and three standardised symptom rating scales (Brief Psychiatric Rating Scale, BPRS; Clinical Global Impression, CGI; and Global Assessment of Functioning, GAF). After receiving clozapine for between two and nine months the participants were re-interviewed and the symptom rating scales were re-administered by researchers blind to diagnosis and baseline functioning. Before-after comparisons revealed that the participants had significant reductions in psychotic symptoms (on the BPRS), a significant decrease in symptom severity (on the CGI) and a significant improvement on GAF scores. The authors tentatively concluded that clozapine might be useful for this subset of BPD patients.

Benedetti, Sforzini, Colombo, *et al.*, (1998) conducted an open-label study of clozapine in participants with severe BPD and psychotic-like features. Twelve inpatient participants who met DSM-IV criteria for BPD were treated with clozapine daily for 16 weeks. Participants began the trial as inpatients and were then discharged to a follow-up programme, during which weekly psychotherapy sessions and side effects monitoring were available. The participants had all been hospitalised because of severe psychotic-like symptoms. Exclusion criteria were major depression, current or past psychotic disorder including bipolar disorder, and major medical or neurological disorders. All participants were free of psychotropic medication for at least two weeks prior to the start of the study, and had followed treatment programmes (including psychotherapy and pharmacotherapy) for at least four months before the current hospitalisation. A variety of outcome measures (GAF scores; CGI scores; BPRS ratings; Hamilton Depression; amount of hospitalisation; number of suicide attempts; and number of fights) were analysed after four and/or 16 weeks of clozapine, and compared with baseline/pre-treatment levels. Significant decreases in BPRS and Hamilton ratings were obtained after four and 16 weeks. GAF scores showed a significant amelioration at the end of the drug treatment. Numbers of suicide attempts and fights, and days of hospitalisation, were all significantly reduced when comparing the 16 weeks of treatment with the 16 weeks prior to treatment. The authors concluded that further interest in, and controlled studies of, clozapine were warranted.

Chengappa, Ebeling, Kang, *et al.*, (1999) also looked at the effectiveness of clozapine in a group of seven female inpatient participants with the dual diagnosis of BPD plus persistent psychosis (various DSM-III-R or DSM-IV Axis I disorders). The participants were all well known within their hospitals for the extremely aggressive nature of their behaviours which included self-mutilation and injuring peers and staff. The study was carried out by detailed casenote review extending one-year prior, and one year after, the participants had begun taking clozapine. Clozapine was discontinued in two patients owing to physical side effects. Data extracted included incidents of self-mutilation, seclusion, use of p.r.n medication, injuries to staff and peers, gaining access to hospital privileges and GAF scores. Before-after comparisons revealed significant improvements on all these indices and four patients were subsequently discharged from hospital.

Swinton (in press) reported an open study of clozapine in five female participants in a maximum-security hospital with a consensus diagnosis of BPD. The levels of nursing input and the numbers of self-injury episodes were compared for the 12-month periods before and after starting clozapine. On a case-by-case basis, there were large and significant reductions in these outcome markers. However, the author urged caution in interpreting the findings owing to the open nature of the study, and raised the possibility that the drug was achieving its results by affecting comorbid schizophrenic pathology in these patients.

Schulz, Camlin, Berry, *et al.*, (1999) reported an open trial of olanzapine in cases of BPD with dysthymia. Participants were recruited via newspaper advertisements and community-based referrals. Eligible participants were those who had BPD and met DSM-IV criteria for dysthymia (seven of the 11 participants met criteria for schizotypal PD). Participants were excluded if they

suffered from a current diagnosis or history of schizophrenia, bipolar disorder or schizoaffective disorder. A history of major depression was not an exclusion criterion, but participants must not have met criteria during the previous 12 weeks. The trial lasted for eight weeks; 11 participants completed at least two weeks and nine completed the entire trial. A variety of standardised scales were used to rate global functioning (GAF; SCL-90; Schedule for Interviewing Borderlines), impulsivity (Barrat Impulsivity Scale) and aggression (Buss-Durkee Hostility Index). All scales were significantly reduced during the period of olanzapine administration. The authors were cautiously optimistic about their results while noting the small sample size and open nature of their trial.

Hough (2001) reported on the effects of olanzapine treatment on self-mutilation behaviour in two female cases who met DSM-IV criteria for BPD. After treatment with olanzapine for one and two months respectively, no further self-mutilating behaviours occurred over the ensuing few months.

Opioid drugs

Experimental studies

The search revealed no experimental studies of the effectiveness of opioid drugs in PD.

Observational studies

In an open-label three-week pilot study of five women with DSM-III-R borderline personality disorder (BPD), Sonne, Rubey, Brady, *et al.* (1996) evaluated the effectiveness of the opioid antagonist, naltrexone, for self-injurious behaviours (SIBs) and obsessional-compulsive (OC) thoughts. Measured outcomes were a mechanically recorded daily count of the number of self-injurious thoughts and behaviours, and the Yale-Brown Obsessive Compulsive Scale (modified to assess specifically self-injurious obsessions and compulsions, and completed at the end of each week of the study). Compared with scores from the drug-free baseline week and post-drug week, SIBs and OC thoughts showed some significant reductions during the week of drug treatment.

Bohus, Landwehrmeyer, Stiglmayr, *et al.*, (1999) also carried out an open-label pilot trial of naltrexone with 18 female inpatient participants who met DSM-IV criteria for BPD. Participants were excluded if they had schizophrenia, lifetime bipolar disorder, or drug and alcohol dependency. All participants displayed prominent dissociative symptoms (e.g. derealisation, depersonalisation, analgesia, and altered sensory perceptions) and flashbacks (vivid, visual, emotionally draining recall of traumatic episodes). Such features are common in BPD, and these were the particular focus of this study. The participants were divided into two groups and the effectiveness of the drug (given for at least two weeks) was assessed, in a before vs. during treatment design, against a different set of outcome measures in each group. Group one completed a novel German self-rating dissociative symptoms questionnaire (based on standard dissociative symptoms scales) and, when taking naltrexone, significant reductions were found in the intensity and duration of a range of dissociative symptoms. Ratings of "inner tension" did not change, making it less likely that the changes in dissociative symptom ratings were due to the sedative action of naltrexone. Group two completed a "flashback protocol". The mean number of flashbacks reported per day during treatment was significantly reduced relative to before treatment levels. The authors suggested that dissociative and flashback symptoms on BPD might therefore be due to increased opioid system activity and called for a more rigorous controlled study to follow up these pilot findings.

Mc Gee, (1997) reported his observations regarding naltrexone treatment for a female client who had BPD, recurrent severe major depression, dysthymic disorder, alcohol dependence, plus severe self-mutilation behaviour (cutting). The alcohol dependence and self-mutilation proved resistant to other drug treatments, but were reported to have ceased (over a one-year period) after naltrexone treatment.

Schmahl, Stiglmayr, Bohme, *et al.*, (1999) reported a clinical case series with three female cases that met DSM criteria for BPD. They observed that the severe dissociative symptoms experienced by their cases were markedly reduced following treatment with naltrexone, although clinical and psychometric measures were not used in this study.

Anticonvulsants

Experimental studies

Hollander, (2001) reported the results of a small preliminary double-blind, placebo controlled trial of divalproex sodium (valproate). The study involved 21 outpatient participants who met DSM-IV criteria for BPD, using the SCID-II. Participants had no medical or neurological illness, psychotic disorders, current substance abuse, bipolar disorder type I or II, current major depression, or current suicidal ideation. Sixteen participants were randomly assigned, evaluated at baseline and provided with medications. Randomisation aimed for an approximate 2:1 (drug: placebo) ratio. In fact, 12 participants were assigned to receive the active drug. Six participants completed the ten-week trial, with nine of the non-completers dropping out in the first three weeks. None of the placebo-assigned participants completed the trial, meaning that significantly fewer participants dropped out from the active drug group than from the placebo group. No drop-outs were due to side effects. Patients were rated using CGI change scores; GAS scores, BDI, Aggression Question, and the OAS-M. CGI change scores rated five of the six active drug trial completers as "responders". The active drug completers showed significant improvements in GAS scores, and the CGI improvement scores of this group were significantly greater than zero (i.e., no change). Intention-to-treat (ITT) analyses compared post-treatment scores on all outcome measures between the groups, using baseline scores as covariates. None of the ITT analyses showed significant treatment effects, although there were numerically larger improvements for the active drug group on some of the measures (GAS, BDI and Aggression Questionnaire ratings). The authors concluded that the results of this study were limited due to the small sample size and high drop-out rate.

Observational Studies

Kavoussi & Coccaro, (1998) carried out an open-label pilot trial of divalproex sodium (valproate) in a group of ten outpatient participants (two female) who met DSM-IV criteria for at least one PD. Participants had previously failed to respond during a trial of fluoxetine and scored above specific cutoffs on measures of aggression and irritability (using a pre-treatment baseline administration of the Overt Aggression Scale-Modified for Outpatients; OAS-M). Participants were excluded if they met DSM-IV criteria for schizophrenia, bipolar disorder, alcohol or drug dependence, or organic mental syndrome. Participants were treated with divalproex sodium for eight weeks, although two participants did not take the drug for the full eight weeks. Relative to baseline levels, OAS-M aggression scores showed significant improvements from week two of treatment, whereas OAS-M irritability scores showed significant improvements from week four. Thus, the authors concluded that divalproex sodium may be useful in reducing impulsive aggressive behaviour in some PD patients who fail to respond to SSRIs (such as fluoxetine), but argued that controlled trials were needed to establish this more conclusively.

Stein, Simeon, Frenkel, *et al.*, (1995) reported an open-label trial of divalproex sodium (valproate) in 11 outpatient participants (six women) who met DSM-III-R criteria for BPD, using the SCID-II. Exclusion criteria included current major depression, current or past psychiatric disorder including bipolar disorder, major medical or neurological disorder and current suicidal ideation. Participants were drug-free and engaging in psychotherapy for at least eight weeks prior to the study. They continued in psychotherapy for the eight weeks of the drug study. Participants were rated weekly on the Hamilton scales for depression and anxiety, the Overt Aggression Scale (Modified; OAS-M), plus a series of change ratings similar to the CGI. The participants rated themselves weekly on the SCL-90. There was a significant decrease in SCL-90 self ratings from the start to the end of the trial. Hamilton scores were lower at the end of the trial, but the change from starting levels did not reach statistical significance. Within the subscales of the OAS-M decreases were observed, and the decrease was significant for global subjective irritability. The authors concluded that valproate may be beneficial, but cautioned that estimates of its effectiveness may be lower when derived from a controlled trial, particularly because BPD patients may display large placebo responses.

Wilcox, (1995) carried out an open trial of divalproex sodium (valproate) in 30 participants (27 women) who met DSM-III-R criteria for BPD as confirmed by the SCID-P. The participants were recruited from all consecutive admissions over a six-month period to a state hospital for the

treatment of severe psychiatric disorders. The participants did not have other comorbid psychiatric conditions and, given the anticonvulsant action of valproate, it was noted that only five had EEG abnormalities (none having ever had a seizure). Two measurements of psychiatric distress were taken during, and at the end of, the six-week study period. The Brief Psychiatric Rating Scale (BPRS) was used to measure psychiatric symptoms and the number of minutes spent in seclusion per day was used to index levels of agitation (as seclusion was used only for clients who were violently agitated). BPRS scores and time in seclusion dropped significantly from the start to the end of the study. The response to treatment was larger for the participants who had an abnormal EEG, and this effect approached significance. The author concluded that valproate may be useful in BPD, particularly where anxiety is a major factor and called for a double-blind controlled study.

It has been suggested that any benefits of mood stabilising drugs in patients with BPD arise via effects on concurrent or superimposed major affective states. To explore this, Pinto & Akiskal (1998) reported treatment results, in a tertiary care setting, from an open case series of lamotrigine in eight participants (seven women) who met DSM-IV criteria for BPD. To address the question of why any treatment effect might arise, the cases were specifically chosen because they also did not meet DSM criteria for a major mood disorder. The participants had severe and wide-ranging symptoms (impulsive sexual, suicidal, drug-taking, and violent behaviour), and had also failed to respond to various prior pharmacotherapeutic treatments. Existing medications were gradually withdrawn while lamotrigine was gradually increased until the participants responded. Two participants did not complete the trial, and of the remaining six, three responded to lamotrigine. In particular, DSM-IV General Adaptive Function (GAF) scores increased from baseline scores of around 40 to scores around 80 during three-four months. At an average follow-up of one year the lamotrigine responders did not meet BPD criteria. The authors suggested that a placebo response was unlikely to have occurred because effects were observed in refractory participants unresponsive to other medications, and they were sustained after a long follow-up duration. They further suggested that a more systematic investigation of this drug with BPD was warranted.

Daly & Fatemi, (1999) reported on two cases, one of whom was a man with schizoaffective disorder and BPD. The man was prone to dangerous and self-injurious impulsive behaviours and had not responded to a wide-range of medications. He was admitted to a psychiatric hospital after a fire-setting incident. Lamotrigine was used as a mood-stabiliser during his inpatient stay, and this reduced his BDI score dramatically. The patient continued to take lamotrigine for four months as an outpatient and denied any self-injurious behaviour during this time.

Relevant studies of pharmacological treatments for other conditions

Studies of the effects of antidepressants on PD symptoms in depression / anxiety disorders

Experimental studies

Ekselius & von Knorring, (1998) reported on the effects of antidepressant drug treatment on PD symptomatology, using the data from an earlier randomised, double-blind, parallel group study of sertraline and citalopram in depression. The original study had 400 primary care participants with DSM-III-R major depressive disorder. Of the eligible participants, 308 completed 24 weeks of treatment according to the study protocol. For the purposes of the Ekselius and von Knorring (1998) study, 145 of these participants (105 women) comprised the sertraline group, the remaining 163 (116 women) comprised the citalopram group. The 92 participants who did not complete the full trial did not differ significantly from the 308 completers in terms of the presence of PDs. Depression was assessed by Montgomery Asberg Depression Rating Scale (MADRS) scores throughout the 24-week trial. The presence of coexisting PDs was evaluated at baseline, and after 24 weeks, using the Swedish version of the Structured Clinical Interview for Personality Disorders screening questionnaire. The authors had previously shown that the screening questionnaire had good agreement with SCID-II interviews, and it was modified to exclude criteria for self-defeating and anti-social PD.

In the sertraline group, after 24 weeks of treatment, there were significant reductions in the frequency of diagnosis for paranoid, borderline, avoidant, dependent and any PD; in the citalopram group significant reductions were also seen for histrionic and obsessional-compulsive

PDs. It was noted that seven participants in the sertraline group were diagnosed as having schizoid PD after 24 weeks treatment, significantly more than the one case with this diagnosis at baseline. When PDs were scored as continuous variables, the number of fulfilled criteria decreased significantly for all PDs except histrionic PD in both treatment groups, and schizoid and narcissistic PDs in the sertraline group. The differences between drugs in these changes were small. To elucidate if PD changes were secondary to changes in depression, the changes in PD criteria were used as the dependent variables in stepwise multiple regressions with depression change scores, age, sex, and drug type as predictors. Depression change scores were significant predictors for most PDs (and all three clusters), but no more than six per cent of the variance in PD change could be ascribed to changes in depression. The authors concluded that either of these two SSRIs may be beneficial in the treatment of various PDs in patients with major depressive disorder.

Fahlen, Nilsson, Borg, *et al.*, (1995) reported results from a double-blind, placebo-controlled trial of the monoamine oxidase A inhibitor brofaromine amongst individuals with social phobias. The 63 participants met DSM-III-R criteria for generalised anxiety disorder, simple phobia, or dysthymia, but those with a history of panic attacks, or an ongoing major depressive episode, or high Hamilton Depression scores, were excluded. After randomisation and withdrawals, data from 25 drug-treated and 32 placebo-treated cases were analysed. A control group of 58 healthy individuals was also assessed. Assessments were made at baseline (before treatment) and at the endpoint (after 12 weeks of drug/placebo), using the Clinical Global Impressions (CGI) scale, the Liebowitz Social Anxiety Scale, and DSM-III-R criteria for avoidant and dependent PD, plus a specially constructed personality questionnaire, measuring avoidant social behaviour and general depressive-anxious traits. Compared with the placebo-treated group, the active drug group contained a significantly higher frequency of participants showing global improvement (on the CGI). Although the two groups were closely similar on social anxiety at baseline, the active drug group showed very much lower levels of social anxiety at the endpoint. A similar pattern of results obtained for both aspects of personality measured by the personality questionnaire. Participants with avoidant PD diminished from 60 per cent to 20 per cent in the active drug group and from 59 per cent to 44 per cent in the placebo group. Very few patients had a diagnosis of dependent PD at baseline, but the total number of dependent PD criteria fulfilled declined significantly more in the drug group than in the placebo group.

Observational studies

Fava, Bouffides, Pava, *et al.*, (1994) reported on the effectiveness of the SSRI fluoxetine in a sample of 83 outpatient participants (63 women) who met DSM-III-R criteria for major depressive disorder. The participants were selected from a larger clinical trial if they volunteered for investigations of PDs, and had completed at least eight weeks of drug treatment. Baseline assessments were taken for: depression, using a 17-item version of the Hamilton Depression Questionnaire; and PDs, using the PDQ-R and/or SCID-II. Seventy-seven of the participants had at least one PD diagnosis at baseline. There was a very large reduction in Hamilton scores after eight weeks of treatment and this effect was significantly stronger for those cases who had a Cluster B PD diagnosis at baseline than for those who did not. The presence of Cluster A or C diagnoses at baseline did not significantly affect the reduction in depression. More critically, there were significant reductions in frequencies of diagnoses, assessed via the PDQ-R, of paranoid, schizotypal, schizoid, histrionic, borderline, anti-social and avoidant PDs, and of each cluster, following eight weeks of fluoxetine treatment. Finally, the loss of a Cluster A or C diagnosis (i.e. present at baseline to absent after eight weeks of drug) was associated with a significantly lower post-treatment Hamilton Depression score (adjusting for baseline Hamilton score). Change in Cluster B diagnostic status was not significantly associated with depression reduction. The authors were tentative in their conclusions from this open trial, all the more so because it is possible that the PDQ-R changes observed were simply manifestations of depression which resolved with the drug treatment.

Peselow, Sanfilippo, Fieve, *et al.*, (1994) reported the effects of drug treatment (using the tricyclic desipramine) for depression, on the PD status of the participants in their trial. The goal was to explore the influence of depressive symptoms on PD, and thereby ascertain how effectively one might treat PD by tackling depression. Sixty-eight participants were included in the study (40 women) and all met DSM-III criteria for major depression, with a minimum score of 18 (out of 21)

on the Hamilton Depression Scale. Before treatment, the participants underwent the Structured Interview for DSM-III PD (SIDP), giving each participant scores for each specific PD, a total PD score, and scores for the three clusters of PD types. Twenty-nine of the 68 patients (43%) met criteria for one or more DSM-III PDs before drug treatment. Participants received desipramine for 26-36 days. After this 39 participants had recovered from their depression (50% reduction in Hamilton, and Hamilton score less than 11). The baseline and treatment characteristics of the recovered and non-recovered groups did not differ significantly. The SIDP was readministered after depression treatment. For Cluster I and III PD scores, there was a significant reduction in PD scores after treatment in the depression-recovered group which was significantly different from the lack of improvement in PD scores in the group who did not show recovery from depression (in fact, the Cluster III PD scores of the depression non-recovered group got significantly worse after treatment). There was no significant change in the Cluster II PD scores as a result of depression treatment, irrespective of whether there was recovery from depression or not. In the 14 participants who met Cluster III PD criteria at baseline and then recovered from depression, ten did not meet PD criteria after treatment; whereas in the 12 participants who met Cluster III PD criteria at baseline and then did not recover from depression, all 12 still met PD criteria after treatment ($p < 0.05$). There were too few patients meeting Cluster I criteria to attempt a similar analysis; for categorical Cluster II diagnoses there were no significant effects. These findings may suggest that treating depression may be valuable in ameliorating certain PD symptoms. Alternatively, the authors suggested that the assessment of some PDs may be contaminated by associated depressive symptomatology.

Studies treating possible risk factors for PD

Observational studies

Young & Harty, (2001) noted that ADHD is a long-term risk factor for PD and criminal behaviour. Further, they commented that, although the incidence of ADHD in secure settings is not commonly reported, it may be as high as 25 per cent. They therefore suggested that the identification and treatment of ADHD, particularly of young adult offenders, may have profound implications in terms of symptom reduction and ability to engage in other treatments. To this end they reported a single case study of a man admitted to a high-security hospital following conviction for arson. The participant met DSM-IV criteria for ADHD. He also met ICD-10 criteria for dissocial, impulsive and borderline PDs using the Standard Assessment of Personality. Treatment was via stimulant medication (the standard approach for ADHD) and this was followed up after 24 months of constant medication and, at 30 months, when the individual had been free of medication for 48 hours. At both follow-up assessments, in comparison with initial assessment, dramatic improvements were observed in several indices of cognitive test performance, along with standardised anxiety and depression scales, plus the Conner's Hyperactivity Scale.

Highlighting findings for women and ethnic minorities

There were no studies that highlighted or targeted gender and ethnicity issues specifically. There were no studies that reported significant differences in drug effectiveness as a function of gender or ethnicity. With a very few exceptions, studies did not generally give the ethnic breakdown of the participants. However, it may be worth reiterating that the majority of studies concerned BPD, particularly in view of the fact that the majority of the BPD cases in the reviewed studies were women.

"Grey" literature on pharmacotherapy for PD

The search for grey literature produced only a very small number of items (three, plus one "in press" article summarised earlier). Each of these grey sources contained review material only, and duplicated published material already covered above.

Summary of pharmacological treatment

It was intended that most of the articles, captured by the search strategy, would be studies in which the primary diagnosis of the participants was PD. In most of these studies, the participants had multiple Axis II diagnoses. In a few of the reviewed studies the inclusion criterion was that the cases had to meet criteria for at least one PD. In these studies, participants usually met criteria for more than one PD. In the majority of the studies, however, the participants were selected if they met diagnostic criteria for BPD specifically (although they usually had other comorbid PD diagnoses). This review also covers studies of participants with other selected diagnoses or difficulties (e.g., multiple suicide attempts) in which the paper reported a very high prevalence of BPD or other PD diagnoses (85%+). It is assumed that treatment outcome in such studies might generalise to at least a large subgroup of patients with BPD/PD. Two studies reported on participants who met criteria for a specific PD (ASPD) and another comorbid condition (alcoholism). We also included one study which reported on the effectiveness of drug treatment for PD patients (in general) within a broader structured therapeutic framework. In each of these types of study, any form of treatment outcome was eligible for inclusion.

In addition, the review included a few studies in which the primary diagnosis of the participants was *not* PD. These studies were eligible for inclusion if the outcome measures used were either PD diagnoses *per se*, PD symptoms, or behaviours closely related to PD (e.g., impulsive aggression). Other studies, which explored whether the presence or absence of PDs was a significant predictor of the drug's effectiveness as a treatment of the participants' primary diagnosis, were not eligible for inclusion.

One can concisely summarise the literature on outcomes of drug treatment for PD since 1992 by saying that little strong evidence (i.e., randomised and controlled) has emerged in the current review. For some classes of drugs (atypical neuroleptics, opioid drugs) there were no relevant RCTs during the period. For other drugs, the small number of RCTs that were found generally had small sample sizes, short treatment durations (<six months), and there was a lack of long-term follow-up. Many of the studies had highly selected participants and large drop-out rates, which raises serious questions about generalisability. Finally, it was often found that the treatment benefits were significant for only a small subset of the outcome measures from a large battery, with many outcomes showing nonsignificant effects. Almost none of the studies controlled for the inflation of Type I error rate that is likely to occur when multiple significance tests are conducted. Large responses in the placebo-treated participants were often noted (particularly in research with BPD participants), further emphasising the need for controlled evidence in this area. In the following sections, the results are summarised according to class of drug.

SSRIs

There were two RCTs of fluoxetine (Coccaro and Kavoussi 1997; Salzman, Wolfson *et al.*, 1995). The Coccaro and Kavoussi study randomised 40 participants meeting criteria for at least one PD. The treatment was for 12 weeks and drop-outs approached 50 per cent. Treatment effects for aggression and irritability were reported. The Salzman *et al* study randomised 22 participants either meeting criteria for BPD or showing BPD traits. Treatment was for 12 weeks after placebo run-in, and the most marked treatment effects were for self-rated anger.

There was one RCT of paroxetine (Verkes, Van der Mast *et al.*, 1998). Ninety-one participants, who had made multiple suicide attempts, were randomised. Most of these participants had one or more PD. The treatment was available for 52 weeks, but only 19 participants completed the trial. The drug effect on the time to next suicide attempt was significant only after adjustment for number of prior suicide attempts (or severity of PD), with the less severely affected participants benefiting from the drug.

MAOIs and tricyclics

There was one RCT of the MAOI phenelzine which was compared in a study with the effectiveness of a neuroleptic and so is reviewed later.

There was one RCT (reported as two papers: (Penick, Powell *et al.*, 1996); (Powell, Campbell *et al.*, 1995) of the tricyclic nortriptyline which was compared with the dopamine agonist bromocriptine or placebo. From a larger RCT of alcoholic men, a subgroup of 65 participants with comorbid ASPD were randomised to the six-month trial, but fewer than 50 per cent (N=29) completed the trial. There were significant drug effects (especially for nortriptyline) and especially on outcome measures related to drinking behaviours. However, further analysis revealed that these effects were particularly for those who also had comorbid anxiety/mood disorders.

Traditional neuroleptics

There was one RCT (reported as two papers: (Cornelius, Soloff *et al.*, 1993; Soloff, Cornelius *et al.*, 1993) of the neuroleptic haloperidol (which also included the MAOI phenelzine). One hundred and eight participants were randomised into the five-week acute phase of the trial (with a 30% dropout rate) and then 54 of the participants continued into a further 16 weeks of treatment in the continuation phase. There was differential drop-out in the continuation trial (higher in drug groups). In either phase there was little evidence of any treatment benefit, particularly for haloperidol.

Anticonvulsants

There was one ten-week RCT of valproate for BPD (Hollander 2001). This study had a very small sample size (16 were randomised) and very high drop-out (100% for the placebo-treated participants), making meaningful treatment analyses very difficult.

Treatment of PD symptoms in depression/anxiety-disordered patients

There was one randomised, double-blind, parallel group study comparing the effectiveness of two SSRI antidepressants (sertraline and citalopram) on PD symptomatology in depressed participants (Ekselius and Knorrning, 1998). Over 75 per cent of 400 eligible participants completed the 24-week trial. Both drugs produced significant and broad reductions in PD symptomatology, but the possibility of placebo effects cannot be excluded. Moreover, the study highlighted the possibility that reduction in PD symptoms may be secondary to a reduction in depression, although the authors argued against this interpretation.

There was one RCT of the MAOI brofaromine amongst individuals with social phobias. Data were presented on 57 of the participants randomised to the 12-week trial. There was a greater reduction in avoidant PD in the drug-treated group, in parallel with significantly greater improvements in general symptoms and social anxiety.

Table 3.6 Summary table of pharmacological treatment

Setting & Last follow-up point	Author (date)	Study type	Sample: diagnosis, N, gender	Controls: diagnosis, N, gender	Treatment	Attrition	Outcome measures/ results
Prison Post/ during treatment	None						
High secure during treatment	Young & Harty (2001)	4c	ADHD and dissocial, impulsive and borderline PD CHS SAP	None	STIMULANT Pemoline and Methylphenidate. Two years South London and Maudsley NHS Trust	N/A	ADHD improved, CHS improved, depression measures improved. Cognitive functioning improved.
High secure during treatment	Swinton (in press)	4c	5 female, BPD, Clinical judgment	None	ATYPICAL NEUROLEPTIC Clozapine, 12 months, Ashworth	N/A	12 months pre and post drug. Reduction in requirement for nursing observations, four patients had reduction in security level.
High secure post treatment	None						
Medium secure post/ during treatment	None						
Inpatient during treatment	Beneditti <i>et al</i> (1998)	4b	12 (10 female) BPD with psychotic like features SCID-II inpatient and then outpatient by end of study period.	None	ATYPICAL NEUROLEPTIC Clozapine 25-100mg/d increased until psychotic-life features disappeared maintained over rest of 16 week period	Not stated	General improvement from pre- to during-drug treatment: CGI GAF Hamilton BPRS day hospitalisation suicide attempts.
Inpatient during treatment	Bohus <i>et al</i> (1999)	4b	9 (9f) BPD revised diagnostic interview for borderline patients. Excluded schizophrenia, bipolar, dependency	None	OPIOID Naltrexone for two weeks	Not stated	Dissociation and flashbacks measured using DAISS or flashback protocol. Reduction in no of flashbacks or reduced intensity or duration of tonic immobility.
Inpatient during treatment	Wilcox (1995)	4b	30 (27 female) BPD, SCID-P	None	ANTICONVULSANT Valproate (divalproex sodium) six weeks	Not stated	Measured using BPRS and number of minutes/ day in seclusion. Measures dropped significantly from start to finish. Authors conclude of most use in severe agitation/ anxiety in BPD.

Setting & Last follow-up point	Author (date)	Study type	Sample: diagnosis, N, gender	Controls: diagnosis, N, gender	Treatment	Attrition	Outcome measures/ results
Inpatient during treatment	Chengappa <i>et al</i> (1995)	4c	One female subject. BPD DSM-3R.	None	ATYPICAL NEUROLEPTIC Clozapine, 3 months inpatient, 16 month outpatient follow-up	N/A	Reduction in self harm and impulsivity
Inpatient during treatment	Chengappa <i>et al</i> (1999)	4c	7 (7f) BPD + Axis I diagnosis (psychosis) Clinical Judgment/ DSMIV 2 patients in forensic unit	None	ATYPICAL NEUROLEPTIC Clozapine	None (retrospective)	Significant reduction in restraints, seclusions, injury to others and use of PRN. Sig GAF score improvements (pre- 27.8, post- 53.6), 4 patients discharged.
Inpatient during treatment	Daly & Fatemi (1999)	4c	1M, 1F, 1 had BPD and schizoaffective, other had bipolar. Unclear how diagnosed	None	ANTICONVULSANT Lamotrigine started as inpatient then 4m follow-up as outpatient Minneapolis, Minnesota.	N/A patient became incompilant after four months as o/p	Patient denied any SIB during period on treatment. Also measured BDI.
Inpatient post treatment	Hull <i>et al</i> (1993)	4c	1 female BPD, schizotypal PD paranoid PD Depression SCID.	None	SSRI Fluoxetine, 18 weeks, New York Hospital-Cornell Medical Centre	N/A	SCI-90-R – most scales improved. No impact on obsessiveness/ paranoia at 8 weeks GSI dropped from 73 to 55 after 8 weeks.
Outpatient during treatment	Battaglia <i>et al</i> (1999)	1	58 (25 female) Multiple suicide attempts and exclusion criteria SCID 85% BPD	None	NEUROLEPTIC 30 low dose fluphenazine, 28 ultra low dose fluphenazine. Once a month injections for 6 months	35 did not complete 6 months	Self-harm behaviour using PHI. Both groups reduced DSH to the same extent. Groups are too small.
Outpatient during treatment	Hough (2001)	4c	2 females with BPD and self-harming behaviour	None	ATYPICAL NEUROLEPTIC Low dose Olanzapine for 2 months in one case and 1 month in the second case	N/A	No more self harm for follow up period of 6 months and 7 months respectively.
Outpatient during treatment	Brooner <i>et al</i> (1998)	1	20 (12 males) ASPD, substance abuse, SCID II	20 (15 males) ASPD, substance abuse, SCID II	Behavioural and counselling substance abuse treatment 3 months	60% completion in exp group 40% completion in control group	Exp group no change. Controls - worse on ASI. ASPD drug abusers respond well to behavioural treatment.
Outpatient during treatment	Coccaro <i>et al</i> (1997)	1	27 (19m) PD (SSI for DSM3R PD) exclusions for other disorders	13(9M) same as subjects given placebo.	SSRI Fluoxetine (20-60mg/d) 12 week period	52% placebo, 69% fluoxetine completed course.	Fluoxetine had beneficial effect on irritability and aggression behaviour and substance use.

Setting & Last follow-up point	Author (date)	Study type	Sample: diagnosis, N, gender	Controls: diagnosis, N, gender	Treatment	Attrition	Outcome measures/ results
Outpatient during treatment	Cornelius <i>et al</i> (1993) ¹⁶	1	54 (22 phenelzine, 14 haloperidol) 40 f BPD. Diagnostic interview for borderline patients	18/54 = placebo BPD. Diagnostic interview for borderline patients	MAOI vs NEUROLEPTIC Randomly assigned to a group. Haloperidol or phenelzine. Also supportive psychotherapy once a week	87.5% dropout for Haloperidol, 58.1% for placebo and 65.7 for phenelzine over 16w period	Total 21 week follow-up SCI-90-R, GSI, BSI, BDI, Hamilton Depression Rating Scale, Schizotypal Symptom Inventory. Halperidol leads to worsening on hopelessness scale of Hamilton, but improved irritability. Phenelzine = only modest effect on irritability and depressive symptoms.
Outpatient during treatment	Fahlen (1995)	1	General anxiety disorder, simple phobia, dysthymia by DSM with Hamilton used to exclude depression. 30	33 same as experimental group treated with placebo. Also included healthy sample. Randomly allocated	MAOI Brofaromine 12 week treatment, measured Unclear. Molndal Hospital Sweden	83% completed drug 97% completed placebo	Bigger improvements in exp group than placebo for all o/c measures: Liebowitz social anxiety scale, PD measures, CGI PTQ.
Outpatient during treatment	Hollander <i>et al</i> (2001)	1	12 BPD, SCID-II	4 BPD, SCIS-II	ANTICONVULSANT Divalproex sodium, 10 weeks	37.5% completion rate overall (all completers were sample not control)	CGI responders = 5/6, GAS showed improvement in completers, 42% sample = responders on ITT, 0% of placebo, Significant decrease in BDI in treated group, no decrease in placebo.
Outpatient during treatment	Salzman <i>et al</i> (1995)	1	13 (77%female) BPD or BPD traits DIB SCID II. Clinical judgment	9 (56% male) BPD or BPD traits. Placebo	SSRI Fluoxetine 13 weeks	81% completion rate. (27 enrolled , 22 completed)	High placebo responsiveness. Improvement in study vs control subjects. POMs (especially improvement in anger sub-scale) GAS PDRS OAS.
Outpatient during treatment	Verkes <i>et al</i> (1998)	1	Suicide attempt, not dep or substance abuse/ other organic, 17M, 29F	45 total Same patient group as study subjects	SSRI Paroxetine (40mg daily) / placebo for up to 52 weeks University Hospitals of Leiden and Rotterdam	11 drug and 8 placebo left at 52 weeks	Measure – time until first suicide attempt. Beneficial effect of drug – particularly for those with fewer cluster BPD criteria.
Outpatient during treatment	Fava <i>et al</i> (1994)	4b	83 (60F) with major depressive disorder and various exclusions. SCID-P, modified Ham-D	N/A	SSRI Fluoxetine for 8 weeks. Massachusetts General Hospital, Clinical Psychopharmacology Unit	N/A. Study included only patients who completed 8 weeks of treatment	O/C measures: Ham-D-17/ PDQ-R. Depression reduced with drug use and more so if Cluster B present at baseline. PD disappeared over trial affected depression recovery.

¹⁶ Continuation study from Soloff *et al.*, (1993).

Setting & Last follow-up point	Author (date)	Study type	Sample: diagnosis, N, gender	Controls: diagnosis, N, gender	Treatment	Attrition	Outcome measures/ results
Outpatient during treatment	Frankenburg & Zanarini (1993)	4b	15 (9 female) DSM3R BDP (7/15 also schizotypal PD). SCID revised. Excluded for major depression/ substance abuse 1-month prior to study.	None	ATYPICAL NEUROLEPTIC Clozapine between 75 and 550mg/d 2-9 months. Setting unclear	None	After drug, significant reduction in: BPRS (pre,57 – post, 37.8), CGI (pre -5.3, post -3.9) scores. Increase in GAS (pre- 30.8, post – 43.1).
Outpatient during treatment	Kavoussi & Coccaro (1998)	4b	10 (2f) +1 DSM PD excluded for schizophrenia, bipolar, substance dependency. SCID	N/A	ANTICONVULSANT Divalproex Sodium 8 weeks	80% completed 8 weeks of drug	Showed significant reduction on aggression/ irritability scores. 6 of 8 completers showed 50% greater reduction on OAS-M. Impulsivity, violence, anger.
Outpatient during treatment	Kavoussi <i>et al</i> (1994)	4b	11, At least 1 PD, SID-P, SSI for exclusions	None	SSRI Sertraline, 8 weeks	82% did at least 4 weeks, 64% completed course	OAS-M, irritability and aggression subscales decreased significantly from baseline at 8 weeks. HAM-D also decreased significantly.
Outpatient during treatment	Markovitz <i>et al</i> (1995)	4b	45 BPD, DIB/ SCL-90. 40 also DSM 3R depressed.	No control	SSRI Venlafaxine 37.5-200mgx2/d increasing over 2 week period. 12 week duration Unclear	87% completed 12 weeks. 39 completed treatment	Self-injurious behaviour, SCL-90. Significant pre-post reduction in SCL-90
Outpatient during treatment	Schulz <i>et al</i> (1999)	4b	11 (82% female) BPD & dsythymia 64% schizotypal PD as well SCID-P SCID II	None	ATYPICAL NEUROLEPTIC Olanzapine (7.73 +/- 2.61mg/d) 8 weeks (4w flexible dosing, 4w constant dose) University of Minnesota Medical School	82% completion rate	Improvement on all scales during drug treatment. SIB GAF SCL-90 BBH BIS BPRS
Outpatient during treatment	Silva, Jerez <i>et al</i> (1997)	4b	46 (36 female), BPD, scored 8+ on DIB-R. Excluded for Axis I diagnoses	None	SSRI Fluoxetine, 7 weeks	83% completion rate	Improvements at one week on: BPRS, Hamilton Depression Scale, GAF, Clinical Impulsivity Scale. Further improvements at weeks 4, 6 and 7.
Outpatient during treatment	Stein <i>et al</i> (1995)	4b	11, BPD, SCID-II (SSI for exclusions)	N/A	ANTICONVULSANT Valproate (divalproex sodium) 8 weeks	3 patients did not complete	Significant reductions in OAS-M irritability subscale and SCL-90 ratings. No significant change on HAM-D, HAM-ANX.
Outpatient during treatment	McGee (1997)	4c	1 female, BPD, -	None	OPIOID Naltrexone	N/A	Self-injurious behaviour and alcohol dependence were observed to be improved for a year. Clinical judgment.

Setting & Last follow-up point	Author (date)	Study type	Sample: diagnosis, N, gender	Controls: diagnosis, N, gender	Treatment	Attrition	Outcome measures/ results
Outpatient during treatment	Pinto & Akiskal (1998)	4c	87 female BPD without major mood disorder DSM, GAF, CGI	None	ANTICONVULSANT Lamotrigine up to 300mg/day. Variable treatment length. Tertiary care centre	75% completion 3 non-responsive	Follow-up at least 9m (12m mean) GAF 40 –80 during treatment. Responders no longer met BPD criteria at 12m, 3 patients showed dramatic improvements.
Outpatient during treatment	Schmah (1999)	4c	3 female, BPD (one comorbid bulimia nervosa). Clinical judgment	None	OPIOID Naltrexone 50mg, 14-17 days	N/A	Dissociative symptoms ameliorated in all three cases. No measures used.
Outpatient during/post treatment	Ekselsius & Knorrning (1998)	1	40 males, 105 females with major depressive disorder	163 (116 females) with major depressive disorder treated with citalopram (24 weeks)	SSRI Sertraline for 24 weeks	77% of original trial completed	Significant reduction in most personality disorder (diagnosis and criteria) for both drugs, only small part of which due to change in depression.
Outpatient post treatment	None						
Other during treatment	Penick <i>et al</i> ¹⁷ (1996)	1	20 males alcohol dependent and ASPD	9 males alcohol dependent and ASPD placebo	TRICYCLIC Bromocriptine or Nortriptyline 21days inpatient and 6m follow-up as outpatient	55% completion study 57% completion control	Results as in Powell <i>et al</i> (1995). Also: ASP with current mood disorder and/or anxiety disorder = abstinence.
Other during treatment	Powell <i>et al</i> (1995)	1	44 males alcohol dependence and ASPD PDI-R	21 males alcohol dependence and ASPD PDI-R	TRICYCLIC Bromocriptine or Nortriptyline 21days inpatient and 6m follow-up as outpatient	55% completion study 57% completion control	Drug effect greater for ASPD subgroup than other subgroups SCL-90 SADQ Nortriptyline bigger improvement in SADQ. Both drugs showed improvement in: Beck Anxiety while placebo deteriorated.
Other during treatment	Soloff <i>et al</i> (1993) ¹⁸	1	38 phenazine, 36 Haloperidol. Total cohort - 82 female, 26 male BPD DIB/ SADS-R	34 placebo group Same diagnosis as study group.	MAOI vs NEUROLEPTIC Haloperidol (4mg/d), phenelzine sulphate (60mg/d). Started as inpatient then moved to o/p 5 weeks min, Western Psychiatric Institute and Clinic of University of Pittsburgh	71% completion rate	Superior efficacy for phenelzine on BPD measures. Outcome measures PD, impulsivity, anger, depression. Hamilton, GAS, SCL-90, BIS

¹⁷ This study is a re-analysis of the data from Powell *et al.*, (1996).

¹⁸ Fifty-four participants also participated in a continuation study (Cornelius, *et al.*, 1993)

Setting & Last follow-up point	Author (date)	Study type	Sample: diagnosis, N, gender	Controls: diagnosis, N, gender	Treatment	Attrition	Outcome measures/ results
Other post treatment	Friis <i>et al</i> (1999)	3a	102 (76F) all had at least one Axis-I diagnosis, 85 had at least one PD. 'Day unit', Norway. SCID-I & II	None	SSRI Medication (unclear what, SSRI's), Ullevål University Hospital, Norway	No attrition rates, all included provided details at admission and discharge.	O/C used GAF and GSI and SCL-90R. Those treated with antidepressants do worse than others and this tendency is stronger in cases with Cluster A/B PD than if Cluster C or no PD.
Other during treatment	Peselow <i>et al</i> (1994)	4b	68 (40f) DSM-3 major depression using Hamilton or SIDP	None	TRICYCLIC Desipramine 26-36 days	Retrospective	Cluster 1 and 3 PD scores decreased but only in the subgroup who recovered from depression. OC measured using Hamilton and SIDP.
Other post treatment	Sonne <i>et al</i> (1996)	4b	5f BPD MCMI	None	OPIOD Naltrexone 50mg/d in week 2/3 Unclear, Medical University of South Carolina?	All patients completed trial	Self-injurious behaviour decreased in drug period, increased in post-drug period (YBOCS).

Physical treatments

Physical treatment: the evidence before 1992

In 1993 Dolan and Coid (Dolan and Coid 1993) reported the “inefficacy of physical treatments” for psychopathy. The Reed report of 1994 found that “no reliable evidence that either electroconvulsive therapy or psychosurgery was effective in the treatment of psychopathic disorder”. These reports have been reflected in the current dearth of studies of physical treatments of personality disorders as well as psychopathy. Personality disorder is investigated as a predictive factor in outcome of other disorders, rather than as the focus of treatment outcome studies (Sareen, Enns & Guertin, 2000) and many recent reviews on treatment of psychopathy or personality disorder no longer include sections on physical treatments (Losel, 1998). Possibly the most promising treatment reported in Dolan and Coid is for those who receive surgery and whose psychopathy is clearly related to brain damage (Andy, 1975). This paper reported the thalamotomy of six patients characterized by psychopathic behaviour. The authors reported no long-lasting post-operative complications and gave a positive outcome with four of the six described as productive and earning a living with follow-up period ranging from one to eleven years post-operation. There was also some evidence to support the use of ECT in depressive or anxiety aspects of people with psychopathy (McCord, 1982; Perry, 1985). However Green, Silverman & Geil (1944) looked at other measures of improvement in psychopaths following ECT (rapport, “emotional tone”, sleep patterns) and found no significant improvement at six months’ follow-up. No diagnostic criteria were used in this study and no controls presented.

Physical treatment: the evidence since 1992

Experimental studies

There were no experimental studies of physical treatments identified in the course of this review.

Observational studies

There has, however, been a recent study on the impact of surgery for other illness on PD diagnoses. Glosser, Zvil, Glosser, *et al.* (2000) note that patients receiving anterior temporal lobectomies for temporal lobe epilepsy also showed a reduction in DSM III-R SCID-diagnosed personality disorders. They used several psychometric scales (GAF, BPRS, STAI, BDI, POMS) at six months pre- and six months post-surgery in a group of 39 patients (of which 77% met the criteria for a PD). Whilst 15 per cent (six) of the group improved psychiatrically they also note that 31 per cent (12) of the patients also experienced temporary onset of a new psychiatric diagnosis or exacerbation of a condition deemed to be in remission at time of surgery making it less than satisfactory. It is also worth noting that ten of the 39 patients had incomplete data on one or more of the self-report scales. As this is a very specific group of personality-disordered individuals it is difficult to extrapolate much from this study.

A recent unusual approach to the treatment of self-harming in borderline personality disorder was reported in a letter to the editor of the Canadian Journal of Psychiatry (Marcoux & Valnicek, 2000). They give three case report studies in which casting of limbs (two years continuous casting in one case) was used to prevent deliberate self-harm. All three individuals reported were female and in all there existed co-morbidity of another severe mental illness. The nature of the casting varied from intermittent to continuous depending on the patient’s self-harming patterns and was decided by clinical judgement. The setting also altered between in- and outpatient settings and it is not clear whether other treatments were used simultaneously for either the self-harming or one of the co-morbid diagnoses. No control participants were reported and the outcome, measured by self-harming behaviour, varied hugely between patients, with one of the patients subsequently dying from an overdose whilst the other two remained free from self-harming for one and two years respectively at time of review. No psychometric measures were reported as used. The authors noted that this is not a suitable treatment for all BPD patients and this report certainly offers little substantial evidence for this method of treatment.

There is some evidence that schizotypal personality disorder, more than other PDs, shares physical characteristics with schizophrenia. Siever measured CSF homovanillic acid in ten male schizotypal PD patients and 14 patients (ten male) with other PDs diagnosed using the SCID and SADS (Siever, Amin, Coccaro, *et al.*, 1993). They proposed that the findings put schizotypal personality disorder on a continuum with schizophrenic disorders with an underlying central dopaminergic dysfunction associated with the psychotic-like features of schizotypal PD.

Blais gave 16 ECT patients (68% female) with a major depressive disorder MCMI, BDI and a self-report measure of personality functioning before the treatment period (Blais, Matthews, Schouten, *et al.*, 1998). These were then re-administered with a mean retest interval of 35 days. They found that of all PD types avoidant, histrionic, aggressive-sadistic and schizotypal PD showed a significant change pre- and post-ECT (with passive aggressive and borderline showing a trend towards significance; $p=0.06$), however the majority of MCMI personality scales were stable across ECT treatment. Interestingly histrionic and aggressive/sadistic scales increased while avoidant and schizotypal decreased leaving little conclusive evidence to support ECT as a treatment for PD. Again this is in a very specific patient group, although the authors suggested that between 30-70 per cent of depressed patients are comorbid for personality disorders. It is also worth noting that in a retrospective review of 107 patients receiving ECT for a major depressive episode it was found that a diagnosis of PD, especially Cluster B PD, is predictive of a poorer response to ECT (Sareen, *et al* 2000).

Summary

The position on physical treatments has changed little since 1992. Studies in this area are sparse and there is little evidence that any form of physical treatment can successfully treat personality disorder or psychopathy. There is some evidence that co-morbidity can be treated in personality disorders by methods such as ECT (Blais *et al.*, 1998) but the impact of this treatment on the underlying personality disorders is not known.

Table 3.7 Summary table of physical treatment

Setting/last follow-up point	Author (Date)	Study Type	Sample: diagnosis, N, gender	Controls: diagnosis, N, gender	Treatment	Attrition	Outcome measures/ results
Prison	None						
High secure	None						
Medium secure	None						
Inpatient post treatment	Sareen <i>et al</i> (2000)	4b	107 consecutive admissions for ECT with major depressive episode (42% also PD)	None	Psychiatry Department of Health Sciences Centre in Winnipeg, Manitoba	Not stated	89% non PD considered responders to ECT, 56% PD considered responder. PD has negative effect on the outcome of treatment of depression by ECT.
Inpatient during treatment	None						
Outpatient post treatment	Marcoux and Valnicek (2000)	4c	3 female BPD patients, method of diagnosis unclear, co-morbid psychiatric diagnoses	None	Casting of limbs to prevent deliberate self-harming behaviour, Saskatoon	33%, one patient died of overdose	Self-harming behaviour/ presentations at A&E. Two remaining patients free of self-harm at one or two year follow-up respectively.
Outpatient	None						
Other	None						

Other recent reviews of the treatment of personality disorder

In conducting this systematic review a number of existing papers were identified in addition to the Dolan and Coid review that are reviews or overviews of treatment. Where these were reviews of a particular type of treatment (for example, pharmacological treatment) they have been incorporated into the relevant results sections of this review. However, three reviews did not fit clearly into the subcategorisations of treatment approaches, taking overviews of the evidence in respect of the treatment and treatability of personality disorders, so are reviewed here separately. These were the reviews by: Sanislow and McGlashan (1998); Perry, Banon *et al.* (1999); and Bateman and Fonagy (2000).

Sanislow and McGlashan (1998) reviewed the treatment outcome of all personality disorders but also retained papers studying Axis-I disorders. The review also considered evidence in respect of the natural history of personality disorder. These authors concluded that there is some evidence for the effectiveness of some treatments at reducing symptoms and symptomatic behaviours that accompany personality disorder but that there is no evidence to assess the effectiveness of treatments at changing the syndrome of personality disorder. They identify the underlying assumption that providing treatment for personality disorder assumes that personality disorder is changeable. They use natural history studies to question this assumption and conclude that these suggest very clearly that personality disorder is amenable to change over time. They conclude that overall, personality disorders become less symptomatic over time and treatment can expedite this process.

Specifically, the authors concluded that, with respect to psychopharmacological treatment, neuroleptics may reduce psychotic like symptoms and reduce anxiety in BPD and SPD; atypical neuroleptics are “promising” but need further trials; SSRIs show some efficacy in treating depression in BPD; lithium and carbamazepine are “viable” but not popular.

With respect to ‘psychosocial’ treatments (by which they mean all treatments other than psychopharmacological or physical), they found that BPD and avoidant personality disorders had been studied the most frequently. (The studies of psychosocial treatment for avoidant personality disorder in Sanislow and McGlashan’s review were all conducted prior to 1992, with the exception of one which is included in our review.) They noted that interpretations of success of treatment are difficult because one of the most common research strategies is to compare two treatments with each other rather than utilising an untreated comparison or control sample methodology. Sanislow and McGlashan particularly noted how few psychosocial treatments had been subjected to randomised controlled trial methods. In respect of avoidant PD they noted that the outcome measures chosen related closely to the aims of treatment (e.g. shyness, social-interpersonal relationships). From this evidence, the authors concluded that DBT was a promising treatment for avoidant PD, given the rigour of the research methodologies used in its evaluation, and that this may be a start towards long-term personality change. They concluded in general that the psychosocial studies they reviewed showed positive outcomes particularly on symptomatic behaviours (rather than symptoms). They suggested that this may be because most psychosocial treatments target behaviours rather than symptoms.

In respect of the review of the natural history of personality disorder Sanislow and McGlashan considered three studies using the PCL that suggested that higher scores on PCL-R were related to poorer recidivism outcomes. However they noted that another study of “psychopaths”, using a more comprehensive assessment of outcome, showed good pre-morbid functioning to predict better outcomes over a 30-year period. The authors noted that most of the studies of natural history they found were of BPD, and the next most commonly studied was ASPD. They questioned whether this reflected a trend that other Axis-II disorders are not considered disorders and have, therefore, been neglected by clinicians and investigators.

The authors classified natural history studies into three “generations”. In the early generation, and over shorter follow-up time periods, studies took a less systematic approach to diagnosis, research and clinical procedures and showed the prognosis for BPD to be a “less than optimistic picture”. Studies of ASPD produced similar findings. In the ‘second generation’ the studies conducted by MacGlashan, Stone and Paris used more systematic assessment processes and

showed some improvement in functioning over time with the best predictor being age. In the 'third generation' of studies greater improvements have been shown over shorter periods of time as the assessment procedures have become more sensitive and reliable. However, studies continued to concentrate on symptoms rather than syndromal assessments. Unfortunately, the variation between outcome measures makes generalisation very difficult.

Perry, Banon *et al* (1999) conducted a literature search for treatment outcome studies of personality disorder from 1974-1998. They selected 15 studies for inclusion in a meta-analysis. The treatments studied included psychodynamic or interpersonal therapy, cognitive-behavioural therapy and mixed and supportive therapies. The review did not include pharmacological or physical treatments or any therapeutic community studies. The majority of studies included were of outpatient-based treatments. There was a range of personality disorder diagnoses of participants with just over half of the studies considering patients with very mixed PD diagnoses. Three of the studies included were randomised controlled trials. Four studies reported changes in personality disorder status and these suggested 52 per cent of patients recover after a mean 67 weeks of treatment. All four of these studies were giving medium-long term psychodynamic psychotherapy. The mean effect sizes for self-report measures and for observational outcomes were significantly greater than zero. They were, respectively, 1.11 and 1.29. As the authors acknowledged this meta-analytic study is very limited by the small number of studies they were able to include in the meta-analysis and the variability of diagnoses, severity of illness, study design, treatment modality, treatment and duration, and assessment methods. They further noted that the attrition rates found in the studies (an average drop out of 21%) is a major obstacle to generalising the findings to the population of personality-disordered patients seeking treatment. They concluded that it was difficult to state that any one treatment of personality disorder consistently demonstrated greater effects than no treatment, or any other treatment and that should only one study with negative findings have been added to their study, the positive results for the self-report data would have been reduced to a trend. However, they developed a heuristic model from the data on four studies, which suggested that 25.8 per cent of personality disorder patients recovered per year of psychotherapy. This is seven times the rate they calculated as yielded by natural history studies (mean 3.7%).

In 2000 Bateman and Fonagy reviewed the English language literature on psychotherapeutic treatment of personality disorders (Bateman and Fonagy 2000). They concluded that, in spite of Perry's meta-analysis, the research evidence for the effectiveness of psychotherapy did "not meet the robust requirements of an empirically based clinical discipline". Although they stated that this view did not derive from the research literature because of the lack of studies comparing treatment contexts, they suggested effective treatment should be "long-term, integrated, theoretically coherent and focused on compliance". They also suggested that perhaps the most beneficial aspect of treatment for personality disorder was the "involvement in a carefully considered and well structured interpersonal endeavour"; that the treatment modality was less important than the "level of seriousness and the degree of commitment with which teams of professionals approach the problem of caring for this group".

In reviewing NHS psychotherapy treatment provision in England with a view to establishing which psychotherapies work for which patient groups, an NHS-commissioned Review Group appraised the evidence for treatments of personality disorders (Parry, 1996; Roth and Fonagy, 1996). Although this review defined psychotherapy very broadly, it did not include the therapeutic community approach. In highlighting some considerations in the evaluations of personality disorder, Roth and Fonagy noted that personality disorders were frequently co-morbid with other Axis-II disorders as well as with Axis-I disorders and suggested that one research design that might be appropriate given this consideration would be to allocate patients to different treatment groups on the basis of matched Axis-I co-morbidity. However, they also acknowledged that the assessment of co-morbidity was difficult. Other difficulties with the evidence for the effectiveness of psychotherapies in general, included generalising from randomised controlled trials but also on the other hand the ambiguity of uncontrolled studies, short-term follow-up periods and the choice of outcome measures. The conclusions they drew from their review of psychotherapeutic treatments were that the strongest evidence came from Dialectical Behaviour Therapy in terms of reducing suicide attempts and days spent in inpatient treatment. The few other controlled studies they identified were conducted with avoidant personality disorders and produced weak evidence for treatment effects of social skills training. However, they concluded that uncontrolled evidence

suggested that psychodynamic and interpersonal approaches might also be useful for personality-disordered patients in the long term.

A recent review of general issues relevant to *offenders* with personality disorder, *not specific to treatment* was conducted in 1999 by The Royal College of Psychiatrists Working Group on the Definition and Treatment of Severe Personality Disorder (Royal College of Psychiatrists 1999). The College report is of relevance to the current review but it should be noted that the report concerns offenders with personality disorders, not people with severe personality disorder in general. The report acknowledges that there is no agreed way of identifying severity from the two primary international classifications of DSM-IV and ICD-10 and recommend that professionals who use the term should always be explicit about the definition they are using.

This report includes a review of treatment outcome literature although the review was not conducted systematically. Some of the primary recommendations about treatment for offenders with personality disorder of relevance for the current systematic review made by the Working Group are as follows:

- Any new developments must be based on randomised controlled trials.
- The current goals of treatment for offenders with personality disorder are ill-defined and require further refinement.
- No treatment can be regarded as effective for offenders with personality disorder until it has been tested in a controlled trial, with independent (blind or masked) assessment.
- There is an urgent need for clinical trials, based on random allocation and with long-term follow-up, of therapeutic regimes designed to change the behaviour of people with anti-social personality disorders.
- A review of treatments of adult offenders with anti-social personality disorder indicates some modest benefits from therapeutic community approaches, both in prison and hospital in-patient settings. However, these therapeutic interventions are limited by their inherent requirement that patients should enter voluntarily into these programmes. When developing new services, planners should be aware that these programmes are highly selective and will exclude a high proportion of offenders with personality disorder.

Pharmacological studies have demonstrated encouraging results and further research is needed in this area. Most have included individuals with borderline rather than anti-social personality disorders and those presenting with associated clinical symptoms.

4 Limitations of the review and the evidence

Methodological limitations of this review

Most of the methodological limitations were a pragmatic response to the short time-scale for delivery of the project. In the main the methodological problems compromised the ability of the search to find unpublished studies, studies published in less prominent journals, or studies published only as electronic publications. For example, although over 6,000 professionals were approached to elicit such studies, this approach did not include an Internet search. Neither were we able to pursue authors in writing or by telephone to clarify questions about their study methodologies. In addition, it is usual to “forward-chain” using citations indexes. This review did not do this.

Much of the work on this review was conducted in parallel. In particular, different reviewers reviewed the outcome studies of each type of treatment because it would not have been possible for one individual to review all studies serially in the time available. The best attempt was made at standardising the review process, by thorough group discussion of the inclusion and quality criteria before the review process began, and by reviewers bringing any queries about inclusion or rating of particular studies to the group for advice. In addition, the decision to include or exclude was done independently by two reviewers on a subset of papers, although this was small. Validation of a tool to assess study quality was also not feasible within this time frame.

Limitations of the final review strategy:

With respect to the client group targeted

Although the remit of this review was to review treatments for severe personality disorder, there is no consensus definition of “severe personality disorder”. Extensive discussion took place about how best to address this problem, both within the Project Team and the Advisory Group. The search strategy employed encompassed ‘personality disorder’, ‘treatment’ and ‘outcome’ as primary categories. It also encompassed interventions of almost any kind whether in health-care settings and termed “treatment” or in penal settings and termed “rehabilitation” or “programmes”. The authors did not search for material that specifically related to dangerousness alone unless this also included a consideration of personality disorder. However, it could be argued (and was, in discussions) that there are many evaluations in the literature which assess interventions for dangerousness or for dangerous offenders in which many of the subjects studied are in fact likely to be personality disordered but who have not been identified as such in the study. Any such research papers were excluded on the basis that the remit was specifically to review treatments for *personality disorder*. However, such a strategy is likely to have excluded studies of successful interventions for dangerous behaviours, violent offending or other risk features that may also be associated with personality disorder.

With respect to women

There are many and complex issues for women in psychiatric and penal institutions, but particularly in high secure care and also for minority ethnic groups. Discussion of these issues is beyond the remit of this project but expert papers and reviews exist (Lart, Payne, Beaumont, *et al.*, 1999; Shaw & Dubois, 1995). In addition, there are some problems with providing an evidence base in these settings. For example, it has been suggested that a concentration on quantitative evidence prejudices findings regarding the effectiveness of treatments for women in high security because of the small sample sizes available for study (Bartlett, 2000) and the heterogeneous nature of women and their needs in high security (Lart, Payne *et al.* 1999).

With respect to minority ethnic groups

The same point can be made with respect to minority ethnic groups given the small proportions in the studies which were identified at all levels of security, and the small number of those of different

ethnicities estimated to be held within in high security hospitals (Singleton, Meltzer, Gatward, *et al.*, 1998). The authors' systematic review method could identify qualitative studies of treatment. However, their approach would be more likely to fail to pick up qualitative studies than quantitative studies. The method may have been strengthened, then, were they to have pursued qualitative studies with more vigour. A recent review, however, suggested that very little qualitative or other evaluative research is available in any event (Lart, Payne *et al.* 1999).

Limitations of the research evidence found by the review

General points and lost opportunities

It has been observed before, and the evidence found confirms, that there are few well-designed studies conducted in high secure settings. Perhaps the exception to this is HMP Grendon where studies with long term follow-up (seven years), large samples, and comparison groups have been conducted. Having said that, some of the difficulties must be acknowledged. HMP Grendon, as a therapeutic community, is a whole-institution therapy that can be treated by research as a “black box” enabling the institution to compare all those who enter the regime with all those referred but not entering the institution. In other high secure settings treatment programmes tend to recruit smaller numbers of patients and provide various approaches. This factor makes it very difficult to draw generalisable conclusions from the studies conducted in high security outside HMP Grendon, in the majority of which, the interventions used are poorly described and highly variable between participants.

It is disappointing in this regard to note the lost research opportunity in high security. Since 1983 approximately 50 people each year have been admitted to High Security Hospitals under the classification of psychopathic disorder (Jones, 1996). It has to be assumed that all of the (400 average) population of psychopaths in the High Security Hospitals have been deemed ‘treatable’ in order to be there. Nevertheless, in December 1995, the Special Services Hospital Authority declared that its “legacy” to the new High Security Psychiatric Services Commissioning Board included the problem of “*a lack of clarity about which interventions were most effective*” for their personality disordered patients (SHSA, 1995). Considering that the power to compulsorily detain and treat those with psychopathic disorder has existed for over 40 years it is remarkable that so little routine research was conducted so that now, there is so little knowledge of the impact of hospitalisation and treatment on these ‘captive’ potential participants.

Specific research problems with the literature reviewed

Dolan and Coid (1993) noted that although the lack of research into treatment effectiveness for psychopathy or ASPD had been acknowledged for several decades, “no obvious improvement” had been made at the time of writing their review. Acknowledging this, the remit of their report was widened to include suggestions for improving the knowledge base about treatment effectiveness rather than simply restating the paucity of available evidence.

A thorough review of the methodological issues in research into treatment outcome for anti-social personality disorder and “psychopaths” formed part of the Dolan & Coid review. Their review and resulting research recommendations will be referred to here as a backdrop against which to assess the issues raised by this review. Others have also highlighted similar failings in the evidence (e.g. Roth and Fonagy, 1996).

Overall, the authors conclude that the methodological flaws in the studies conducted on personality-disordered people identified by Dolan and Coid, eight years ago have only been very slightly improved. In the main, the improvement in study quality has been in studies conducted in settings other than high security. There has been an increase in the use of the randomised controlled approach to studies of treatment outcome but this has not reached high secure settings and there is, therefore, no RCT evidence about treatment effectiveness at this level. In addition, the RCTs that exist are not of particularly high quality. If security of setting is taken as a proxy for the dangerousness of people with personality disorder in that setting, then the evidence for treatment of this group is very scant.

Description of sample/patient characteristics

Dolan and Coid highlighted that the terms psychopathy and personality disorder are often used inconsistently throughout the literature. These terms are used in varying contexts and also the level of description of populations is of varying detail and consistency. This problem also applied to the use of personality disorder or “severe personality disorder” in many of the studies reviewed.

Few studies conducted additional diagnostic tests as part of the research study. The reader is asked to take it as read that all those accepted for treatment in a given institution have that characteristic. Alternatively, some studies include the entire patient sample of an institution, which includes a mixture of Axis I and Axis II diagnostic categories, but do not present the results broken down by diagnostic group. Several studies had to be excluded for this reason.

Where participants’ Axis-II disorders are diagnosed as part of the research study, different instruments are used in different studies. Comparisons would be helped by use of common measures.

In addition, many of the studies utilise only part of whichever diagnostic instrument they choose. This means that although standardised assessment has been undertaken, comprehensive assessment has not and details about multiple Axis-II disorders are not available.

They noted that many studies omit fundamental demographic features of the samples (such as age, gender, marital status, etc.). It is surprising to note that providing even scant demographic data on participants such as sex and ethnic background is still not routine research practice. Dolan and Coid (1993) point out that with the exception of IQ, descriptions of psychological features are almost totally absent unless the study is measuring change in that particular psychological aspect. This also remained true in the current review.

Selection of patients for study

Dolan & Coid (1993) also noted that many studies either gave minimal information on the selection of participants for treatment, or used methods and criteria for selection for treatment that were not clearly defined and therefore not readily replicable. Furthermore, the selection of those participants included in follow-up investigation is often not clearly documented. It is not sufficient to describe 'all consecutive discharges' if no information is given about how these discharged patients differed from those who have not yet been discharged or those who terminated treatment in another way. The authors would not change this observation. Case reports, in particular failed to put the study in context or to describe the reasons for reporting that particular case. Even in the RCT studies, information about who was approached to participate and how allocation was conducted was often very difficult to extract from the paper or entirely lacking.

Previous research has often been carried out with a principal intention of validating the institution under study (Dolan and Coid, 1993). They recommend that the object of future research should not be to determine the efficacy of one particular treatment or unit for the whole of the heterogeneous category of 'psychopaths' but to consider which patients benefit most from which setting at which time in their recovery. There was little evidence found in this review to enlighten these questions.

Study design – randomisation, control and comparison

In their review, Dolan and Coid (1993) found five randomised, controlled studies of adult “psychopaths”. They suggested that there is a need for new research strategies which take a naturalistic approach following large cohorts of patients through a number of statutory and voluntary treatments, with differing levels of security, within health, social and penal services. They stated that until further naturalistic studies were completed which gave better indications of appropriate treatment, more methodologically rigorous studies of comparative and controlled treatments cannot be designed.

The authors found one study of “psychopaths” that used random assignment. They did find several RCTs of treatments for BPD, however, which suggested an improvement in methodology

in outpatient and inpatient psychotherapy, particularly. It is a moot point whether the evidence to date represents sufficient indication of appropriate treatment to progress to RCTs in higher security since it does not add considerably to the evidence prior to 1992. The authors recommend that the feasibility of conducting RCTs in higher security is considered.

What works for whom?

Dolan and Coid (1993) also argue that the treatment of personality disorder is rarely, if ever, something which involves just one treatment modality or therapist in practice. Several different strategies of treatment will be involved at different periods in the patient's recovery. They recommended that it would therefore be wrong to suggest that one treatment alone would prove to be the most efficacious for this group of clients. They recommended that naturalistic studies be conducted that would identify what kinds of patients find their way back to the community after treatment, how soon they relapse, what treatment did they receive and what if anything is typical about their diagnostic presentation. This would provide information in terms of patients and treatments rather than institutions, but it is, after all, the patient who should be at the centre of investigations of caring strategies. The authors found that the quality of description of sample characteristics would be a barrier to extrapolating this information about treatments that are more appropriate at different points in a patient's career. Although the age of samples is often quoted this is not necessarily a reliable proxy for the stage in a "patient's psychiatric career".

Choice of comparisons/controls

Conclusions can be most clearly drawn about efficacy when participants with the same diagnosis are randomly allocated to treatment and no treatment (for a discussion of "no treatment", see below). However, studies found in this review used a few different approaches to comparison samples, which had been previously described by Dolan and Coid (1993) who identified three types of comparison group in their review:

1. patients with a similar diagnosis or characteristics who do not receive treatment
2. patients who receive the same treatment but who have a different psychiatric diagnosis
3. participants matched on demographic and historical variables, who do not have the same psychological or psychiatric profile and who do not receive treatment.

With the exception of random allocation of one, each choice of comparison group brings problems for the interpretation of results. The authors found that a considerable number of the studies identified did not include comparison groups at all.

Description of treatments studied

Dolan and Coid (1993) made an emphatic point about the difficulty presented by poor descriptions of the treatment studied. The primary difficulty is in replicating the research findings in other studies but the clinical implication of poor description is that supposedly effective treatment cannot be replicated with other patients in need. For the present review, this was a particularly concerning issue as the service development context to this review is set up to demand quick results. It is primarily the drug and physical treatments that give good descriptions of what treatment was given and that this may be because these are easier to describe. The advent of manualised treatments and clear treatment protocols has led to some improvement in this aspect of research methodology. However, in addition to references to a manual, the study should also test therapist adherence to the model. Some good precedents have been set in this regard by the DBT studies although some difficulties have been shown in respect of replicating treatment effects with different therapists. For some other treatments, such as TCs, in which the patients are also key agents of therapy, it may be more difficult to test adherence to the model.

Receipt of other treatment and effects of the environment

Many participants, particularly those incarcerated in high security are given an experimental treatment in the context of a certain environment. In addition, few studies identify whether other treatments are being received, particularly pharmacological treatments. A small number of studies in this review excluded participants on medication but most did not and did not report

details of concomitant pharmacotherapy being received. This is a particular difficulty in studies in higher levels of hospital security where most patients are medicated as a matter of course because the dominant model of treatment in our psychiatric services is medical. In many of the studies reviewed it is not possible to establish whether participants are receiving other interventions.

Outcome measures

Several outcomes of treatment for personality disorders may be of interest. These include recidivism, rehospitalisation, life history (employment etc) and social functioning, and psychological measures. Dolan and Coid (1993) noted that some studies used clinical impression as the outcome measure, which carries clear difficulties because it is not standardised. This seemed to be less common in the studies reviewed here, few of which did not use standardised measures. The majority of these were of psychodynamic psychotherapy. However, it is useful to note here the point made by Stanislow and McGlashan (1998) that symptomatic behaviours seem to show good outcomes but that the syndrome of personality disorder has not been shown to be ameliorated convincingly. That comment must be tempered with a reiteration that an absence of evidence (because studies have considered particular aspects of personality disorder rather than the whole syndrome) is not evidence of an absence of treatment effect.

In contrast to the findings of the last review commissioned, recidivism was infrequently used as a measure of outcome, which probably reflects the difference in search strategy used by the two reviews. There were fewer than five studies that did use recidivism. One of the difficulties posed for treatment by the composite construct DSPD is the aim of treatment. Recidivism is a very important outcome if the aim of treatment is to reduce offending. However, as personality disorder is proposed as the causal link to offending within the DSPD definition, psychological change should also be measured and this should be change in personality *disorder* not symptom change.

Although not highlighted by Dolan and Coid (1993) this problem, which has been noted by previous reviewers, (Stanislow 1998) was evident in this review. The majority of outcome measures are symptomatological rather than syndromal. Few studies assessed change in personality disorder status following treatment.

Rehospitalisation has continued to be a popular measure of outcome in the last eight years of PD treatment outcome. For those incarcerated, progress to services at lower levels of security may also be seen to be key. Two studies in this review assessed movement in the system as an outcome, yet this must be central to the effectiveness of services for DSPD.

Follow-up periods

Many of the studies described as outcome do not have an assessment of participants who have actually left the treatment. Clearly this is a greater difficulty in longer-term treatments but in many reports the follow-up post treatment is unclear. For treatment programmes administered during a period of incarceration in prison or hospital settings, the effects of the institutional environment are not usually taken into account in the evaluation.

The selection of appropriate times to follow-up is a challenge for research into personality disorder. Whilst short-term follow-up periods such as six months to one year cannot show the nature of any lasting treatment gains, the longer the follow-up period the more difficult it is to attribute differences to the treatment received. In this review, only a small number of studies considered follow-up over a number of years.

Attrition

It is clear from reviewing these studies that attrition rates are high with this group of clients. The attrition rates (for participants in the "experimental" groups) in the studies identified here were as high as 57 per cent. Indeed, in one of the pharmacology studies, 100 per cent of the control group dropped out of the study. It has to be noted that many studies did not report their attrition rates and that in some of those that did, the report remained unclear. Attrition occurred either from the treatment or from the research study and the rate was generally, although not always, likely to

increase over time. Few studies reported analysis of responders versus non-responders in order to establish the representativeness of the final sample.

Application of statistics

A difficulty that arises from recognition of personality disorder as a multidimensional problem and applying measures of outcome accordingly arises in the application of statistical analyses. As an example, few of the studies reviewed here incorporated adjustment for multiple testing although many used multiple outcome measures.

Definition of “promising”

One further limitation to this review was the interpretation of “promising”. One of the key tasks that was set for this review was to attempt to identify or suggest promising treatments and make clear recommendations about the most promising forms of intervention for personality disorder in use or currently in development. The term ‘promising’ is not defined by the tender but needs defining here to make explicit the criteria and assumptions made here.

The most obvious model on which to base the criteria of promising was evidence-based practice. Evidence-based practice is a term in prominent usage currently and evidence-base policy, entailing the evaluation of policy decisions, may be seen to be a requirement which is both reasonable and feasible with the increased focus of the NHS on evaluation (Ham, Hunter *et al.*, 1995). Indeed, the approach taken with respect to DSPD could be seen as representing an evidence-based approach to policy. However, although it can be argued that “individuals may be at less risk from uninformed policymaking than from medicine that ignores available evidence”, evaluating the policy decisions remain important (Ham, Hunter *et al.*, 1995). Furthermore, it can be argued that the sort of evidence needed to inform practice is different from that needed to inform policy (Davey Smith, Ebrahim *et al.*, 2001). However, the DSPD developments encapsulate both: an attempt to extrapolate from the evidence base about treatment and implementing treatment as a matter of policy.

One way to define “promising” would have been to use quality of methodology as the criterion and consider only the high level evidence (say level 1 and 2) for each treatment modality or setting and compare the different treatments and settings on the basis of this ‘good quality’ evidence. However the general dearth of good quality research made this approach impractical.

Further, with an evidence base so small, the absence of high-level research in any one treatment modality or setting cannot be taken as evidence that that approach is unsuccessful. There are constraints on the use of certain methodologies in some settings (Black, 1998; Khan, ter Riet, Glanville, *et al.*, 2001) or with some treatment approaches. In addition, the volume of research from any single treatment modality may well be influenced by the modality itself as some treatments or settings or outcome variables are more amenable to measurement. Further, absence of high-level long-term outcome research may reflect the availability of money to fund this more expensive research methodology.

In the absence of the “gold standard” evidence base guidance from the next best level must be sought. “Promising” can, therefore, be interpreted as a comparative and evolving rather than categorical and static concept.

The term “*promising*” invites us to question the goal of providing new services for personality disordered people.

The long term goal of providing *treatment* for dangerous and (severely) personality disordered individuals must be to rehabilitate the individual to such an extent that they can be moved from higher to lower levels of security and ultimately to independent living in the community. Indeed the White Paper envisages this when it discusses provision of placements for DSPD individuals not only in prisons and high secure hospitals but also in the community in specialist rehabilitation hostels. Whilst this movement through different levels of security will undoubtedly not be achievable for all individuals, in order to invest in providing treatment, there must be the assumption that change is possible.

In their 'therapeutic career' any individual patient would be expected to successfully complete treatment, (or demonstrate positive change in one level of security) in order to move on to the next lowest level. For any individual to achieve this progression from the highest to the lowest level of security, they would be expected to engage in the most appropriate treatment delivered at each level and gain from it. They would, perhaps, be expected to gain different things from different stages. One consequence of this overall view is that no treatment which has been shown to be successful at one stage of this process can be considered "promising" (even with meta-analytic evidence) if it is to be implemented in isolation from the treatments delivered in the settings immediately above and below it in terms of security. In other words, there must be a range of treatment available at each level of security. The levels of security should have some level of interdigitation of treatments. For example, a patient receiving DBT treatment in a high secure hospital should not be expected to receive and benefit from CAT in medium security when the approach, language and structure of the treatment is completely different.

Were the authors to adopt the recommendation of the recent Royal College of Psychiatrists review (Royal College of Psychiatrists 1999), and confine themselves to only recommending as 'promising' service developments based on randomised, controlled trials, only be able to recommend treatments which have not been provided in a high secure setting since there are no RCTs at this level and, hence, remain untested in the group of personality disordered people at whom the DSPD legislation is aimed. In recognition of the paucity of the available evidence, especially in the higher levels of security, the authors have taken a comparative view of "promising", which is in line with evidence based medicine (Sackett, Rosenberg, Gray, *et al.*, 1996) and indicate below those treatments which the evidence suggests produce the best outcomes in each level of security whilst also identifying the limitations of the evidence in each case.

5 Summary

In this section the findings of this review in respect of the various treatment approaches identified are summarised. The summary is organised so that treatments of those who may be most likely to meet the definition of DSPD appear first. These are identified first by treatment setting, then a separate section considers studies which included participants with psychopathic or anti-social personality disorder. The final section summarises the evidence for the treatment of any personality disorder for each treatment type.

Comparison and comparability of studies

There was, in our view too little consistency of participant type, study design and outcome measures to reduce the evidence in this field statistically and to make meaningful statistical comparisons, such as a meta-analysis. The authors have restricted themselves, therefore, to descriptive comparisons only.

Treatment outcome by level of security

High security settings

As anticipated, the authors found no studies of any kind of any treatment which used the term “dangerous and severely personality disordered” to describe their participants. There were some studies which used the term “severe personality disorder” to describe the participant group, however with only one exception this term was not further defined or qualified. The exception was Dolan, Warren *et al.* (1997), who defined “severe” as referring to those who met criteria for seven or more DSM personality disorders each.

One assumption that may be made is that the level of security of setting can be taken as a proxy of the level of severity of PD in so far as it may be reasonable to assume that the higher the level of security in which individuals are held, the more dangerous they may be considered to be. However, “dangerous” and “personality disordered” are not synonyms, since the level of risk one presents to self and others is not necessarily related to the degree of personality disorder pathology.

Nevertheless, given that “DSPD” is not synonymous with “psychopath” or “anti-social personality disorder”, security of setting in which the participants were held seemed the best proxy available to the review group. Given that no studies were found that described their personality-disordered participants in terms of perceived level of risk or dangerousness, the authors have considered the review data by treatment setting. The consideration of treatment outcome by level of security of treatment setting does have the advantage of allowing the broad assumptions to be made that a high degree of risk is posed by those with personality disorder who have been detained in the setting.

In high secure settings there is no high quality evidence of treatment outcome available (levels one and two – see section Appendix 1). Indeed, evidence of any kind is sparse at this level. Only 13 studies were found that were conducted in medium or higher levels of security and all of these were observational.

What evidence there is from prisons points towards long-term treatment in a therapeutic community institution as being efficacious in reducing levels of re-offending when compared with ‘untreated’ inmates who remained in the general prison system. However, this evidence has only been derived from the treatment of males. Within high secure psychiatric units, the majority (five) of the identified studies were of cognitive behavioural type treatment. In two of these studies the follow-up period was not clear from the paper and in one it was three weeks after the end of the course of group treatment, thus there is no robust indication of long term outcome. All patients remained in the high secure environment and none were specified as unmedicated. Some

impact on self-harming behaviours was suggested in a very small sample of BPD women in special hospitals who had lower levels of self-harming at six months after the end of the course of DBT. Two uncontrolled drug studies (of six patients in total) suggested that clozapine may reduce the need for nursing observations in self-harming women after a twelve-month period of treatment and that ADHD may be improved with premoline and methylphenidate.

The most promising evidence from high security supports therapeutic community treatment. However this conclusion must be seen in the light of the finding of a dearth of research into any other treatment modalities for personality disorder in high security. Further, TC treatment in high security has only been reported in studies of men and evaluated in terms of criminogenic and behavioural outcomes (recidivism, violence etc). Other treatments that may be promising on the basis of limited research include DBT and the drug clozapine.

Lower security settings

In low security and open settings the evidence suggests that therapeutic community treatments have been effective in ameliorating behaviours and symptoms associated with personality disorder. Pharmacological treatments may ameliorate symptoms, particularly depression and self-rated anger. With respect to psychological treatments in outpatient settings, DBT and partial hospitalisation seem to have the most promising results.

Management of psychopathic and anti-social personality disorders

The task set for this systematic review was to “review and make recommendations about suitable treatments for severe personality disorder” whilst building upon the information available from earlier reviews of the treatment of psychopathic and anti-social personality disorders (e.g. Dolan and Coid, 1993). This review was required to provide a central point of reference on treatment intervention for personality disorders.

In 1993 Dolan and Coid concluded that the evidence base for the treatability of anti-social and psychopathic personality disorder was practically non-existent. The identified body of research which did exist was limited to a small number of studies which themselves were limited by poor methodology with vaguely defined samples followed up for short periods of time with inadequate measures. Dolan and Coid lamented the position and particularly noted the worrying fact that although since 1941 it had been clearly stated by a great number of commentators that research investigations into the treatment of psychopathy were few and of poor quality no obvious improvements had come about over the ensuing five decades.

The Reed Committee (1993) endorsed Dolan and Coid’s findings and recommended that the Department of Health/Home Office should set up a programme of research into the outcome of different treatments for those with psychopathic disorder evaluating treatment using standardised diagnostic and outcome criteria in a wide range of settings and treatments. It was also recommended that sufficient samples of woman and those from ethnic minority groups should be included to reveal any factors specific to their diagnosis, treatment and prognosis.

Although policy, service development and expectations of research methodology have progressed considerably in the eight years since the Dolan and Coid review, having conducted this present systematic review of the outcome research on personality disorder from 1993 the authors find themselves in a very similar position. Overall the quality and implementation of study design is generally poor in the identified studies. Despite over 1,600 copies of Dolan and Coid’s review having been purchased by clinicians, academics and institutions the methodological issues which were clearly set out in that review appear not to have been taken on board by the scientific community or those who fund research. In many of the post-1992 studies the diagnosis or nature of personality disorder remains ill-defined. Where evaluation has continued beyond the end of the therapy the post-treatment follow-up periods are generally very short and the measures of outcome vary widely. Most studies have a behavioural variable associated with the personality disorder as the focus of their treatment and there are extremely few studies which make any attempt to treat or measure change in the core disorder of personality.

In respect of those disorders considered in the Dolan and Coid review, that is 'psychopathic and anti-social personality disorders', the authors found only 17 new studies which specifically considered patients coming within these categories (however defined) (Penick, Powell *et al.*, 1996; Powell, Campbell *et al.*, 1995; Young and Harty, 2001; Kalman, Longabaugh *et al.*, 2000; Longabaugh, Rubin *et al.*, 1994; Project Match Research Group, 1997; Saunders, 1996; Brooner, Kidorf *et al.*, 1998; Hughes, Hogue *et al.*, 1997; Quayle and Moore, 1998; Gacono, 1998; Ryle, 1995; Pollock and Belshaw, 1998; Reiss, Grubin *et al.*, 1996; Martens, 1999; Messina, Wish *et al.*, 1999; Davidson and Tyrer, 1996).

Of these 17 studies, seven stated that they addressed subjects with psychopathic PD but in only three reports was the PCL-R used to assess the participants and none of these three applied the PCL-R cut-off score although one study explicitly excluded those with PCL scores over the cut-off point of 30 (Hughes, Hogue, Hollin, *et al.*, 1997), and the two subjects in Gacano's case report study both had PCL-R scores below 30 (Gacono, 1998). Six of these studies of 'psychopaths' were observational and one was an RCT (Kalman, Longabaugh *et al.*, 2000). In four of these studies treatment took place in high security and two in medium security. Three were of CBT treatment (both of mixed types) and two of psychodynamic psychotherapy (again, both of mixed types).

The RCT study was of reasonable quality and showed an impact of CBT and relationship-focused treatments in an outpatient setting on alcohol use behaviours. The study failed to replicate the results of a previous study that had shown a differential improvement in alcohol behaviours depending on the treatment offered.

The remaining studies assessed outcomes including recidivism and aggression but are of insufficient quality to draw conclusions about the treatment outcomes. None of the seven studies of "psychopaths" assessed outcomes in terms of psychopathy or personality disorder variables.

The remaining ten of these 17 studies considered subjects with anti-social PD (ASPD). All defined ASPD by reference to a recognised diagnostic classification system, such as DSM or ICD criteria, although not all used a standardised approach to assessing this. Of these ten reports three studies were of drug treatments for ASPD whilst the remaining seven were RCT studies of CBT. The outcome variables considered were mainly substance abuse (nine of the 17 studies), and psychological factors, such as mood change and cognitive functioning (five studies). Recidivism or violent behaviour was an outcome measure in four studies. Only one of these ten studies assessed personality disorder (or psychopathy) as an outcome (Ryle, 1995). This study of CAT in an outpatient setting showed that following treatment two patients no longer met criteria for ASPD. However, the study was of low quality, being a case study only and provides only suggestive evidence for further research, not treatment or policy.

It is very difficult to draw out common results from these studies that did not assess the same outcomes and particularly since all but one of the RCTs was of cognitive behavioural treatment for substance abuse. However, in general, the findings suggest that CBT may produce some reductions in substance abuse, and pharmacological treatment had some effect in reducing anxiety. However, all studies were limited by the choice of control or comparison samples and the short length of follow-up.

Treatment outcome by type of treatment

Pharmacological treatments

Dolan and Coid found no controlled studies of the pharmacological treatment of the "core" features of psychopathic and anti-social personality disorder and concluded there was no reliable evidence of the efficacy of drug treatment for psychopathic disorder per se, most studies being aimed at ameliorating Axis I disorders or symptomatic disturbance associated with PD rather than the core psychopathological condition.

Stein (1992) in his review of the drug treatment literature concluded that small doses of neuroleptics might be beneficial for those with BPD and schizotypal PD. However he determined

that MAOIs and carbamazepine appeared to have benefit for a selected number of patients in any PD category. Dolan and Coid also noted that carbamazepine had been shown to improve impulse control irrespective of the PD diagnosis of the recipient and suggested that these beneficial effects may derive from its mood-stabilising properties, as such its use should be targeted at specific symptoms and behaviours rather than deemed a general treatment for any specific PD. Studies of anti-depressant treatment (with TCAs or SSRIs) had been restricted mainly to patients with BPD with no dramatic responses reported.

Notwithstanding Dolan and Coid's endorsement of Stein's (1992) advice that "the era of uncontrolled studies has passed and only placebo controlled trials should now be undertaken", their review has revealed that a number of non-placebo controlled studies continue to be undertaken and reported.

The authors identified one randomised, placebo controlled study (two reports) of alcohol dependent patients with co-morbid anti-social personality disorder which suggested slightly better outcome (in terms of change in psychological symptoms and alcohol use) for bromocriptine when compared to nortryptiline (Powell, Campbell *et al.*, 1995; Penick, Powell *et al.*, 1996). The authors also identified two randomised studies that showed reductions in personality disorder diagnoses after SSRI and MAOI treatment for depression (Ekselius, 1998; Fahlen, 1995). The majority of drug studies identified by the authors were conducted in an outpatient setting with subjects with BPD. Only two studies of drug treatment in a high secure setting were found, both were uncontrolled case series, one reporting the case of a single patient with dissociative personality disorder and another a case series of five female participants with BPD.

Previous reviews had concluded that drug treatments had shown some moderate effects on impulse control, over-activity and aggression (Dolan and Coid 1993), although others had suggested that evidence for the drug treatment of impulsivity was equivocal (von Knorring and Ekselius 1998). The published evidence before 1993 suggested that MAOIs and lithium were the more promising pharmacotherapies for PD (Dolan and Coid 1993).

This review also found a series of studies indicating that a range of different medications may be effective in reducing symptoms associated with Axis-II psychopathology, particularly borderline and schizotypal personality disorder and on associated forms of behavioural dyscontrol, including self-harming behaviours and suicide attempts, self-rated anger. The atypical neuroleptic and opioid drugs were not reviewed by Dolan and Coid (1993) and similarly the authors did not find any RCT studies of this group of compounds in the review although Sanislow & McGlashan, (1998) have suggested that these are "promising" treatments.

In summary, in this review no additional strong evidence was found (i.e., randomised and controlled) regarding the effectiveness of drug therapy of sufficient quality to add to the knowledge base provided by these previous reviews.

The small number of RCTs that were found generally had small sample sizes, short treatment durations (<six months), and there was a lack of long-term follow-up. Many of the studies had highly selected participants and large drop-out rates, which raises serious questions about generalisability. Finally, it was often found that the treatment benefits were significant for only a small subset of the outcome measures from a large battery, with many outcomes showing non-significant effects. Almost none of the studies controlled for the inflation of Type I error rate that is likely to occur when multiple significance tests are conducted. Large responses in the placebo-treated participants were often noted (particularly in research with BPD participants), further emphasising the need for controlled evidence in this area.

Physical treatments

Dolan and Coid reviewed early studies of ECT and psychosurgery and reported that no identified studies carried out controlled investigations and all had used only subjective clinical reports as their measure of improvement. There was therefore no evidence to support the use of psychosurgery or ECT for treating psychopathic disorder.

In this review the authors did not find any new studies of physical treatments for anti-social personality disorder or for people detained under the legal category of psychopathic disorder. One uncontrolled study (Blais *et al.*, 1998) of ECT for major depressive disorder has suggested that some co-morbid personality disorders, (avoidant, histrionic and schizotypal), may be ameliorated by ECT treatment. However other evidence from a case series study suggests that PD is a predictor of poor response to ECT (Sareen et al 2000)

In summary, the position with regard to physical treatments has changed little since 1993. Studies in this area are sparse and there is no cogent evidence that any form of physical treatment can successfully treat personality disorder or psychopathy. Although the frequency with which physical treatments are studied is not necessarily a reflection of the frequency with which they are applied, the results of this review, taken together with the results of previous reviews, suggest that physical treatments are only used in desperate circumstances and when all other approaches have been exhausted.

Dynamic psychotherapy

Very few studies have evaluated the application of psychotherapy independent of other treatment modalities for psychopaths or those with ASPD.

In 1993, Dolan and Coid concluded that the existing reports of short-term outpatient psychotherapy had shown only limited effectiveness in treating psychopathic or anti-social personality disorder. The follow-up periods for empirical studies of personality-disordered patients were generally short and the initial reduction in recidivism found in a study of inpatient psychotherapy with adult psychopaths was not maintained on long-term follow-up (Jew *et al.*, 1972). Dolan and Coid did however identify two studies that showed some long-term reduction in recidivism following enforced group therapy for sex-offenders.

No experimental studies were found of the efficacy of dynamic psychotherapy in high secure environments, or indeed in any in-patient setting. One uncontrolled case series is reported of legal 'psychopaths' who received a mixture of group and individual psychoanalytic psychotherapy (Reiss, Grubin & Meux, 1996). This study found that 20 per cent of the 49 men had re-offended at a mean of two years after discharge from a high security hospital. The study also considered movement to a lower level of security as a positive outcome and found that 76 per cent had been discharged from high security. The study shows that psychoanalytic psychotherapy can be applied within a high secure hospital setting. However the uncontrolled study design prevents much useful extrapolation of the outcome data.

In respect of other personality disorder diagnoses the authors identified six randomised controlled studies of dynamic psychotherapy in outpatient settings or with partial hospitalisation (Bateman & Fonagy, 1999; Bateman & Fonagy, 2001; Munroe-Blum & Marziali, 1995; Piper, Joyce, Azim, *et al.*, 1994; Piper, Rosie, Azim, *et al.*, 1993; Winston, Laikin, Pollack, *et al.*, 1994). In three studies the participants had BPD, in two dependent PD, and two a mixture of Cluster B and C PD diagnoses. The longest follow-up time was 24 months and outcomes measured were primarily neurotic symptoms and social adjustment. These studies suggest some improvement in neurotic symptoms with no differences in effects for group or individually delivered therapy.

The majority of studies of dynamic psychotherapy identified in inpatient settings were observational studies with a before and after design without control groups. Few made attempts to control for baseline differences between groups. In addition the study sample sizes were not sufficiently large to generate data sets that could be used to derive conclusions in the absence of random controlled assignment.

In summary the efficacy of dynamic psychotherapy in reducing core features of PD remains largely untested. Some positive changes in neurotic symptoms and social adjustment in those with PD have been shown in outpatient settings but as yet the same have not been adequately explored in in-patient settings.

Cognitive-behavioural therapies

Dolan and Coid concluded that there was only limited evidence for the long-term efficacy of cognitive-behavioural programmes alone for treating psychopathic disorder in adults although some initial reduction in recidivism had been noted after behavioural programmes for young offenders whose personality disorder status was not specified (Stermac, 1986; Valliant and Antonowicz, 1991) and the effects were not shown to be maintained in the long-term (Cohen and Filipczak, 1971; Moyes et al 1985).

Since the Dolan and Coid treatment review two variants of CBT have become prominent in clinical practice and literature. These are Cognitive Analytic Therapy (Ryle, 1997) and Dialectical Behaviour Therapy (Linehan, 1993c). This review identified 40 studies of CBT. However the vast majority of these were studies of women in outpatient settings. There were no experimental studies conducted in high secure environments, however six RCTs were identified which involved participants who were described as psychopathic or had anti-social personality disorder. In one of these, domestic violent offenders were treated with feminist-informed CBT or process-oriented psychodynamic groups. Those with anti-social personality disorder responded better to the CBT treatment in terms of partners' behavioural ratings. Both types of treatment had similar re-offending rates of approximately 50 per cent in four years.

In four of the six controlled studies participants also had concomitant substance abuse diagnoses. Most studies have looked for a treatment by anti-social PD interaction with substance abuse related outcome measures. The evidence is equivocal.

Stronger study designs have been applied to DBT in which randomised designs with a "treatment as usual" comparison group have been used in outpatient settings with women with BPD. Some encouraging evidence suggests that self-harming behaviour is reduced whilst patients are also retained in therapy using DBT. However, only a small number of the multiple outcome measures used show any change and these changes are not very stable over time. As yet only one uncontrolled study of DBT has been reported in high secure psychiatric care with a small subject sample (Low *et al.*, 2001).

Most of the cognitive therapy programmes reviewed were of short-term treatments aimed at a specific aspect of behaviour or attitude (such as aggression, self-harming or social skills) and which do not claim to treat the core disorder of personality.

However, two uncontrolled studies have been reported which showed a reduction in personality disorder diagnoses (on the SCID-II) following treatment. One considered outcome at the end of four weeks of behavioural treatment for obsessive compulsive disorder (McKay, Neziroglu, Todaro, *et al.*, 1996) and another considered mixed CBT treatments for agoraphobia focused on behaviours and personality over 15 months (Gude, Monsen & Hoffart, 2001).

In conclusion this review has identified little additional evidence of the efficacy of CBT with either psychopathic or anti-social personality disordered patients or for those with other PD diagnoses held within high security. Some randomised-controlled evidence is available in non-secure and community settings suggesting that CBT can reduce levels of self-harm in women with BPD. Additionally some reduction in alcohol abuse has been demonstrated following outpatient CBT for those with anti-social personality disorder.

DBT has been studied using RCT designs in outpatient settings and shown some short-term improvement on a minority of the multiple outcome measures used. Using the weaker study methodology of a pre- and post-design some improvements in self-harming behaviour have been found after DBT treatment of a small sample of borderline PD women, in a high secure psychiatric hospital. Although the authors suggest that the treatment, as with any CBT treatment, may be less appropriate for those with poorer levels of cognitive functioning, they do not report difficulties with applying this treatment in a high secure setting.

Therapeutic community

Previously Dolan and Coid concluded that studies of TC treatment had shown the most promising results of any treatment modality for psychopathy and ASPD. Outcomes were favourable in terms of a number of measures including: psychological and behavioural changes during treatment; reduction of violent incidents in treatment settings; significant improvements following treatment in life history variables (recidivism, rehospitalisation etc) and psychological states, and in some cases maintained these changes at follow-up. In general the actual treatment provided in TC studies was well described. However Dolan and Coid noted the dearth of controlled research studies into TC treatment. In this review no evidence was found to contradict their conclusions. It must be noted, however, that little additional evidence about TCs has been published since 1993.

In secure settings Dolan and Coid's 1993 review reported on a TC study from HMP Grendon where it was found that there was no difference in recidivism between treated male offenders compared with matched control samples of untreated non-psychopaths at ten-year follow-up (Robertson and Gunn, 1987). Since then two further reports have been produced from the same institution which show a non-significant trend for there to be lower rates of reconviction in a sample of personality disordered men who had received treatment at HMP Grendon compared with a waiting list sample at four and seven year follow-ups (Marshall, 1997; Taylor, 2000). Both of these recent reports demonstrated a significant positive relationship between time spent in therapy at HMP Grendon and outcome and suggested that at least 18 months of treatment is needed to impact upon an inmate's chances of recidivism.

In non-secure TC settings few further studies have been published since 1993 that augment the evidence for the effectiveness of TCs in reducing PD symptoms. One cohort study considered core borderline personality disorder symptomatology (although not change in diagnostic status) and showed that 43 per cent of a treated sample had improved both reliably and clinically significantly at one-year post-treatment follow-up (Dolan, Warren & Norton, 1997). This was a statistically significantly greater proportion than the "treatment as usual" comparison group. There have also been studies of day hospital TCs.

Therapeutic community treatment is the only single treatment modality identified in this review that has been subjected to a meta-analysis of randomised controlled trials (Lees, Manning & Rawlings, 1999)¹⁹. A fixed effects meta-analysis was performed on the results of the 29 TC outcome studies (eight RCTs including 2,737 participants) from which it was possible to abstract the data of treatment success or failure (variously defined). The meta-analysis demonstrated that the TC approach was effective. The pooled odds ratio from all 29 studies was 0.57 (95% confidence intervals 0.52 to 0.61) and from the eight randomised trials alone was 0.46 (95% confidence interval of 0.39 to 0.55). However, it must be noted that this meta-analysis included studies that did not identify their participants as personality disordered but as 'young offenders' (two trials), 'psychiatric inpatients' (one trial), 'male delinquents' on probation referred for psychiatric assessment (one trial), 'drug-involved offenders' (four trials) and as such several of the studies entered into the meta-analysis would not have been included under the terms of reference of this present review.

Further, TCs are the only form of treatment for which the authors have identified a study that considers the applicability of the treatment to different British ethnic groups. Whilst noting the low proportion of ethnic minority inmates admitted to HMP Grendon, Newton (2000) found that there was no difference between the white and ethnic minority inmates in terms of their likelihood of successfully completing assessment and progressing on to a TC or in their rates of drop-out from treatment.

The evidence from TC studies is sufficient to allow the authors to state that the TC model represents the most promising form of treatment for severe PD considered by this review. Nevertheless, the efficacy of TC treatment for specific PD subject groups remains unclear and the current state of TC research is such that the authors cannot yet provide any confident conclusions on whether or how this approach should be differentially applied to specific types of people falling within the broad DSPD category. Notwithstanding this limitation the TC model has generally been

¹⁹ Note also that Perry *et al.*, 1999 conducted a meta-analysis of a range of psychological treatments for PD.

shown to be effective in producing long-term symptomatic and behavioural improvements in both PD subjects and in offender populations. As such the TC model may well represent a suitable framework within which to experiment with different treatment methods and combinations, since within the TC environment a range of other individual methodologies may be embraced, including both psychological and pharmacological interventions.

6 Conclusions and recommendations

On the basis of this systematic review the authors are able to make few recommendations about treatment provision that derive directly from research evidence.

The conclusions that can be drawn about the degree to which any particular treatment is effective are as follows:

In respect of the evidence for treatments for DSPD and PD

The research literature does not currently use the language of dangerousness and personality disorder together. Using high security (prison or high secure psychiatry) as a proxy for dangerousness, there is no evidence that “DSPD” can or cannot be treated.

The quality of evidence currently precludes an informative statistical approach to the comparison of treatment approaches to personality disorder, such as a meta-analysis.

The TC model currently has the most promising evidence base in this poor field.

Psychodynamic day hospital-based programmes with highly-structured therapeutic programmes have some promising evidence of effectiveness to treat relatively poorly functioning self-harming borderline patients.

The evidence for DBT comprises good study designs and shows short-term gains but is limited 1) to reduction of self-harm in high functioning female outpatients with borderline personality disorder 2) by evidence of a failure to maintain treatment effect after treatment has ended.

The evidence for pharmacological intervention is very poor. SSRI antidepressants may ameliorate PD symptomatology and anger and brofaromine (MAOI) may ameliorate avoidant PD and symptoms of social anxiety.

In respect of the effectiveness of treatment for women

DBT has been designed for and tested, almost exclusively, on female patients. All other treatment approaches have studies on both male and female patients. However, those studies that had mixed sex participants, did not report the differential effectiveness for women and men.

In respect of the effectiveness of treatments for those with minority ethnic backgrounds

There is no evidence on the differential effectiveness of these treatments for people from differing ethnic backgrounds.

Imaginative comments and suggestions arising from conducting this review

The therapeutic community ethos could be used as the dominant approach and structure of the system providing new regimes.

The application of a TC model could include the use of other treatments targeting specific aspects of the pathology of those in those regimes e.g. drug therapy for anger or DBT for women who self-harm.

Physical treatments for personality disorder should not be employed save as an absolute last resort when all other treatment options have been tried and found to fail.

Other “composite” treatments such as the psychoanalytically-oriented partial hospitalisation programmes should be considered for adaptation to higher levels of security.

A range of treatments should be available at each level of security to allow individuals to move through levels of security with consistency of treatment approach.

The long-term pathway of care should be considered such that service development provides for both geographical and conceptual proximity of treatments delivered at different levels of security.

In respect of research into PD

The highest priority should be given to research into the treatment outcome of personality-disordered individuals.

Research into the treatment progress and outcome of personality-disordered individuals in high security should be implemented as soon as is reasonably practical with the highest priority.

Research in high security should not be funded unless it is attempting to apply the highest standards possible.

Research into PD should **as a minimum**:

- utilise recognised diagnostic criteria for PD (DSM or ICD)
- base diagnostic assessment on a standardised instrument (and preferably a structured interview)
- where relevant to the patient sample, also use the PCLR
- assess co-morbid Axis 1 symptomatology
- assess the “danger” or risk to others, where appropriate
- describe the sex and ethnicity of the sample studied
- describe the treatment given in sufficient detail so that it could be replicated by others. This includes describing the composition and training of the staff team delivering the treatment in detail
- describe the setting in which the treatment is administered
- assess outcome across a range of domains from different perspectives (clinician, key professional, subject, independent assessor)
- where possible employ randomised allocation to each component of treatment
- use a validated instrument to measure the experimental variables
- evaluate change in both core PD and the experimental variable during and after treatment
- follow-up outcome over at least a six month period (and preferably much longer)
- consider outcome in terms of different diagnostic categories of PD, sex and ethnicity where possible.

In respect of the treatment of women with PD

Given the dearth of information of existing treatment on the differential outcomes of men and women in PD treatment the authors are unable to make specific recommendations about the differential treatment needs of women and men or of the differential effectiveness of treatments on the basis of sex.

The question of whether there is a differential response of men and women to different PD treatment(s) in different settings should be addressed within future research.

The authors endorse that priority is given to considering the differing needs of the sexes when they are compulsorily detained in institutions.

In respect of the treatment of those of minority ethnic groups with PD

Given the dearth of information of existing treatment on the differential outcomes of those of different ethnicities in PD treatment the authors are unable to make specific recommendations about suitability of the treatments reviewed for diverse ethnic groups.

The question of whether there is a differential response of those of different ethnic backgrounds to different PD treatment(s) in different settings should be addressed within future research.

The authors nevertheless recommend that when establishing any services for PD consideration is given to the clinical and other literature on the delivery of health care to people of diverse ethnic backgrounds. Particular attention should be paid to how these needs may be met for those compulsorily detained in institutions.

In respect of implementation of these treatments in a short time scale

Given the range of treatments which could be employed in high security settings, the therapeutic skills needed to deliver them and the time-scale in which it is anticipated that they will be available it would be remiss not to comment on some of the issues raised, however, self-evident:

A review of the skills and qualifications required, organisational structures needed and supervision requirements for conducting a given treatment should be conducted prior to implementing the treatment.

Appointment of therapeutic staff. Whilst there may be a considerable pool of staff already trained in some treatments such as CBT, there will be fewer with the experience or training necessary to deliver other treatments such as DBT, CAT and TC. The training, supervision and recruitment of suitably qualified staff should be considered very carefully prior to setting up treatments. Treatments should not be implemented until adequately trained staff are available and adequate supervision structures are in place.

Implementing treatments may entail changing the culture of a well established institution. This can take time and needs careful management if "client" care or therapeutic service provision is not to be compromised. Service development should not be rushed at the expense of "clients".

The development of an institution and approach which is clear about its tasks and objectives and in which staff are able to provide consistent treatment to a highly disturbed group whose problems are exacerbated by inconsistency of treatment delivery is a complex and difficult task.

7 References

- Alden, L. E. & Capreol, M. J. (1993) Avoidant personality disorder: Interpersonal problems as predictors of treatment response. *Behavior Therapy*, 24 (3), 357-376.
- Alden, L. E., Wiggins, J. S. & Pincus, A. L. (1990) Construction of circumplex scales for the inventory of interpersonal problems. *Journal of Personality Assessment*, 55, 521-536.
- American Psychiatric Association (1994) *Diagnostic and statistical manual of mental disorders (DSM-IV)* (4 edn). Washington DC: American Psychiatric Association.
- Andy, O. (1975) Thalamotomy for psychopathic behavior. *Southern Medical Journal*, 68 (4), 437-442.
- Antikainen, R., Koponen, H., Lehtonen, J., *et al* (1994) Factors Predicting Outcome of Psychiatric-Hospital Treatment in Patients With Borderline Personality Organization. *Nordic Journal of Psychiatry*, 48 (3), 177-185.
- Antikainen, R., Lehtonen, J., Koponen, H. J., *et al* (1992) The effect of hospital treatment on depression and anxiety in patients with borderline personality organization. *Nordic Journal of Psychiatry*, 46 (6), 399-405.
- Ball, J., Kearney, B., Wilhelm, K., *et al* (2000) Cognitive behaviour therapy and assertion training groups for patients with depression and comorbid personality disorders. *Behavioural & Cognitive Psychotherapy*, 28 (1), 71-85.
- Barber, J. P., Morse, J. Q., Krakauer, I. D., *et al* (1997) Change in obsessive-compulsive and avoidant personality disorders following time-limited supportive-expressive therapy. *Psychotherapy*, 34 (2), 133-143.
- Barber, J. P. & Muenz, L. R. (1996) The role of avoidance and obsessiveness in matching patients to cognitive and interpersonal psychotherapy: empirical findings from the treatment for depression collaborative research program. *Journal of Consulting & Clinical Psychology*, 64 (5), 951-8.
- Bartlett, A. (2000) *Social Difference and Division (Subcategory: Women)*. *Expert Paper*. London: National Programme on Forensic Mental Health R&D Priority Question Setting Exercise.
- Bateman, A. & Fonagy, P. (1999) Effectiveness of partial hospitalization in the treatment of borderline personality disorder: A randomized controlled trial. *American Journal of Psychiatry*, 156 (10), 1563-1569.
- Bateman, A. & Fonagy, P. (2001) Treatment of borderline personality disorder with psychoanalytically oriented partial hospitalization: An 18-month follow-up. *American Journal of Psychiatry*, 158 (1), 36-42.
- Bateman, A. W. & Fonagy, P. (2000) Effectiveness of psychotherapeutic treatment of personality disorder. *British Journal of Psychiatry*, 177, 138-143.
- Battaglia, J., Wolff, T. K., Wagner-Johnson, D. S., *et al* (1999) Structured diagnostic assessment and depot fluphenazine treatment of multiple suicide attempters in the emergency department. *International Clinical Psychopharmacology*, 14 (6), 361-372.
- Battle, C., Imber, S., Hoehn-Saric, R., *et al* (1966) Target Complaints as a criteria of Improvement. *American Journal Psychotherapy*, 20, 184-92.
- Benedetti, F., Sforzini, L., Colombo, C., *et al* (1998) Low-dose clozapine in acute and continuation treatment of severe borderline personality disorder. *Journal of Clinical Psychiatry*, 59 (3), 103-7.

- Benjamin, L. (1974) Structural Analysis of Social Behaviour. *Psychological Review*, 81, 392-425.
- Benjamin, L. (1984) Principles of prediction using Structural analysis of Social behaviour. In *Personality and the prediction of behaviour* (eds R. Zucker, J. Aronoff & A. Rabin), pp. 121-73: New York: Academic Press.
- Blais, M. A., Matthews, J., Schouten, R., *et al* (1998) Stability and predictive value of self-report personality traits pre- and post-electroconvulsive therapy: A preliminary study. *Comprehensive Psychiatry*, 39 (4), 231-235.
- Bohus, M., Haaf, B., Stiglmayr, C., *et al* (2000) Evaluation of inpatient Dialectical-Behavioral Therapy for Borderline Personality Disorder - A prospective study. *Behaviour Research & Therapy*, 38 (9), 875-887.
- Bohus, M. J., Landwehrmeyer, G. B., Stiglmayr, C. E., *et al* (1999) Naltrexone in the treatment of dissociative symptoms in patients with borderline personality disorder: an open-label trial. *Journal of Clinical Psychiatry*, 60 (9), 598-603.
- Budman, S. H., Cooley, S., Demby, A., *et al* (1996) A model of time-effective group psychotherapy for patients with personality disorders: the clinical model. *International Journal of Group Psychotherapy*, 46 (3), 329-55.
- Chengappa, K., Baker, R. & Sirri, C. (1995) The successful use of clozapine in ameliorating severe self mutilation in a patient with borderline personality disorder. *Journal of Personality Disorders*, 9 (1), 76-82.
- Chengappa, K. N., Ebeling, T., Kang, J. S., *et al* (1999) Clozapine reduces severe self-mutilation and aggression in psychotic patients with borderline personality disorder. *Journal of Clinical Psychiatry*, 60 (7), 477-84.
- Chiesa, M. & Fonagy, P. (2000) Cassel Personality Disorder Study. Methodology and treatment effects. *British Journal of Psychiatry*, 176, 485-91.
- Clarke, D. H. (1965) The Therapeutic Community Concept: Present and Future. *British Journal of Psychiatry*, 111, 947-954.
- Clarkin, J. F., Hull, J., Yeomans, F., *et al* (1994) Antisocial traits as modifiers of treatment response in borderline inpatients. *Journal of Psychotherapy Practice & Research*, 3 (4), 307-312.
- Clopton, J. R., Weddige, R. L., Contreras, S. A., *et al* (1993) Treatment outcome for substance misuse patients with personality disorder. *International Journal of the Addictions*, 28 (11), 1147-53.
- Coccaro, E. F. (1998) Clinical outcome of psychopharmacologic treatment of borderline and schizotypal personality disordered subjects. *Journal of Clinical Psychiatry*, 59, 30-37.
- Coccaro, E. F. & Kavoussi, R. J. (1997) Fluoxetine and impulsive aggressive behavior in personality-disordered subjects. *Archives of General Psychiatry*, 54 (12), 1081-1088.
- Conte, H., Plutchik, R., Karasu, T., *et al* (1980) A Self-Report Borderline Scale: Discriminant validity and preliminary norms. *Journal of Nervous and Mental Disease*, 168, 428-35.
- Cook, D., Fox, C., Weaver, M., *et al* (1991) The Berkeley group: ten years' experience of a group for non-violent sex offenders. *British Journal of Psychiatry*, 158, 238-43.
- Cooke, D. J. (1989) Containing violent Prisoners: an analysis of Barlinnie special unit. *British Journal of Criminology*, 29, 129-143.
- Cookson, A., Espie, J. & Yates, K. (unpublished) The Edinburgh Project: A pilot study for the psychotherapeutic treatment of borderline and other severe personality disorders.

- Coon, D. W. (1994) Cognitive-behavioral interventions with avoidant personality: A single case study. *Journal of Cognitive Psychotherapy*, 8 (3), 243-253.
- Copas, J. B., O'Brien, M., Roberts, J. C., *et al* (1984) Treatment outcome in personality disorder: The effect of social, psychological and behavioural variables. *Personality and Individual Differences*, 5, 565-73.
- Cope, R. (1993) A survey of forensic psychiatrists views on psychopathic disorder. *Journal of Forensic Psychiatry*, 4 (2), 215-35.
- Cordess, C. (2001) Forensic Psychotherapy. In *Handbook of Offender Assessment and Treatment* (ed C. Hollin), pp. 309-29: Wiley.
- Cornelius, J. R., Soloff, P. H., Perel, J. M., *et al* (1993) Continuation pharmacotherapy of borderline personality disorder with haloperidol and phenelzine. *American Journal of Psychiatry*, 150 (12), 1843-8.
- Cottraux, J., Note, I., Albuissou, E., *et al* (2000) Cognitive behavior therapy versus supportive therapy in social phobia: a randomized controlled trial. *Psychotherapy & Psychosomatics*, 69 (3), 137-46.
- Daly, K. A. & Fatemi, S. H. (1999) Lamotrogine and impulse behaviour [6]. *Canadian Journal of Psychiatry*, 44 (4), 395-396.
- Davanloo, H. (1980) *Short-Term Dynamic Psychotherapy*. New York: Jason Aronson.
- Davey Smith, G., Ebrahim, S. & Frankel, S. (2001) How policy informs the evidence. *British Medical Journal*, 322 (7280), 184-185.
- Dawson, D. (1988) Treating Borderline Personality disorder patients. *Canadian Journal of Psychiatry*, 33, 370-4.
- Department of Health (1992) *The health of the nation: a strategy for health in England*. London: HMSO.
- Dept Health and Welsh Office (1999) *Code of Practice, Mental Health Act 1983*. The Stationary Office, London.
- Derogatis, L. & Melisaratos, N. (1983) The Brief Symptom Inventory. An introductory report. *Journal of Psychological Medicine*, 13, 595-605.
- DHSS/ Home Office (1986) *Offenders suffering from Psychopathic Disorder*.
- Dolan, B. & Coid, J. (1993) *Psychopathic and antisocial personality disorders: treatment and research issues*. Gaskell.
- Dolan, B., Polley, K., Allen, R., *et al* (1991) Addressing racism in Psychiatry: Is the Therapeutic Community Model Applicable? *International Journal of Social Psychiatry*, 37, 71-79.
- Dolan, B., Warren, F., Menzies, D., *et al* (1996) Cost-offset following specialist treatment of severe personality disorders. *Psychiatric Bulletin*, 20, 413-17.
- Dolan, B., Warren, F. & Norton, K. (1997) Change in borderline symptoms one year after therapeutic community treatment for severe personality disorder. *British Journal of Psychiatry*, 171, 274-279.
- Dolan, B. M., Evans, C. D. & Norton, K. (1995) Multiple Axis-II diagnosis of personality disorder. *British Journal of Psychiatry*, 106, 107-112.

- Dolan, B. M., Evans, C. D. H. & Wilson, J. (1992) Neurotic symptomatology and length of stay in a therapeutic community. *International Journal of Therapeutic Communities*, 13 (3), 171-177.
- Donnelly, J. & Guy, S. (1998) Evaluation of a first stage pilot project to address offending behaviour in a mentally disordered population in Scotland. *Psychiatric Care*, 5 (3), 106-8, 110-111.
- Egger, M. & Smith, D. G. (2001) Principles of and procedures for systematic reviews. In *Systematic Reviews in Health Care: Meta-analysis in context*, (eds M. Egger, G. D. Smith & D. G. Altman), pp. 23-42. London: Altman, BMJ Publishing Group.
- Ekselius, L. & von Knorring, L. (1998) Personality disorder comorbidity with major depression and response to treatment with sertraline or citalopram. *International Clinical Psychopharmacology*, 13 (5), 205-11.
- Evans, C., Searle, Y. & Dolan, B. (1988) Two New Tools for the Assessment of Multi-impulsivity, the M.I.S. and C.A.M. *European Eating Disorders Review*, 6 (1), 48-57.
- Evans, K., Tyrer, P., Catalan, J., *et al* (1999) Manual-assisted cognitive-behaviour therapy (MACT): a randomized controlled trial of a brief intervention with bibliotherapy in the treatment of recurrent deliberate self-harm. *Psychological Medicine*, 29 (1), 19-25.
- Fahlen, T., Nilsson, H. L., Borg, K., *et al* (1995) Social phobia: the clinical efficacy and tolerability of the monoamine oxidase -A and serotonin uptake inhibitor brofaromine. A double-blind placebo-controlled study. *Acta Psychiatrica Scandinavica*, 92 (5), 351-8.
- Fava, M., Bouffides, E., Pava, J. A., *et al* (1994) Personality disorder comorbidity with major depression and response to fluoxetine treatment. *Psychotherapy & Psychosomatics*, 62 (3-4), 160-7.
- Fisher, M. S., Sr. & Bentley, K. J. (1996) Two group therapy models for clients with a dual diagnosis of substance abuse and personality disorder. *Psychiatric Services*, 47 (11), 1244-1250.
- Frankenburg, F. R. & Zanarini, M. C. (1993) Clozapine treatment of borderline patients: a preliminary study. *Comprehensive Psychiatry*, 34 (6), 402-5.
- Friis S, Wilberg T, Dammen T, *et al* (1999) - Pharmacotherapy for patients with personality disorders: Experiences from a group analytic treatment program. In *Treatment of Personality Disorders* (ed J. Derksen).
- Gacono, C. B. (1998) The use of the Psychopathy Checklist--Revised (PCL-R) and Rorschach in treatment planning with antisocial personality disordered patients. *International Journal of Offender Therapy & Comparative Criminology*, 42 (1), 49-64.
- Geddes, J., Freemantle, N., Streiner, D., *et al* (1998) Understanding and interpreting systematic reviews and meta-analyses. Part 1: rationale, search strategy, and describing results. *Evidence-Based Mental Health*, 1, 68-69.
- Genders, E. & Player, E. (1995) Therapeutic Achievements. In *Grendon: A compilation of Grendon research* (ed J. Shine).
- Gledhill, K. (2000) Managing dangerous people with severe personality disorder. *Journal of Forensic Psychiatry*, 11 (2), 439-447.
- Glosser, G., Zvil, A. S., Glosser, D. S., *et al* (2000) Psychiatric aspects of temporal lobe epilepsy before and after anterior temporal lobectomy. *Journal of Neurology, Neurosurgery & Psychiatry*, 68 (1), 53-58.
- Green, E., Silverman, M. & Geil, G. (1944) Petit Mal Electro-shock therapy of criminal psychopaths. *Criminal Psychopathology*, 5 (4), 667-73.

Gude, T., Monsen, J. T. & Hoffart, A. (2001) Schemas, affect consciousness, and Cluster C personality pathology: A prospective one-year follow-up study of patients in a schema-focused short-term treatment program. *Psychotherapy Research*, 11 (1), 85-98.

Gunderson, J., Carpenter, W. & Strauss, J. (1975) Borderline and schizophrenic patients, a comparative study. *American Journal Psychiatry*, 132, 1257-64.

Gunderson, J., Waldinger, Sabo, A., *et al* (1993) Stages of change in dynamic psychotherapy with borderline patients. *Journal of Psychotherapy practice research*, 2 (1), 64-71.

Gunderson, J. G. & Chu, J. A. (1993) Treatment implications of past trauma in borderline personality disorder. [see comments]. [Review] [51 refs]. *Harvard Review of Psychiatry*, 1 (2), 75-81.

Guze, S. B., Goodwin, D. W. & Crane, J. B. (1969) Criminality and Psychiatric Disorders. *Archives of General Psychiatry*, 20, 1969.

Hafner, J. & Holme, G. (1996) The influence of a therapeutic community on psychiatric disorders. *Journal of Clinical Psychology*, 52 (4), 461-468.

Ham, C., Hunter, D. J. & Robinson, R. (1995) Evidence based policymaking. *BMJ*, 310 (6972), 71-72.

Hare, R., Harpur, T., Hakstian, A., *et al* (1990) The revised psychopathy checklist: reliability and factor structure. *American Journal of Consulting and Clinical Psychology*, 2 (3), 338-41.

Hengeveld, M. W., Jonker, D. J. & Rooijmans, H. G. (1996) A pilot study of a short cognitive-behavioral group treatment for female recurrent suicide attempters. *International Journal of Psychiatry in Medicine*, 26 (1), 83-91.

Higgitt, A. & Fonagy, P. (1992) Psychotherapy in borderline and narcissistic personality disorder. *British Journal of Psychiatry*, 161, 64-71.

HMSO (1957) Report of Royal Commission on the Law relating to Mental Illness and Mental Deficiency (Percy Commission) (cmd 169).

Hobson, J. & Shine, J. (1998) Measurement of Psychopathy in a UK prison population referred for long-term Psychotherapy. *British Journal of Criminology*, 38 (3), 504-515.

Hoffman, P. D. & Hooley, J. M. (1998) Expressed emotion and the treatment of borderline personality disorder. *In Session-Psychotherapy in Practice*, 4 (3), 39-54.

Hofmann, S. G., Shear, M. K., Barlow, D. H., *et al* (1998) Effects of panic disorder treatments on personality disorder characteristics. *Depression & Anxiety*, 8 (1), 14-20.

Hoglund, P. (1993) Personality disorders and long-term outcome after brief dynamic psychotherapy. *Journal of Personality Disorders*, 7 (2), 168-181.

Hollander (2001) Preliminary double blind, placebo-controlled trial of divalproex sodium in borderline personality disorder. *Journal of Clinical Psychiatry*, 62 (3), 199-203.

Hollander, E. (1999) Managing Aggressive behaviour in patients with obsessive-compulsive disorder and borderline personality disorder. *Journal of Clinical psychiatry*, 60 (supp 15), 38-44.

Home Office (2001) *Press Release 16N/01*.

Home Office and Department of Health (1999) *Managing Dangerous People with Severe Personality Disorder*.

Home Office/ Department of Health (1994) *Report of the joint home Office/ Department of Health Committee Review of Health and Social services for Mentally Disordered Offenders and Others requiring similar services* (The Reed Committee).

Horowitz, M., Marmar, C., Weiss, D., *et al* (1986) Comprehensive analyses of change after brief dynamic psychotherapy. *American Journal Psychiatry*, 1 (143), 582-9.

Hough, D. (2001) Low-dose Olanzapine for self-mutilation. *Journal of Clinical Psychiatry*, 62 (4), 296.

Hughes, G., Hogue, T., Hollin, C., *et al* (1997) First-stage evaluation of a treatment programme for personality disordered offenders. *Journal of Forensic Psychiatry*, 8 (3), 515-527.

Hull, J. W., Clarkin, J. F. & Alexopoulos, G. S. (1993) Time series analysis of intervention effects. Fluoxetine therapy as a case illustration. *Journal of Nervous & Mental Disease*, 181 (1), 48-53.

Hull, J. W., Clarkin, J. F. & Kakuma, T. (1993) Treatment response of borderline inpatients. A growth curve analysis. *Journal of Nervous & Mental Disease*, 181 (8), 503-8.

Hyler, S., Reider, R. O., Spitzer, R. L., *et al* (1987) *Personality Diagnostic Questionnaire - revised (PDQ-R)*. New York: New York State Psychiatric Institute.

Hyler, S., Skodol, A., Oldham, J., *et al* (1992) The Validity of the PDQ-4. A replication in an outpatient sample. *Comprehensive Psychiatry*, 33, 73-7.

ISI Researchsoft (2001) *Endnote* (Version Windows Version 5.0). Berkeley, California: Thomson Scientific,.

Jew, C., Clanon, T. & Mattocks, A. (1972) The effectiveness of group psychotherapy in a correctional institution. *American Journal Psychiatry*, 129, 602-5.

Jones, D. (1996) Possible ways forward: A special Hospital perspective. In *Understanding the Enigma SHSA*.

Jones, M. (1952) *A study of therapeutic communities*. London: Tavistock.

Junkert-Tress, B., Schnierda, U., Hartkamp, N., *et al* (2001) Effects of short-term dynamic psychotherapy for neurotic, somatoform, and personality disorders: a prospective 1-year follow-up study. *Psychotherapy Research*, 11 (2), 187-200.

Kavoussi, R. J. & Coccaro, E. F. (1998) Divalproex sodium for impulsive aggressive behavior in patients with personality disorder. *Journal of Clinical Psychiatry*, 59 (12), 676-80.

Kavoussi, R. J., Liu, J. & Coccaro, E. F. (1994) An open trial of sertraline in personality disordered patients with impulsive aggression. *Journal of Clinical Psychiatry*, 55 (4), 137-41.

Kennard, D. (1998) Therapeutic communities are back---and there's something a little different about them. *Therapeutic Communities: the International Journal for Therapeutic & Supportive Organizations*, 19 (4), 323-329.

Kern, R. S., Kuehnel, T. G., Teuber, J., *et al* (1997) Multimodal cognitive-behavior therapy for borderline personality disorder with self-injurious behavior. *Psychiatric Services*, 48 (9), 1131-3.

Kernberg, O. (1975) *Borderline Conditions and Pathological Narcissism*. New York: Aronson.

Kernberg, O. (1976) *Object relations theory and clinical psychoanalysis*. New York: Jason Aronson.

- Kernberg, O. (1978) The structural diagnosis of borderline personality organisation. In *Borderline personality disorder: the concept, the syndrome, the patient* (ed P. Hartocollis). New York: International University Press.
- Kerr, I. B. (1999) Cognitive-analytic therapy for borderline personality disorder in the context of a community mental health team: Individual and organizational psychodynamic implications. *British Journal of Psychotherapy*, 15 (4), 425-438.
- Khan, K. S., ter Riet, G., Glanville, J., *et al* (Eds.). (2001) *Undertaking Systematic Reviews of Effectiveness: CRD's Guidelines for those carrying out or commissioning reviews*. CRD Report Number 4 (2nd Edition). (2nd edn): Centre for Reviews and Dissemination, University of York.
- Kohut, H. (1994) *How does analysis cure?:* The University of Chicago Press.
- Koistinen, P., Ruonala, K., Kiminki, O., *et al* (1992) A three-year follow-up study of patients in a day treatment program. *International Journal of Partial Hospitalization*, 8 (1), 29-40.
- Koons, C., Robins, C., Tweed, L., *et al* (2001) Efficacy of dialectical behaviour therapy in women veterans with Borderline Personality disorder. *Behaviour Therapy*, 32, 371-90.
- Kozol, H., Boucher, R. & Garofalo, R. (1972) The diagnosis and treatment of dangerousness. *Crime and Delinquency*, 18, 371-92.
- Krawitz, R. (1997) A prospective psychotherapy outcome study. *Australian & New Zealand Journal of Psychiatry*, 31 (4), 465-73.
- Krawitz, R. & Watson, C. (1997) Gender, race and poverty: bringing the sociopolitical into psychotherapy. *Australian and New Zealand Journal of Psychiatry*, 31, 474-479.
- Lart, R., Payne, S., Beaumont, B., *et al* (1999) *Women and Secure Psychiatric Services: A literature review*. York: Centre for Reviews and Dissemination (CRD Report 14).
- Lees, J. & Kennard, D. (1999) *Association of Therapeutic Communities' response to: Managing dangerous people with severe Personality Disorder*. Proposals for policy development: Association of Therapeutic communities.
- Lees, J., Manning, N. & Rawlings, B. (1999) *Therapeutic Effectiveness. a systematic international review of therapeutic community treatment for people with personality disorders and mentally disordered offenders* (CRD report 17): The University of York. NHS Centre for reviews and dissemination.
- Linehan, M. (1993a) *Skills training manual for treating borderline personality disorder*. The Guilford Press.
- Linehan, M., Armstrong, H., Suarez, A., *et al* (1991) Cognitive-Behavioral treatment of chronically parasuicidal borderline patients. *Archives of General Psychiatry*, 48, 1060-4.
- Linehan, M., Heard, H. & Armstrong, H. (1993) Naturalistic follow-up of a behavioural treatment for chronically parasuicidal borderline patients. *Archives of General Psychiatry*, 50, 971-7.
- Linehan, M. M. (1993b) *Cognitive-Behavioral Treatment of Borderline Personality Disorder*. The Guilford Press.
- Linehan, M. M. (1993c) *Cognitive-behavioural Treatment of Borderline Personality Disorder*. New York: The Guilford Press.
- Linehan, M. M., Schmidt, H., Dimeff, L. A., *et al* (1999) Dialectical behavior therapy for patients with borderline personality disorder and drug-dependence. *American Journal on Addictions*, 8 (4), 279-92.

- Linehan, M. M., Tutek, D. A., Heard, H. L., *et al* (1994) Interpersonal outcome of cognitive behavioral treatment for chronically suicidal borderline patients. *American Journal of Psychiatry*, 151 (12), 1771-6.
- Lion, J. & Bach-Y-Rita (1979) Benzodiazepines in the treatment of aggressive patients. *Journal of Clinical Psychology*, 40, 70-1.
- Loranger, A. (1988) *Personality Disorder Examination (PDE) manual*. Yonkers, NY: DV communications.
- Loranger, A., Janca, A. & Sartorius, N. (1997) *Assessment and diagnosis of personality disorder. The I.C.D-10 International Personality Disorder Examination.*: Cambridge University Press.
- Losel, F. (1998) Treatment and management of psychopaths. In *Psychopathy: theory, research and implications for society* (eds J. Cooke, A. Forth & R. Hare): Kluwer Academic Publishers.
- Low, G., Jones, D., Duggan, c., *et al* (2001) The treatment of deliberate self-harm in borderline personality disorder using dialectical behaviour therapy: A pilot study in a high security hospital. *Behavioural and Cognitive Psychotherapy*, 29, 85-92.
- Luborsky, L. (1984) *A manual for supportive-expressive dynamic psychotherapy*. New York: Basic Books.
- Maas, J. (1966) The use of actional procedures in group psychotherapy with sociopathic women. *International Journal of Group Psychotherapy*, 16, 190-7.
- MacKenzie, J. (1999) An analysis of therapeutic factors on 'A' Wing HM Prison Grendon. In *Grendon: A compilation of Grendon research* (ed J. Shine).
- Magnavita, J. J. (1994) The process of working through and outcome: The treatment of passive-aggressive personality disorder with intensive short-term dynamic psychotherapy: III. *International Journal of Short Term Psychotherapy*, 9 (1), 1-17.
- Main, T. F. (1983) The concept of the therapeutic community: its variations and vicissitudes. In *The evolution of group analysis* (ed M. Pines). London: Routledge and Kegan Paul.
- Malan, D. (1976) *Towards a validation of a dynamic psychotherapy*. New York: Plenum.
- Malan, D. (1979) *Individual Psychotherapy and the science of psychodynamics*. London: Butterworth.
- Mann, J. (1973) *Time-limited psychotherapy*. Cambridge, Mass: Havard University Press.
- Marcoux, G. & Valnicek, S. (2000) Another idea for the treatment of patients with borderline personality disorder. *Canadian Journal of Psychiatry*, 45 (4), 395-396.
- Markowitz, P. & Wagner, S. (1995) Venlafaxine in the Treatment of Borderline Personality disorder. *Psychopharmacology Bulletin*, 3 (4), 773-77.
- Marshall, P. (1997) *A reconviction study of HMP Grendon Therapeutic Community* (No 53 Home Office Research and Statistics Directorate): Home Office.
- Martin, R. L., Cloniger, C. R., Guze, S. B., *et al* (1985) Mortality in a follow-up of 500 psychiatric outpatients: II. Cause-specific mortality. *Archives of General Psychiatry*, 42, 58-66.
- Mc Gee, M. (1997) Cessation in self-mutilation in a patient with borderline personality disorder treated with naltrexone. *Journal of Clinical Psychiatry*, 58 (1), 32-3.
- McCallum, M. & Piper, W. (1987) *Manual for the psychological mindedness assessment procedure*.

- McCallum, M. & Piper, W. (1990) The psychological mindedness assessment procedure. *Psychological assessment. Journal of Consulting and Clinical Psychology*, 2, 412-8.
- McCallum, M. & Piper, W. (1996) Psychological Mindedness. *Psychiatry: interpersonal and biological processes*, 59, 48-64.
- McCallum, M. & Piper, W. (1997) The psychological mindedness Assessment procedure. In *Psychological Mindedness: A contemporary understanding* (eds M. McCallum & W. Piper), pp. 27-58. Mahwah: Erlbaum.
- McCallum, M. & Piper, W. E. (1999) Personality disorders and response to group-oriented evening treatment. *Group Dynamics*, 3 (1), 3-14.
- McCallum, M., Piper, W. E. & O'Kelly, J. (1997) Predicting patient benefit from a group-oriented, evening treatment program. *International Journal of Group Psychotherapy*, 47 (3), 291-314.
- McCord (1982) *The Psychopath and Milieu therapy: a longitudinal Study*. New York: Harcourt Brace Jovanovich.
- McKay, D., Neziroglu, F., Todaro, J., *et al* (1996) Changes in personality disorders following behavior therapy for obsessive-compulsive disorder. *Journal of Anxiety Disorders*, 10 (1), 47-57.
- Meares, R., Stevenson, J. & Comerford, A. (1999) Psychotherapy with borderline patients: I. A comparison between treated and untreated cohorts. *Australian and New Zealand Journal of Psychiatry*, 33 (4), 467-472.
- Mehlum, L., Friis, S., Irion, T., *et al* (1991) Personality disorders 2-5 years after treatment. *Acta Psychiatrica Scandinavica*, 72-77.
- Messina, N. P., Wish, E. D. & Nemes, S. (1999) Therapeutic community treatment for substance abusers with antisocial personality disorder. *Journal of Substance Abuse Treatment*, 17 (1-2), 121-8.
- Monsen, J., Odland, T., Faugli, A., *et al* (1995a) Personality disorders: changes and stability after intensive psychotherapy focusing on affect consciousness. *Psychotherapy Research*, 5 (1), 33-8.
- Monsen, J., Odland, T., Faugli, A., *et al* (1995b) Personality disorders and psychosocial changes after intensive psychotherapy: a prospective follow-up study of an outpatient psychotherapy project, 5 years after end of treatment. *Scandinavian Journal of Psychology*, 36 (3), 256-68.
- Monsen, J. T., Odland, T., Faugli, A., *et al* (1995c) Personality disorders: Changes and stability after intensive psychotherapy focusing on affect consciousness. *Psychotherapy Research*, 5 (1), 33-48.
- Moorhead, S. & Scott, J. (1999) Is specialist registrar training in cognitive therapy effective? *Psychiatric Bulletin*, 23 (10), 603-607.
- Munroe-Blum, H. & Marziali, E. (1995) A controlled trial of short-term group treatment for borderline personality disorder. *Journal of Personality Disorders*, 9 (3), 190-198.
- Najavits, L. M. & Gunderson, J. G. (1995) Better than expected: improvements in borderline personality disorder in a 3-year prospective outcome study. *Comprehensive Psychiatry*, 36 (4), 296-302.
- Nestadt, G., Romanoski, A. J., Samuels, J. F., *et al* (1992) The relationship between personality and DSM-III axis I disorders in the population: results from an epidemiological survey. *American Journal of Psychiatry*, 149 (9), 1228-33.

- Newton, M. (1998) Changes in measures of personality, hostility and locus of control during residence in a prison therapeutic community. *Legal and Criminological Psychology*, 3, 209-223.
- Newton, M. (2000a) Age and reconviction after residence in a prison therapeutic community. *Forensic Update*, 61.
- Newton, M. (2000b) Ethnic Minorities at Grendon: Trends in admission and length of stay. In *A Compilation of Grendon Research* (ed J. Shine). Aylesbury: HMP Grendon.
- Newton, M. (2000c) *Psychological variable as dynamic risk factors for reconviction among residents in a prison therapeutic community*: Research and development unit, HMP Grendon.
- Norton, K. (1992a) A culture of enquiry - its preservation or loss. *International Journal of Therapeutic Communities*, 13(1), 3-26.
- Norton, K. R. W. (1992b) The Health of the Nation: the impact of personality disorder on "key areas". *Postgraduate Medical Journal* (68), 350-354.
- Ogloff, J. R. P., Wong, S. & Greenwood, A. (1990) Treating Criminal Psychopaths in a Therapeutic Community Program. *Behavioural Sciences and the Law*, 8, 181-190.
- O'Keefe, G. & Scott-Moncriefe, L. (2000) The Mental Health Act: from review to reform. *Journal of Forensic Psychiatry*, 11 (3), 667-81.
- Paris, J., Brown, R. & Nowlis, D. (1987) Long term follow up of borderline patients in a general hospital. *Comprehensive Psychiatry*, 28, 530-535.
- Parry, G. (1996). *NHS psychotherapy services in England: review of strategic policy*, Department of Health.
- Pelissolo, A. & Lepine, J. P. (1999) Pharmacotherapy of personality disorders: methodological issues and results. *Encephale-Revue De Psychiatrie Clinique Biologique Et Therapeutique*, 25 (5), 496-507.
- Penick, E. C., Powell, B. J., Campbell, J., *et al* (1996) Pharmacological treatment for antisocial personality disorder alcoholics: A preliminary study. *Alcoholism: Clinical & Experimental Research*, 20 (3), 477-484.
- Perry, J. (1985) Depression in borderline personality disorder: lifetime prevalence at interview and longitudinal course of symptoms. *American Journal of Psychiatry*, 142, 15-21.
- Perry, J., Banon, E. & Ianni, F. (1999a) Effectiveness of Psychotherapy for Personality Disorders. *American Journal Psychiatry*, 156 (9), 1312-21.
- Perry, J. C., Banon, E. & Ianni, F. (1999b) Effectiveness of psychotherapy for personality disorders. *American Journal of Psychiatry*, 156 (9), 1312-1321.
- Perry, J. C., Lavori, P. W. & Hoke, L. (1987) A Markow model for predicting levels of psychiatric service use in borderline and anti-social personality disorders and bi-polar type II affective disorder. *Journal of Psychiatric Research*, 21, 213-232.
- Peselow, E. D., Sanfilippo, M. P., Fieve, R. R., *et al* (1994) Personality traits during depression and after clinical recovery. *British Journal of Psychiatry*, 164 (3), 349-54.
- Pinto, O. C. & Akiskal, H. S. (1998) Lamotrigine as a promising approach to borderline personality: an open case series without concurrent DSM-IV major mood disorder. *Journal of Affective Disorders*, 51 (3), 333-43.
- Piper (1996) *Time limited day treatment for personality disorder*. American Psychological Association Press.

- Piper, W. E., Joyce, A. S., Azim, H. F., *et al* (1994) Patient characteristics and success in day treatment. *Journal of Nervous & Mental Disease*, 182 (7), 381-6.
- Piper, W. E., Rosie, J. S., Azim, H. F. A., *et al* (1993) A randomized trial of psychiatric day treatment for patients with affective and personality disorders. *Hospital & Community Psychiatry*, 44 (8), 757-763.
- Pollock, P. & Kear-Colwell, J. (1994) Women who stab: a personal construct analysis of sexual victimisation and offending behaviour. *British Journal of Medical Psychology*, 67, 13-22.
- Powell, B., Campbell, J., Landon, J., *et al* (1995) A double blind, placebo controlled study of nortriptyline and bromocriptine in male alcoholics subtyped by comorbid psychiatric disorders. *Alcoholism: Clinical and experimental research*, 19 (2), 462-8.
- Primac, D. W. (1993) Measuring change in a brief therapy of a compulsive personality. *Psychological Reports*, 72 (1), 309-10.
- Project Match Research Group (1997) Matching Alcoholism Treatments to Client Heterogeneity: Project MATCH post-treatment drinking outcomes. *Journal of Studies on Alcohol*, 58 (1), 7-29.
- Rapoport, R. (1960) *The community as doctor*. London: Tavistock.
- Reckless, J. (1970) Enforced outpatient treatment of advantaged pseudisociopathic neurotically disturbed young women. *Canadian Psychiatric Association Journal*, 15, 335-45.
- Reiss, D., Grubin, D. & Meux, C. (1996) Young 'psychopaths' in special hospital: treatment and outcome. [see comments]. *British Journal of Psychiatry*, 168 (1), 99-104.
- Rice, M. E., Harris, G. T. & Cormier, C. A. (1992) An Evaluation of a Maximum Security Therapeutic Community for Psychopaths and Other Mentally Disordered Offenders. *Law Hum Behav*, 16, 399-412.
- Roth, A. and P. Fonagy (1996). *What Works For Whom - a Critical Preview of Psychotherapy Research (Personality Disorders)*, Guildford Press London.
- Roth, A., Fonagy, P. & Parry, G. (1996) Translating research into practice: methodological considerations. In *What Works for whom: a critical review of psychotherapy research* (eds A. Roth & P. Fonagy), pp. 3-13. New York: Guildford press.
- Royal College of Psychiatrists (1999) *Offenders with personality disorder (CR71)*: Royal College of Psychiatrists (CR71).
- Ryle, A. (1997) *Cognitive Analytic Therapy and Borderline Personality Disorder*. John Wiley & Sons Ltd.
- Ryle, A. & Golyukina, K. (2000) Effectiveness of time-limited cognitive analytic therapy of borderline personality disorder: Factors associated with outcome. *British Journal of Medical Psychology*, 73, 197-210.
- Sabo, A., Gunderson, J., Najavitis, L., *et al* (1995) Changes in self-destructiveness of borderline patients in psychotherapy: a prospective follow-up. *Journal of Nervous and Mental Disease*, 183 (6), 370-6.
- Sackett, D. L., Rosenberg, W. M. C., Gray, J. A. M., *et al* (1996) Evidence based medicine: what it is and what it isn't. *BMJ*, 312 (7023), 71-72.
- Sadoff, R., Roether, H. & Peters, J. (1971) Clinical measure of enforced group psychotherapy. *American Journal of Psychiatry*, 128, 116-9.

- Salzman, C., Wolfson, A., Schatzberg, A., *et al* (1995) Effect of Fluoxetine on anger in symptomatic volunteers with borderline personality disorder. *Journal of Clinical psychopharmacology*, 15 (1), 23-29.
- Sandell, R., Alfredsson, E., Berg, M., *et al* (1993) Clinical significance of outcome in long-term follow-up of borderline patients at a day hospital. *Acta Psychiatrica Scandinavica*, 87 (6), 405-413.
- Sanislow, C. A. & McGlashan, T. H. (1998) Treatment outcome of personality disorders. *Canadian Journal of Psychiatry-Revue Canadienne De Psychiatrie*, 43 (3), 237-250.
- Sareen, J., Enns, M. W. & Guertin, J. E. (2000) The impact of clinically diagnosed personality disorders on acute and one-year outcomes of electroconvulsive therapy. *Journal of Ect*, 16 (1), 43-51.
- Schmahl, C., Stiglmayr, C., Bohme, R., *et al* (1999) Treatment of dissociative symptoms in borderline patients with naltrexone. *Nervenarzt*, 70 (3), 262-264.
- Schulz, S. C., Camlin, K., Berry, S. A., *et al* (1999) Olanzapine safety and efficacy in patients with borderline personality disorder and comorbid dysthymia. *Biol Psychiatry*, 46, 1429-1435.
- Secretary of State for Health and the Home Secretary (2000) *Reforming the Mental Health Act: Part II, High Risk Patients*: HMSO, Crown Copyright.
- Shaw, M. & Dubois, S. (1995) *Understanding Violence by Women: A Review of the Literature*: Correctional Services of Canada.
- Shearin, E. N. & Linehan, M. M. (1994) Dialectical behavior therapy for borderline personality disorder: theoretical and empirical foundations. *Acta Psychiatrica Scandinavica, Supplementum*, 379, 61-8.
- Shine, J. (2000) *A Compilation of Grendon Research*.
- Shine, J. & Morris, M. *Regulating Anarchy: The Grendon Programme*: Springhill Press.
- SHSA (1995) *Services for Secure Care*.
- Siever, L., Amin, F., Coccaro, E., *et al* (1993) CSF homovanillic acid in schizotypal personality disorder. *American Journal Psychiatry*, 150 (1), 149-151.
- Sifneos, P. (1979) *Short-term dynamic psychotherapy*. New York: Plenum Press.
- Silva, H., Jerez, S., Paredes, A., *et al* (1997) Fluoxetine in the treatment of borderline personality disorder. *Actas Luso-Espanolas De Neurologia Psiquiatria Y Ciencias Afines*, 25 (6), 391-395.
- Singleton, N., Meltzer, H., Gatward, R., *et al* (1998) *Psychiatric morbidity among prisoners in England and Wales*. London: Office for National Statistics.
- Sloane, R., Staples, F., Allan, M., *et al* (1975) *Psychotherapy versus behaviour therapy*. Cambridge, MA: Harvard University Press.
- Soloff, P. H., Cornelius, J., George, A., *et al* (1993) Efficacy of phenelzine and haloperidol in borderline personality disorder. *Archives of General Psychiatry*, 50 (5), 377-385.
- Sonne, S., Rubey, R., Brady, K., *et al* (1996) Naltrexone treatment of self-injurious thoughts and behaviors. *Journal of Nervous & Mental Disease*, 184 (3), 192-5.
- Springer, T., Lohr, N., Buchtel, H., *et al* (1996) A preliminary report of Short-term cognitive-behavioural group therapy for inpatients with personality disorder. *The Journal of Psychotherapy Practice and Research*, 5, 57-71.

- Stein, D. J., Hollander, E. & Skodol, A. (1995) Pharmacotherapy of hospitalized personality disorder patients: Four decades of clinical experience. *Research Communications in Biological Psychology & Psychiatry*, 20 (3-4), 81-94.
- Stein, D. J., Simeon, D., Frenkel, M., *et al* (1995) An open trial of valproate in borderline personality disorder. *Journal of Clinical Psychiatry*, 56 (11), 506-10.
- Stein, W. & Brown, J. (1991) Group therapy in a forensic setting. *Canadian Journal Psychiatry*, 36, 718-722.
- Stevenson, J. & Meares, R. (1992) An outcome study of psychotherapy for patients with borderline personality disorder. [see comments]. *American Journal of Psychiatry*, 149 (3), 358-62.
- Stevenson, J. & Meares, R. (1999) Psychotherapy with borderline patients: II. A preliminary cost benefit study. *Australian & New Zealand Journal of Psychiatry*, 33 (4), 473-7.
- Stone, M. (1993) Long term outcome in personality disorders. *British Journal of Psychiatry*, 162, 299-313.
- Stone, M., Stone, D. & Hurt, S. (1987) Natural History of Borderline Patients Treated by Intensive Hospitalization. *Psychiatric Clinics of North America*, 10, 185-206.
- Stravynski, A., Belisle, M., Marcouiller, M., *et al* (1994) The treatment of avoidant personality disorder by social skills training in the clinic or in real-life settings. *Canadian Journal of Psychiatry Revue Canadienne de Psychiatrie*, 39 (8), 377-83.
- Swinton, M. (in press) *Clozapine in severe personality disorder*.
- Taylor, R. (2000) *A seven year reconviction study of HMP Grendon Therapeutic Community* (Home Office Research, Development and Statistics directorate): Home Office.
- Teasdale, C. (1997) Art therapy is a shared forensic investigation. *Inscape*, 2 (2), 32-40.
- Thornton, D., Mann, R., Bowers, L., *et al* (1996) Sex Offenders in a Therapeutic Community. In *Grendon: a compilation of Grendon research* (ed J. Shine).
- Trestman, R., Woo-Ming, A., deVegvar, M., *et al* (1998) Treatment of personality disorders. In *Textbook of Psychopharmacology* (eds A. Schatzberg & C. Nemeroff), pp. 901-916: American Psychiatric Press.
- Tyrer, P. & Johnson, T. (1996) Establishing the severity of personality disorder. *American Journal of Psychiatry*, 153 (12), 1593-7.
- Verkes, R. J., Van der Mast, R. C., Hengeveld, M. W., *et al* (1998) Reduction by paroxetine of suicidal behavior in patients with repeated suicide attempts but not major depression. *American Journal of Psychiatry*, 155 (4), 543-547.
- von Knorring, L. & Ekselius, L. (1998) Psychopharmacological treatment and impulsivity. In *Psychopathy: antisocial, criminal and violent behaviour* (eds T. Millon, E. Simonsen, M. Birket-Smith, *et al.*), pp. 359-371.
- Warren, F., Dolan, B. M (Ed.s) (2001) *Perspectives on Henderson Hospital*, 2nd Edition. London, Henderson Hospital.
- Warren, F. (1995) What do we mean by a therapeutic community for offenders? *International Journal of Therapeutic Communities*, 15 (4) 312-318.
- Weider, A., Wolff, H., Brodman, K., *et al* (1948) *Cornell Index*. New York: Psychological Corp.

- Wheeler, J. & Gunderson, J. (1998) A little cream and sugar: Psychotherapy with a borderline patient. *American Journal of Psychiatry*, 155 (1), 114-22.
- Whiteley, J. (1975) The large group as a medium for sociotherapy. *Constable London*, 193-211.
- Whiteley, J. S. (1986) Sociotherapy and Psychotherapy in the treatment of personality disorder. Discussion paper. *Journal of the Royal Society of Medicine*, 79, 721-5.
- Wilberg, T., Friis, S., Karterud, S., *et al* (1998) Outpatient group psychotherapy: A valuable continuation treatment for patients with borderline personality disorder treated in a day hospital? A 3-year follow-up study. *Nordic Journal of Psychiatry*, 52 (3), 213-221.
- Wilberg, T., Karterud, S., Irnes, O., *et al* (1998) Outcomes of poorly functioning patients with personality disorders in a day treatment program. *Psychiatric Services*, 49 (11), 1462-7.
- Wilcox, J. A. (1995) Divalproex sodium as a treatment for borderline personality disorder. *Annals of Clinical Psychiatry*, 7 (1), 33-7.
- Winston, A., Laikin, M., Pollack, J., *et al* (1994) Short-term psychotherapy of personality disorders. *American Journal of Psychiatry*, 151 (2), 190-4.
- Winston, A., Pollack, J., McCullough, L., *et al* (1991) Brief psychotherapy of personality disorders. *Journal of Nervous and Mental Disease*, 179, 188-93.
- Woody, G., McLellan, A. & Luborsky, L. (1985) Sociopathy and psychotherapy outcome. *Archives of General Psychiatry*, 42, 1081-6.
- World Health, O. (1992) *The ICD-10 classification of mental and behavioural disorders*. Geneva: World Health Organisation.
- Yalom, I. D. (1975) *The theory and practice of group psychotherapy*. New York: Basic Books.
- Young, S. & Harty, M. (2001) Treatment issues in a personality disordered offender: a case of attention deficit hyperactivity disorder in secure psychiatric services. *Journal of Forensic Psychiatry*, 12 (1), 158-67.

8 Appendices

Appendix 1: Method

The methodology of this systematic literature review was based on the guidelines produced by the Centre for Reviews and Dissemination (CRD) (Khan, ter Riet, Glanville, *et al.*, 2001). Some compromises to these guidelines had to be made in this review because of the short-time scale for delivery of results. Where compromises were made, they are acknowledged.

Project management

The project team involved professionals of a variety of disciplines assisted by a research assistant. The project team were: Ms Fiona Warren (psychologist); Dr Gill McGauley (psychiatrist and psychotherapist); Dr Kingsley Norton (psychiatrist and psychotherapist); Dr Bridget Dolan, (psychologist and barrister); Dr Alan Pickering (psychologist); Dr John Geddes (psychiatrist); Ms Katherine Preedy (psychologist: research and administrative assistant to the project). The research team represented a collaboration of three institutions: St. George's Hospital Medical School, Goldsmiths College, and Oxford University.

Project management was accomplished through regular email communications between the entire team and fortnightly meetings of the project team in which updates on the progress of the literature review and strategic next steps were identified.

Project team resources

A Research Fellow (FW) was employed for three days per week for 21 weeks to work on the project. Her responsibilities included co-ordinating the day-to-day running of the project, reviewing a proportion of the literature and editing, writing and collating the final report. Four of the other bidders (GM, KN, AP, BD) were allocated a maximum of 100 hours each in which to systematically review the studies identified and contribute other relevant material for the final report. Another bidder (JG) advised on the methods for conducting the review and the analysis of the data that was extracted.

The research assistant (KP) supported the project administratively by conducting the literature searches, distributing papers to authors, maintaining a database of articles, monitoring the process of the review and constructing the majority of the summary tables from data extraction sheets, amongst other tasks. In addition, the research assistant implemented the exclusion criteria for the majority of the papers identified and reviewed a proportion of the treatment literature.

Advisory group

An advisory group was recruited to advise on the search strategy for the systematic review. A panel of clinicians and researchers in the field was selected on the basis of them having specific expertise, which would complement and expand on the expertise of the project team (See Appendix 1). Eleven experts in the fields of personality disorder or psychotherapy and high secure care agreed to join an advisory group to this project²⁰. The purpose of the advisory group was to provide an external check on the scope and methodology of this project from a variety of perspectives. A meeting of the advisory group took place on 17 May 2001 and was attended by nine members of the advisory group along with the project team. International members of the advisory group were consulted by telephone.

²⁰ (See list of advisory group membership at Appendix 2)

The advisory group commented on the search strategy and remit of the project. Discussion concerned the definition of DSPD and the availability of literature. Advisory group members were sent the draft report prior to finalisation.

Data collection

The search question and strategy

The question posed for this review was framed as “what is the evidence for the treatment of personality disorder?”

Defining the target sample group

In tendering for the review the project team had anticipated that there would be very little literature that specifically addressed treatment of ‘dangerous and severe personality disorder’. At an initial stage of the study this assumption was tested by a preliminary search on ‘Medline’ using the terms “dangerous”, “severe personality disorder” and treatment. One reference was retrieved and this was not an outcome study.

This was unsurprising as neither the label “severe personality disorder” nor the label “dangerous people with severe personality disorder” maps onto a clinical diagnosis or commonly used label with a clear definition. Therefore, attempting to encapsulate only those people who may fall into the category as currently defined in the White Paper was not possible (since the diagnoses are not known).

There was no accepted definition of “severe personality disorder”. Therefore, neither was it possible to confine the review to treatments for “severe personality disorder” only.

In order to answer the research question, a search strategy was required, which would be highly *sensitive* but not highly *specific*. The inclusion criteria for the search were broad to favour sensitivity over specificity in the first instance (Khan, ter Riet, Glanville, *et al.*, 2001). A variety of terms that might capture this population were used. These terms were chosen to encapsulate personality disorder, not limited to severe personality disorder and to include psychopathy and those who are detained under the legal category of psychopath.

Defining the target interventions

In addition, there are a wide variety of terms available to encapsulate outcomes and interventions. Outcome terms included in this review included recidivism but also other terms. It was recognised that the literature about the effectiveness of interventions with offenders often does not use the language of “treatment”. A variety of terms to include interventions described using other labels was therefore selected (the search terms can be found in Appendix 3: Search strategy).

Following discussions amongst the project team and consultation with the advisory group the questions for review and the terms for the literature search strategy were refined.

It was specifically noted that the primary requirement that the project “*review and make recommendations about suitable treatments for severe personality disorder*” would exclude some studies of the effectiveness of treatments or programmes for dangerous offenders where the personality disorder status of the participants had not been assessed. It was suggested that any group of dangerous offenders was likely to contain a number of participants with severe personality disorder. It was noted, however, that consideration of studies of those who were not shown to have a personality disorder was outside the terms of the Home Office’s tender requirements. Extrapolation from information concerning symptoms or behaviours of participants entering studies to their being personality disordered was considered by the project team. However, this strategy was rejected on the grounds that such information was unlikely to be reliably present and that, given the time-scale for the project such an avenue may have used many resources to provide little information. In summary, the advisory group discussion approved

of the search strategy but noted the difficulty of targeting a strategy to this newly defined group of people.

The final terms for use in the search strategy were developed in consultation with librarians at St. George's Hospital Medical School (See Appendix 3: Search strategy).

As a result of the design of individual databases, some required slightly different search strategies and terms.

Criteria for studies to be included in the review

The following *inclusion criteria* were used to select studies for full review:

In summary the review is targeted at studies of *any* design, evaluating *any* treatment or regime for people identified as having *any* kind of personality disorder pathology *or* who are identified as psychopathic *either* using a structured tool such as PCL (Hare, Harpur, Hakstian, *et al.*, 1990) *or* are detained under the Mental Health Act (1983) section of Psychopathic Disorder.

Given the short time frame for the study and the pre-existence of a joint Home Office/Department of Health review of treatments for antisocial and psychopathic personality disorders published in 1993 (Dolan and Coid, 1993) it was decided that this project would draw on the findings of that earlier review. Rather than re-review the entire literature, this systematic review would therefore concentrate on those studies published since that last review in 1992. The inclusion and exclusion criteria are shown in Box A.1.

Box A.1 Inclusion and exclusion criteria applied to the studies retrieved by the literature search

Inclusion criteria:

Sample said to be personality disordered, sociopathic, psychopathic however diagnosed/identified;
Sample either Male or Female;
Sample aged 18-65;
Study reports change in some variable after a therapeutic intervention;
Any type of study design;
In any language.

Exclusion criteria:

Sample criteria outside inclusion criteria;
Study published before 1992;
Sample identified as learning disabled;
Personality disorder was studied only as a mediator or predictive factor – unless outcome is aggression, recidivism etc.

What is not covered by this review?

The effect of these criteria is that this review does not consider the numerous reports of treatment of personality disorder that *do not contain outcomes* as part of the report. Further, the project did not attempt to review studies of treatments for 'dangerousness' or management of 'dangerous', 'violent' or 'anti-social' behaviours unless they included consideration of the *personality disorder status* of the participants, because the terms of reference specified that the review was to be of treatments for personality disorder.

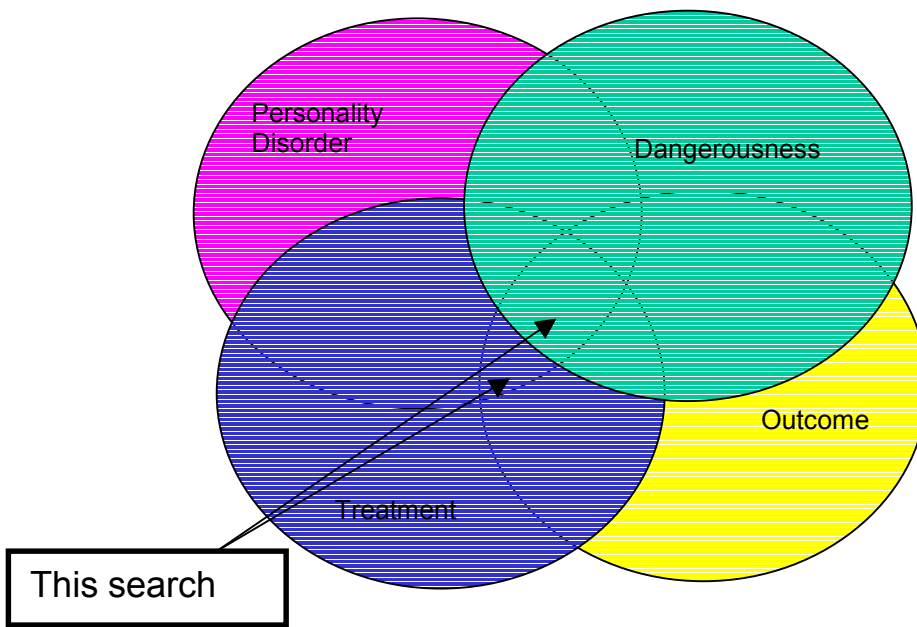
In addition, personality disorder is an essential component of the definition of DSPD specified in the White Paper to which any dangerousness needs to be causally connected for an individual to meet the criteria. The set of inclusion and exclusion criteria used in this review would capture

programmes for personality disordered individuals who were offenders or deemed to be presenting a risk of offending. However, there is evaluative literature concerning offender programmes, for sex offenders for example, which does not explore the personality disorder status of the participants. This literature is not covered by this review.

The causal link between personality disorder and dangerousness (required for an individual to meet the current definition of DSPD) is also not explored. This was outside the terms of reference for the review, which was about treatment, and the Home Office has subsequently commissioned empirical research to investigate this putative link.

The Venn diagram below (Figure A.1) illustrates the literature targeted by this review.

Figure A.1 Venn diagram of literature search strategy



Sources of studies for review

In line with the CRD report 4 (Khan, ter Riet, Glanville, *et al.*, 2001) the sources of data searched for this review, included:

Electronic bibliographic databases
Reference lists from relevant primary literature and review articles
Professional journals
Journals, grey literature (unpublished material, theses and conference proceedings etc.)
Researchers and manufacturers

A preliminary search of the Internet drew over a million web sites. The Internet was therefore, not searched to identify studies for this review in view of time constraints (Khan, ter Riet, Glanville, *et al.*, 2001).

Electronic bibliographic databases

The databases searched were:

Medline
PsychLit
AMED (Allied and Complementary Medicine Database)
ASSIA (Applied Social Science Index and Abstracts)
CINAHL (The Cumulative Index to Nursing & Allied Health)
Embase
HMIC (Health Management Information Consortium)
SCI (Science Citation Index Expanded)
SSCI (Social Sciences Citation Index)
The Cochrane Library & CCTR (Cochrane Controlled Trials Register) & HTA (Health Technology Assessment)
SIGLE (System for Information on Grey Literature in Europe)

Hand searching

Relevant primary literature and review articles were identified and the reference lists from these were hand-searched. Key journals were identified and hand-searched both to ensure inclusion of relevant studies and to cross-check the reliability of the computerised searches.

Books and book chapters identified using the COPAC database were obtained and hand-searched for data on treatment outcome. Books also contained contextual information about personality disorders, offenders and their treatment and where possible this was used to inform the treatment review.

Researchers and manufacturers, and “grey” literature

In order to identify grey literature and to use researchers as a source of information, a survey was conducted of professionals in the field asking them to identify publications or unpublished material they considered relevant.

The survey targeted professionals in the field of personality disorder research and treatment *and* in the field of “therapeutic regimes” in secure settings.

The survey comprised a very simple questionnaire accompanied by an introductory letter (these are found in Appendix 4: Survey letter). The questionnaire asked for the participants’ contact details and then simply whether they knew of any published or unpublished materials relevant to the treatment of DSPD, whether they were associated with a treatment resource and whether they would be prepared to host a visit of the project team.

The survey was sent to 6,051 professionals in the UK and worldwide who were identified using the following databases:

British Psychological Society membership (Forensic section)
Royal College of Psychiatrists (Forensic and Psychotherapy sections).
International Association for Forensic Psychotherapy
Special hospitals & prisons in UK & other countries
Specialist treatment centres for PD/offending
Regional Probation Services
Regional Secure Units
The “Dialogue” database ²¹
International Society for the Study of Personality Disorder membership

Reference and data management

Reference managing software, Endnote (ISI Researchsoft, 2001) was used to manage the reference collection, distribution and bibliographic citations.

Selection of studies to be included

All references retrieved through the initial search methods were assessed by application of the study criteria to abstracts and titles of articles in the first instance. In the interests of time, reviewers were not blind to the studies’ author and institution. This is deemed methodologically acceptable in the guidelines produced by CRD (Khan, ter Riet, Glanville, *et al.*, 2001). However, a subset of 10 per cent of the retrievals was double assessed by two reviewers.

Following initial screening of abstracts and titles papers were then sorted on the basis of the type of treatment under study and sets of papers were given to designated members of the project team. In this second stage the reviewer had a further opportunity to exclude studies that, on closer consideration did not meet the inclusion criteria. Once studies were established as included, the project team was to summarise and review the full papers.

A data summary sheet (see Appendix 5: Summary sheet) was devised on which each reviewer summarised the design and results of each study and categorised the study quality based on the quality standards summarised below (Box A.2) (Khan, ter Riet, Glanville, *et al.*, 2001).

²¹ A database of people with an interest in personality disorder collated by Henderson Hospital using funding from the Virtual Institute for Severe Personality Disorder (VISPED) and incorporating the database on which the “Survey of services where personality disordered people are managed” (1998) co-ordinated by Les Storey and Roger Logue for High Secure Psychiatric Services Commissioning Board.

Box A.2 Hierarchy of study design for studies of effectiveness

1. Experimental studies (e.g. RCT with concealed allocation)
2. Quasi-experimental studies (e.g. experimental study without randomisation)
3. Controlled observational studies
 - a. Cohort studies
 - b. Case control studies
4. Observational studies without control groups
 - a. Cohort study
 - b. Before and after study
 - c. Case series

Data analysis

The assessment of the quality of research studies is complex and can be done in a number of ways (Jadad 1998; Moher, Cook *et al.*, 1999). In this review, the authors concentrated on the internal and external validity of studies in assessing them. Assessment tools are often developed for reviews and used as scales yielding a quantitative score of quality. Data were extracted on each study using summary sheets to aid the assessment process in this review. However, it was not practicable to develop and validate a tool to aid quantitative analysis of study quality in the time-scale for this project. In addition, the breadth of study design was such that such a quantitative approach would not have been likely to aid the interpretation of the evidence.

Meta-analysis

A second step in a systematic review is the statistical analysis of the results of individual randomised controlled trials to produce an overall summary of the treatment effect or meta-analysis (Geddes, Freemantle, Streiner, *et al.*, 1998). Pooling data from several studies in this way can produce more precise estimates of the effects of treatments.

However, in order to conduct a meta-analysis, it is essential to assess whether the individual studies are of sufficient quality and comparability (in terms of participants, interventions and outcomes) to make statistical pooling valid (Egger & Smith, 2001).

Meta-analysis was considered for this review, previous authors having conducted a meta-analysis of studies for personality disorder (Perry, Banon & Ianni, 1999a). However, for the interventions retrieved and included in this review, most trials were small-scale and of limited quality with heterogeneous participants and outcomes and treatment modalities. Although the authors pre-specified in the original protocol the patients, specific interventions and outcomes that were of key interest, once the trial reports were obtained, it became clear that a meta-analysis was unlikely to be informative. A small number of reports utilised the same outcome measures. However, usually these are reports of the same treatment. Where reports of different treatments used the same or similar outcome measures it could be argued that a meta-analysis of these may be useful. However, the authors' view was that to subject a subset of the papers to meta-analysis in this way would have been misleading. The purpose of the review was to compare all available treatment approaches and recommend those shown to be the most promising. Meta-analysis of a subset of these would not have compared all the available treatments and would only have been able to draw conclusions regarding those treatments which had, coincidentally, sufficient in common with a study of another treatment.

The systematic review therefore includes descriptions of the included studies but no quantitative summary of the results.

Data presentation

The data can be presented in various ways in order to summarise the findings. Three perspectives on the data would seem to inform the question for this review. The authors have, therefore, presented the study results by personality disorder sub-types, by the setting in which the treatment under study was provided and by the type of treatment given. In each they have assessed the findings, taking into account the study design and the success with which the design was implemented as far as can be judged from the reports.

Criteria for designating treatments as “promising”

Given that this review was commissioned to support the development of policy, the way in which “promising” was interpreted was pivotal. The description implies a categorical criterion but the question of where to set this criterion was problematic because of the paucity of the evidence found.

The advice of evidence-based practice in general is that non-experimental evidence should be avoided when the questions to be answered concern treatment efficacy because such studies are more likely to lead to false-positive conclusions (Sackett, Rosenberg, Gray, *et al.*, 1996). In this field, the Royal College of Psychiatrists in its recent review of personality-disordered offenders recommended that all future treatment developments must be based on evidence from randomised controlled trials (RCTs) (Royal College of Psychiatrists, 1999). The available literature does not enable the authors to make recommendations about the most promising treatments for personality disorder, “Severe Personality Disorder” or “Dangerous and Severe Personality Disorder” solely on the basis of RCT evidence.

In the absence of the “gold standard” evidence base, guidance from the next best level must be sought. The evidence available in this field is, in fact, of variable quality at each level of the evidence base hierarchy: there are very poor randomised controlled trials and very good observational studies, for example. For the purposes of this review “promising” had, therefore, to be interpreted as a comparative and evolving, rather than categorical and static, concept.

Appendix 2: Advisory Group

Todd Hogue – Ph.D. Psychology Advisor DSPD, Rampton Hospital

Danny Clark – Principal Psychologist, What Works Unit, National Probation Directorate, Home Office.

Mark Morris – Director of Therapy, HMP Grendon Underwood, Member of the Psychoanalytic Society. Member of the Royal British College of Psychiatrists

Val Hawes – Locum Consultant Forensic Psychiatrist to DSPD Pilot Project, HMP Whitemoor

John Basson – Senior Consultant Forensic Psychiatrist, Broadmoor Hospital; Senior Consultant Forensic Psychiatrist at Springfield University Hospital; Fellow of the Royal College of Psychiatrists

Jenny Harwood – Organizational Development Consultant

Phil Woods – Lecturer/Researcher in Forensic Mental Health Nursing, School of Nursing, The University of Manchester

David Ndegwa – Consultant Forensic Psychiatrist, Clinical Director Lambeth Forensic Psychiatric Services. South London and Maudsley NHS Trust. Member of R&D Advisory committee at the Home Office.

Annie Bartlett - Senior Lecturer and Consultant in Forensic Psychiatry, St George's Hospital Medical School.

Steven Wong Director of Research at Regional Psychiatric Centre, Saskatoon, Canada

Appendix 3: Search strategy (\$ denotes that a search was made for all words with this stem. ? denotes that a search was made for both spelling of behavior(u)r.)

No.	Search term	Embase	Medline	AMED	Cinahl	CCTR	ASSIA	SCI	SSCI	Psychlit	COPAC	HTA	HMIC	SIGLE
	Personality disorder.mp	5830	3557	125	228	1110	444	2309	3822	6510		16	18	17
	[exp personality disorders/]	*6939	*9315	171	525	272	1			6631				
	[exp borderline personality disorder/]	1553	2257	22	142		0							8
	[exp antisocial personality disorder/]	11547	3980	0	29		0							1
	"sociopath\$.mp.	230	279	3	4		8	100	140	249				
1.	Psychopath.mp.	34	103	0	3		25	17	80	130				
	Psychopathic.mp	223	593	1	11		79	116	274	813				
	Psychopaths.mp	89	213	1	5		47	56	192	311				
	Psychopathy.mp	606	516	3	8		100	131	448	787				8
	borderline personalit\$.mp.	980	2563	27	179		146	734	1271	2669				
	Self defeating personalit\$.mp	32	50	0	0		4	10	49	108				
	Sadistic personalit\$.mp	9	6	0	0		0			27				
	Avoidant personalit\$.mp	145	141	2	1		17	91	198	246				
	Anxious personalit\$.mp	17	26	0	2		0	14	18	23				
	Multiple personalit\$.mp	405	646	76	56		33	277	647	1151				
	Emotionally unstable personalit\$.mp	6	8	0	0		0			10				
	Dissocial personalit\$.mp	13	14	1	0		1	12	13	16				
	Asthenic personalit\$.mp	1	7	0	0		0			3				
	Hysterical personalit\$.mp	23	122	0	1		1	9	10	93				

	Anankastic personalit\$.mp	4	6	0	0		0			2				
	Affective personalit\$.mp	35	47	0	3		2	7	14	89				
	Explosive personalit\$.mp	0	4	0	0		0			9				
	antisocial personalit\$.mp.	636	4310	4	47		100	533	827	1276				
	paranoid personalit\$.mp.	53	213	0	2		5	28	42	149				
	narcissistic personalit\$.mp.	110	233	2	6		20	38	164	730				
	schizoid personalit\$.mp.	54	483	1	0		9	42	94	196				
	schizotypal personalit\$.mp.	209	1140	4	0		43	277	328	466				
	histrionic personalit\$.mp.	67	479	0	3		6	34	56	184				
	compulsive personalit\$.mp.	160	359	1	1		6	52	91	251				
	dependent personalit\$.mp.	92	222	3	4		7	49	84	200				
	passive-aggressive personalit\$.mp.	25	93	0	6		5	11	24	71				
	Multiple behavio?r.mp	5	16	1	0		1			39				
	Borderline behavio?r.mp.	2	3	0	1		0			10				
	Antisocial behavio?r.mp.	1677	732	7	41		107	59	117	1644				
	Affective behavio?r		135	1	7		10	14	10	164				
	Paranoid behavio?r.mp.	36	80	0	0		1			21				
	Narcissistic behavio?r.mp.	8	2	0	0		0			13				
	schizoid behavio?r.mp.	0	2	0	0		1			5				
	Schizotypal behavio?r.mp.	1	0	0	0		0			0				
	Avoidant behavio?r.mp.	0	23	0	2		3			59				

	Self defeating behavior?r.mp.	16	8	1	2		1			63				
	Sadistic behavior?r.mp.	2	4	0	0		0			6				
	Anxious behavior?r.mp.	1	45	0	1		3	10	7	53				
	Dissocial behavior?r.mp.	17	10	0	0		2			9				
	Emotionally unstable behavior?r.mp.	6	0	0	0		0			0				
	Asthenic behavior?r.mp.	0	0	0	0		0			0				
	Hysterical behavior?r.mp.	0	10	0	0		0			6				
	Anankastic behavior?r.mp.	1	0	0	0		0			0				
	Explosive behavior?r.mp.	0	22	0	0		0	15	2	18				
	Dependent behavior?r.mp.	11	408	2	0		4	311	7	99				
	Compulsive behavior?r.mp.	27	1270	1	33		11	33	31	263				
	passive aggressive behavior?r.mp.	122	8	0	1		0			11				
	Offend*	(1966)	(4051)			134								4
	[exp Therapeutics/]	1	1144130		146262		23			118847				
	Exp therapy			48990										
	Treatment.mp.	54952	1126874	16689	36349		9190	104334	56890	118847				
	"therapy".mp.	63835	469205	33223	22462		5615	120717	25862	52134				
	[exp treatment outcome/]	34790	107258	3850	8552	13709	4			7536				11
	Outcome.mp.	9010	153199	6629	12222		2710	102632	23362	27253				
	Recidivism.mp.	18613	694	17	87	56	117	310	780	1235				5
	[exp Rehabilitation/]	363	77910	22765	31623		1785			13552				
	rehabilit\$.mp.	10184	48859	18231	17617		1519	16893	8098	11934				
	Program\$.mp.	5173	203037	6286	38901		7600	10006	5930	75496				

							64	2					
	[exp evaluation studies/]	14250	379133	0	4069		0		0				
	Evaluation.mp. [mp=title, abstract, full text, keywords, caption text	257	313865	6130	16885		3151	11418 1	2823 9	41482			
	re-offend\$.mp.	13758	14	1	3		10	5	24	38			
	[exp Risk management/]	18	17648	0	1923		7			295			
	risk management.mp.	334	5789	42	1718		115	1425	835	392			
	Exp risk behavior?r change.mp.	375	1436	33	425		177	168	196	2065			
	[exp Drug therapy/]	409	144205	10831	13021		1			33436			
	pharmacotherapy.mp.	13187	4931	43	303		104	3190	1940	2748			
	psychotherap\$.mp.	1961	35174	1386	2270		1846	3848	1180 6	30200			
	[exp Psychotherapy/]	14056	81087	5469	18041		2484			45946			
	[exp Psychosurgery/]	24365	1373	0	9		4			201			
	psychosurgery.mp.	94	1411	0	12		2	85	70	142			
	Exp Psychiatric treatment	36170								14734			
	Exp. Mental Health treatment				4								
	All Personality Disorder terms	20257	17014	239	685	1581	835			14851			
	Outcome terms	19472	107258	6629	18782		2710			30361			
	Treatment terms	128650	2862055	67834	223482		24740			280526			
	79 and 80 and 81	1265	376	10	32	344	17	293	656				
	With age/year limits	647	265		15	438	17	293	282	141	16	18	54

COPAC Terms: Personality Disorder and treatment (87)Recidivism and Treatment (1)Offend* and treatment outcome (3)Offend and Personality disorder (4)Severe Personality disorder (9)Dangerous Personality Disorder (4)Psychopathy (33)

Appendix 4: Survey letter



Department of Psychiatry
Chairman: Professor J. Hubert Lacey
St George's Hospital
Medical School
University of London
Patron: Her Majesty the Queen

Personality Disorder theme
Jenner Wing
Cranmer Terrace
London SW17 0RE. UK

Katherine Preedy
Research Assistant
Direct Tel: +44 (0) 20 8725 3616
Fax: +44 (0) 20 8725 1216
Email: kpreedy@sghms.ac.uk

Dear Sir/ Madam,

RE: Dangerous People with Severe Personality Disorder (DSPD) - Treatment Review

We are undertaking a review of treatment (both psychological and pharmacological) of DSPD for the Home Office. This is to provide a steer to the development of services for this group. To this end, we are approaching you to ask for any literature (either published or unpublished) which we might gather in order to be as comprehensive as possible in the scope of our treatment literature review. This means that we are therefore interested in any form of treatment that relates to personality disorder broadly.

Since we are required to advise on what we judge to be the most promising of treatments, it may be necessary for us to visit relevant establishments. If you believe that you are associated with any such treatment resource or know of others who are, we would additionally welcome that information from you.

The timescale for the project is short, only five months. We are already one week into the project and need to report definitively by the end of July.

Please let us know therefore, within two weeks of receipt, if you have, or know of, any relevant published or unpublished literature by completing the brief form overleaf. If you are associated with such a treatment approach we hope you would be prepared to let us visit you.

Thanks you in anticipation for your time and effort.

Yours sincerely

Kingsley Norton
Consultant Psychotherapist MA (Cantab), MD, FRCPsych.
Director, Henderson Hospital & Reader, St George's Hospital Medical School

On behalf of:

Dr Bridget Dolan - Ph.D., C Psychol. Barrister-at-Law, 3 Serjeants' Inn Chambers,
Hon. Senior Lecturer in Forensic Psychology, SGHMS.

Dr John Geddes - MD FRCPsych Senior Clinical Research Fellow and Honorary Consultant Psychiatrist
Department of Psychiatry University of Oxford Warneford Hospital

Dr Gill McGauley - BSc, MBBS, MRCPsych, Consultant and Senior Lecturer in Forensic Psychotherapy St.
George's Hospital Medical School and Broadmoor Hospital Authority

Dr Alan Pickering - BA PhD Senior Lecturer, Department of Psychology, Goldsmiths College

Ms Fiona Warren - MA (Oxon), Robert Baxter Research Fellow Henderson Hospital & St George's Hospital Medical School

PLEASE COMPLETE THE FOLLOWING AND RETURN TO:

Miss Katherine Preedy
Personality Disorder Theme
Department of Psychiatry,
St George's Hospital Medical School
Cranmer Terrace
London, SW17 0RE. UK
Tel: +44 (0) 208 725 3616
Fax: +44 (0) 208 725 1216
Email: kpreedy@sghms.ac.uk

Name: _____
Organisation: _____
Address: _____
Tel: _____ Email: _____

Do you know of any relevant publications? Yes No
If yes, please enclose/ specify giving as full a reference(s) as possible.

Do you have any unpublished material? Yes No
If yes, please enclose/ specify:

Are you associated with a Personality Disorder treatment resource? Yes No
If yes, please give details:

If yes, are you prepared to host a visit from us? Yes No
If you know of other relevant treatment resources or personnel please give details:

THANK YOU FOR YOUR HELP

Appendix 5: Summary sheet

Meets inclusion criteria

Reviewers initials

Abstract reviewer

Citation.....

No. of subjects:		No. of controls:	
Subjects gender	M..... F.....	Control gender	M..... F.....
Experimental subjects diagnosis:			
Diagnostic criteria:	Clin. Judgement Instrument	PCL SSI	DSM/ ICD None Other
Instrument used			
Validated	Yes	No	Not stated
Control/comparison groups. Who are they? (in full)			
Random allocation to treatment/ not treatment groups	Yes	No	Not stated
Were attrition rates stated?	Yes	No	
Treatment setting:	Inpatient High secure Prison Other		Outpatient Medium secure
Country of study			
Treatment applied: (Not mutually exclusive)	Drug Milieu T.C. Surgery Psychoanalytic		CBT Systemic/ family Individual Group Other
Outcome measures:	PD Impulsivity Offending Other		Violent/aggressive behaviour to others Anger/ impulsive behaviour Alcohol/ drug use
Psychometric instrument used for measuring outcome	Clin. judgement Instrument	None SSI	DSM/ ICD PCL Other
Instrument used:			
Validated	Yes	No	Not stated
Treatment duration:		Follow up duration:	
Statistical tests of outcome	Applied	Not applied	
Results	Details:		
Conclusions			
Level of evidence/study design: (use codes from EBM chapter)			
Subjective rating of quality Excellent (1) – Very poor, (5)			
Comments:			

Appendix 6: Included references

- Alden, L. E. and M. J. Capreol (1993) Avoidant personality disorder: Interpersonal problems as predictors of treatment response. *Behavior Therapy* 24(3): 357-376.
- Antikainen, R., J. Lehtonen, *et al.* (1992) The effect of hospital treatment on depression and anxiety in patients with borderline personality organization. *Nordic Journal of Psychiatry* 46(6): 399-405.
- Antikainen, R., H. Koponen, *et al.* (1994) "Factors Predicting Outcome of Psychiatric-Hospital Treatment in Patients With Borderline Personality Organization." *Nordic Journal of Psychiatry* 48(3): 177-185.
- Ball, J., B. Kearney, *et al.* (2000) Cognitive behaviour therapy and assertion training groups for patients with depression and comorbid personality disorders. *Behavioural & Cognitive Psychotherapy* 28(1): 71-85.
- Barber, J. P. and L. R. Muenz (1996) The role of avoidance and obsessiveness in matching patients to cognitive and interpersonal psychotherapy: empirical findings from the treatment for depression collaborative research program. *Journal of Consulting & Clinical Psychology* 64(5): 951-8.
- Barber, J. P., J. Q. Morse, *et al.* (1997) Change in obsessive-compulsive and avoidant personality disorders following time-limited supportive-expressive therapy. *Psychotherapy* 34(2): 133-143.
- Bateman, A. and P. Fonagy (1999) Effectiveness of partial hospitalization in the treatment of borderline personality disorder: A randomized controlled trial. *American Journal of Psychiatry* 156(10): 1563-1569.
- Bateman, A. W. and P. Fonagy (2000) Effectiveness of psychotherapeutic treatment of personality disorder. *British Journal of Psychiatry* 177: 138-143.
- Bateman, A. & Fonagy, P. (2001) Treatment of borderline personality disorder with psychoanalytically oriented partial hospitalization: An 18-month follow-up. *American Journal of Psychiatry*, 158 (1), 36-42.
- Battaglia, J., T. K. Wolff, *et al.* (1999) Structured diagnostic assessment and depot fluphenazine treatment of multiple suicide attempters in the emergency department. *International Clinical Psychopharmacology* 14(6): 361-372.
- Benedetti, F., L. Sforzini, *et al.* (1998) Low-dose clozapine in acute and continuation treatment of severe borderline personality disorder. *Journal of Clinical Psychiatry* 59(3): 103-7.
- Bohus, M. J., G. B. Landwehrmeyer, *et al.* (1999) Naltrexone in the treatment of dissociative symptoms in patients with borderline personality disorder: an open-label trial. *Journal of Clinical Psychiatry* 60(9): 598-603.
- Bohus, M., B. Haaf, *et al.* (2000) Evaluation of inpatient Dialectical-Behavioral Therapy for Borderline Personality Disorder - A prospective study. *Behaviour Research & Therapy* 38(9): 875-887.
- Brooner, R. K., M. Kidorf, *et al.* (1998) Preliminary evidence of good treatment response in antisocial drug abusers. *Drug and Alcohol Dependence* 49(3): 249-260.
- Budman, S. H., A. Demby, *et al.* (1996). "Time-limited group psychotherapy for patients with personality disorders: outcomes and dropouts." *International Journal of Group Psychotherapy* 46(3): 357-377.
- Chengappa, K., R. Baker, *et al.* (1995) The successful use of clozapine in ameliorating severe self mutilation in a patient with borderline personality disorder. *Journal of Personality Disorders* 9(1): 76-82.
- Chengappa, K. N., T. Ebeling, *et al.* (1999) Clozapine reduces severe self-mutilation and aggression in psychotic patients with borderline personality disorder. *Journal of Clinical Psychiatry* 60(7): 477-84.
- Chiesa, M., C. Drahorad, *et al.* (2000) Early termination of treatment in personality disorder treated in a psychotherapy hospital. Quantitative and qualitative study. *British Journal of Psychiatry* 177: 107-11.
- Chiesa, M. and P. Fonagy (2000) Cassel Personality Disorder Study. Methodology and treatment effects. *British Journal of Psychiatry* 176: 485-91.

- Clarkin, J. F., J. Hull, *et al.* (1994) Antisocial traits as modifiers of treatment response in borderline inpatients. *Journal of Psychotherapy Practice & Research* 3(4): 307-312.
- Clopton, J. R., R. L. Weddige, *et al.* (1993) Treatment outcome for substance misuse patients with personality disorder. *International Journal of the Addictions* 28(11): 1147-53.
- Coccaro, E. F. and R. J. Kavoussi (1997) Fluoxetine and impulsive aggressive behavior in personality-disordered subjects. *Archives of General Psychiatry* 54(12): 1081-1088.
- Cookson, A., J. Espie, *et al.* (unpublished). The Edinburgh Project: A pilot study for the psychotherapeutic treatment of borderline and other severe personality disorders.
- Coon, D. W. (1994) Cognitive-behavioral interventions with avoidant personality: A single case study. *Journal of Cognitive Psychotherapy* 8(3): 243-253.
- Cornelius, J. R., P. H. Soloff, *et al.* (1993) Continuation pharmacotherapy of borderline personality disorder with haloperidol and phenelzine. *American Journal of Psychiatry* 150(12): 1843-8.
- Cottraux, J., I. Note, *et al.* (2000) Cognitive behavior therapy versus supportive therapy in social phobia: a randomized controlled trial. *Psychotherapy & Psychosomatics* 69(3): 137-46.
- Daly, K. A. and S. H. Fatemi (1999) Lamotrogine and impulse behaviour [6]. *Canadian Journal of Psychiatry* 44(4): 395-396.
- Davidson, K. and P. Tyrer (1996) Cognitive therapy for antisocial and borderline personality disorders: Single case series. *British Journal of Clinical Psychology* 35: 413-29.
- Dolan, B. M., C. Evans, *et al.* (1992) Therapeutic community treatment for personality disordered adults: changes in neurotic symptomatology on follow-up. *International Journal of Social Psychiatry* 38(4): 243-50.
- Dolan, B., F. Warren, *et al.* (1996) Cost-offset following specialist treatment of severe personality disorders. *Psychiatric Bulletin* 20: 413-7.
- Dolan, B., F. Warren, *et al.* (1997) Change in borderline symptoms one year after therapeutic community treatment for severe personality disorder. *British Journal of Psychiatry* 171: 274-279.
- Donnelly, J. and S. Guy (1998) Evaluation of a first stage pilot project to address offending behaviour in a mentally disordered population in Scotland. *Psychiatric Care* 5(3): 106-8, 110-111.
- Ekselius, L. and L. von Knorring (1998) Personality disorder comorbidity with major depression and response to treatment with sertraline or citalopram. *International Clinical Psychopharmacology* 13(5): 205-11.
- Evans, K., P. Tyrer, *et al.* (1999) Manual-assisted cognitive-behaviour therapy (MACT): a randomized controlled trial of a brief intervention with bibliotherapy in the treatment of recurrent deliberate self-harm. *Psychological Medicine* 29(1): 19-25.
- Fahlen, T. (1995) Personality traits in social phobia, II: Changes during drug treatment. *Journal of Clinical Psychiatry* 56(12): 569-73.
- Fava, M., E. Bouffides, *et al.* (1994) Personality disorder comorbidity with major depression and response to fluoxetine treatment. *Psychotherapy & Psychosomatics* 62(3-4): 160-7.
- Fisher, M. S., Sr. and K. J. Bentley (1996) Two group therapy models for clients with a dual diagnosis of substance abuse and personality disorder. *Psychiatric Services* 47(11): 1244-1250.
- Frankenburg, F. R. and M. C. Zanarini (1993) Clozapine treatment of borderline patients: a preliminary study. *Comprehensive Psychiatry* 34(6): 402-5.
- Friis S, Wilberg T, *et al.* (1999). - Pharmacotherapy for patients with personality disorders: Experiences from a group analytic treatment program. *Treatment of personality disorders*. J. Derksen.

- Gacono, C. B. (1998) The use of the Psychopathy Checklist--Revised (PCL-R) and Rorschach in treatment planning with antisocial personality disordered patients. *International Journal of Offender Therapy & Comparative Criminology* 42(1): 49-64.
- Gude, T., J. T. Mosen, *et al.* (2001) Schemas, affect consciousness, and Cluster C personality pathology: A prospective one-year follow-up study of patients in a schema-focused short-term treatment program. *Psychotherapy Research* 11(1): 85-98.
- Hafner, R. J. and G. Holme (1996) The influence of a therapeutic community on psychiatric disorder. *Journal of Clinical Psychology* 52(4): 461-468.
- Hardy, G. E., M. Barkham, *et al.* (1995) Impact of Cluster C personality disorders on outcomes of contrasting brief psychotherapies for depression. *Journal of Consulting & Clinical Psychology* 63(6): 997-1004.
- Hengeveld, M. W., D. J. Jonker, *et al.* (1996) A pilot study of a short cognitive-behavioral group treatment for female recurrent suicide attempters. *International Journal of Psychiatry in Medicine* 26(1): 83-91.
- Hoffman, P. D. and J. M. Hooley (1998) Expressed emotion and the treatment of borderline personality disorder. *In Session-Psychotherapy in Practice* 4(3): 39-54.
- Hofmann, S. G., M. K. Shear, *et al.* (1998) Effects of panic disorder treatments on personality disorder characteristics. *Depression & Anxiety* 8(1): 14-20.
- Hoglund, P. (1993) Personality disorders and long-term outcome after brief dynamic psychotherapy. *Journal of Personality Disorders* 7(2): 168-181.
- Hollander (2001) Preliminary double blind, placebo-controlled trial of divalproex sodium in borderline personality disorder. *Journal of Clinical Psychiatry* 62(3): 199-203.
- Hughes, G., T. Hogue, *et al.* (1997) First-stage evaluation of a treatment programme for personality disordered offenders. *Journal of Forensic Psychiatry* 8(3): 515-527.
- Hull, J. W., J. F. Clarkin, *et al.* (1993) Treatment response of borderline inpatients. A growth curve analysis. *Journal of Nervous & Mental Disease* 181(8): 503-8.
- Hull, J. W., J. F. Clarkin, *et al.* (1993) Time series analysis of intervention effects. Fluoxetine therapy as a case illustration. *Journal of Nervous & Mental Disease* 181(1): 48-53.
- Junkert-Tress, B., U. Schnierda, *et al.* (2001). Effects of short-term dynamic psychotherapy for neurotic, somatoform, and personality disorders: a prospective 1-year follow-up study. *Psychotherapy Research* 11(2): 187-200.
- Kalman, D., R. Longabaugh, *et al.* (2000) Matching alcoholics to treatment. Failure to replicate finding of an earlier study. *Journal of Substance Abuse Treatment* 19(2): 183-7.
- Kavoussi, R. J., J. Liu, *et al.* (1994) An open trial of sertraline in personality disordered patients with impulsive aggression. *Journal of Clinical Psychiatry* 55(4): 137-41.
- Kavoussi, R. J. and E. F. Coccaro (1998) Divalproex sodium for impulsive aggressive behavior in patients with personality disorder. *Journal of Clinical Psychiatry* 59(12): 676-80.
- Kern, R. S., T. G. Kuehnel, *et al.* (1997) Multimodal cognitive-behavior therapy for borderline personality disorder with self-injurious behavior. *Psychiatric Services* 48(9): 1131-3.
- Kerr, I. B. (1999). "Cognitive-analytic therapy for borderline personality disorder in the context of a community mental health team: Individual and organizational psychodynamic implications." *British Journal of Psychotherapy* 15(4): 425-438.
- Koons, C., C. Robins, *et al.* (2001) Efficacy of dialectical behaviour therapy in women veterans with Borderline Personality disorder. *Behaviour Therapy* 32: 371-90.
- Krawitz, R. (1997) A prospective psychotherapy outcome study. *Australian & New Zealand Journal of Psychiatry* 31(4): 465-73.

- Linehan, M., H. Heard, *et al.* (1993) Naturalistic follow-up of a behavioural treatment for chronically parasuicidal borderline patients. *Archives of General Psychiatry* 50: 971-7.
- Linehan, M. M., D. A. Tutek, *et al.* (1994) Interpersonal outcome of cognitive behavioral treatment for chronically suicidal borderline patients. *American Journal of Psychiatry* 151(12): 1771-6.
- Linehan, M. M., H. Schmidt, *et al.* (1999) Dialectical behavior therapy for patients with borderline personality disorder and drug-dependence. *American Journal on Addictions* 8(4): 279-92.
- Longabaugh, R., A. Rubin, *et al.* (1994) Drinking outcomes of alcohol abusers diagnosed as antisocial personality disorder. *Alcoholism: Clinical & Experimental Research* 18(4): 778-85.
- Low, G., D. Jones, *et al.* (2001) The treatment of deliberate self-harm in borderline personality disorder using dialectical behaviour therapy: A pilot study in a high security hospital. *Behavioural and Cognitive Psychotherapy* 29: 85-92.
- Magnavita, J. J. (1994) The process of working through and outcome: The treatment of passive-aggressive personality disorder with intensive short-term dynamic psychotherapy: III. *International Journal of Short Term Psychotherapy* 9(1): 1-17.
- Marcoux, G. and S. Valnicek (2000) Another idea for the treatment of patients with borderline personality disorder. *Canadian Journal of Psychiatry* 45(4): 395-396.
- Markowitz, P. and S. Wagner (1995) Venlafaxine in the Treatment of Borderline Personality disorder. *Psychopharmacology Bulletin* 3(4): 773-77.
- Marshall, P. (1997). *A reconviction study of HMP Grendon Therapeutic Community* Home Office.
- Martens, W. H. J. (1999) Marcel: A case report of a violent sexual psychopath in remission. *International Journal of Offender Therapy & Comparative Criminology* 43(3): 391-399.
- Mc Gee, M. (1997) Cessation in self-mutilation in a patient with borderline personality disorder treated with naltrexone. *Journal of Clinical Psychiatry* 58(1): 32-3.
- McCallum, M. and W. E. Piper (1999) Personality disorders and response to group-oriented evening treatment. *Group Dynamics* 3(1): 3-14.
- McKay, D., F. Neziroglu, *et al.* (1996) Changes in personality disorders following behavior therapy for obsessive-compulsive disorder. *Journal of Anxiety Disorders* 10(1): 47-57.
- Meares, R., J. Stevenson, *et al.* (1999) Psychotherapy with borderline patients: I. A comparison between treated and untreated cohorts. *Australian and New Zealand Journal of Psychiatry* 33(4): 467-472.
- Messina, N. P., E. D. Wish, *et al.* (1999) Therapeutic community treatment for substance abusers with antisocial personality disorder. *Journal of Substance Abuse Treatment* 17(1-2): 121-8.
- Monsen, J., Odland, T., Faugli, A., *et al* (1995a) Personality disorders: changes and stability after intensive psychotherapy focusing on affect consciousness. *Psychotherapy Research* 5 (1), 33-8.
- Monsen, J., Odland, T., Faugli, A., *et al* (1995b) Personality disorders and psychosocial changes after intensive psychotherapy: a prospective follow-up study of an outpatient psychotherapy project, 5 years after end of treatment. *Scandinavian Journal of Psychology*, 36 (3), 256-68.
- Monsen, J. T., Odland, T., Faugli, A., *et al* (1995c) Personality disorders: Changes and stability after intensive psychotherapy focusing on affect consciousness. *Psychotherapy Research* 5 (1), 33-48.
- Moorhead, S. and J. Scott (1999) Is specialist registrar training in cognitive therapy effective? *Psychiatric Bulletin* 23(10): 603-607.
- Munroe-Blum, H. and E. Marziali (1995) A controlled trial of short-term group treatment for borderline personality disorder. *Journal of Personality Disorders* 9(3): 190-198.

- Najavits, L. M. and J. G. Gunderson (1995) Better than expected: improvements in borderline personality disorder in a 3-year prospective outcome study. *Comprehensive Psychiatry* 36(4): 296-302.
- Penick, E. C., B. J. Powell, *et al.* (1996) Pharmacological treatment for antisocial personality disorder alcoholics: A preliminary study. *Alcoholism: Clinical & Experimental Research* 20(3): 477-484.
- Peselow, E. D., M. P. Sanfilippo, *et al.* (1994) Personality traits during depression and after clinical recovery. *British Journal of Psychiatry* 164(3): 349-54.
- Pinto, O. C. and H. S. Akiskal (1998) Lamotrigine as a promising approach to borderline personality: an open case series without concurrent DSM-IV major mood disorder. *Journal of Affective Disorders* 51(3): 333-43.
- Piper, W. E., J. S. Rosie, *et al.* (1993) A randomized trial of psychiatric day treatment for patients with affective and personality disorders. *Hospital & Community Psychiatry* 44(8): 757-763.
- Piper, W. E., A. S. Joyce, *et al.* (1994) Patient characteristics and success in day treatment. *Journal of Nervous & Mental Disease* 182(7): 381-6.
- Pollock, P. and J. Kear-Colwell (1994) Women who stab: a personal construct analysis of sexual victimisation and offending behaviour. *British Journal of Medical Psychology* 67: 13-22.
- Pollock, P. and T. Belshaw (1998) Cognitive analytic therapy for offenders. *Journal of Forensic Psychiatry* 9(3): 629-42.
- Powell, B., J. Campbell, *et al.* (1995) A double blind, placebo controlled study of nortriptyline and bromocriptine in male alcoholics subtyped by comorbid psychiatric disorders. *Alcoholism: Clinical and Experimental Research* 19(2): 462-8.
- Primac, D. W. (1993) Measuring change in a brief therapy of a compulsive personality. *Psychological Reports* 72(1): 309-10.
- Project Match (1997) Matching Alcoholism Treatments to Client Heterogeneity: Project MATCH post-treatment drinking outcomes. *Journal of Studies on Alcohol* 58(1): 7-29.
- Quayle, M. and E. Moore (1998) Evaluating the impact of structured groupwork with men in a high security hospital. *Criminal Behaviour and Mental Health* 8: 77-92.
- Reiss, D., D. Grubin, *et al.* (1996) Young 'psychopaths' in special hospital: treatment and outcome. *British Journal of Psychiatry* 168(1): 99-104.
- Ryle, A. (1995) Transference and counter-transference variations in the course of the cognitive-analytic therapy of two borderline patients: the relation to the diagrammatic reformulation of self-states. *British Journal of Medical Psychology* 68(Pt 2): 109-24.
- Ryle, A. and K. Golyunkina (2000) Effectiveness of time-limited cognitive analytic therapy of borderline personality disorder: Factors associated with outcome. *British Journal of Medical Psychology* 73: 197-210.
- Salzman, C., A. Wolfson, *et al.* (1995) Effect of Fluoxetine on anger in symptomatic volunteers with borderline personality disorder. *Journal of Clinical Psychopharmacology* 15(1): 23-29.
- Sandell, R., E. Alfredsson, *et al.* (1993) Clinical significance of outcome in long-term follow-up of borderline patients at a day hospital. *Acta Psychiatrica Scandinavica* 87(6): 405-413.
- Sareen, J., M. W. Enns, *et al.* (2000) The impact of clinically diagnosed personality disorders on acute and one-year outcomes of electroconvulsive therapy. *Journal of ECT* 16(1): 43-51.
- Saunders, D. G. (1996) Feminist-cognitive-behavioral and process-psychodynamic treatments for men who batter: interaction of abuser traits and treatment models. *Violence & Victims* 11(4): 393-414.
- Schimmel, P. (1999) The psychotherapeutic management of a patient presenting with brief psychotic episodes. *Australian and New Zealand Journal of Psychiatry* 33(6): 918-925.

- Schmahl, C., C. Stiglmayr, *et al.* (1999) Treatment of dissociative symptoms in borderline patients with naltrexone. *Nervenarzt* 70(3): 262-264.
- Schulz, S. C., K. Camlin, *et al.* (1999) Olanzapine safety and efficacy in patients with borderline personality disorder and comorbid dysthymia. *Biol Psychiatry* 46: 1429-1435.
- Silva, H., S. Jerez, *et al.* (1997) Fluoxetine in the treatment of borderline personality disorder. *Actas Luso-Espanolas De Neurologia Psiquiatria Y Ciencias Afines* 25(6): 391-395.
- Soloff, P. H., J. Cornelius, *et al.* (1993) Efficacy of phenelzine and haloperidol in borderline personality disorder. *Archives of General Psychiatry* 50(5): 377-385.
- Sonne, S., R. Rubey, *et al.* (1996) Naltrexone treatment of self-injurious thoughts and behaviors. *Journal of Nervous & Mental Disease* 184(3): 192-5.
- Springer, T., N. Lohr, *et al.* (1996) A preliminary report of Short-term cognitive-behavioural group therapy for inpatients with personality disorder. *The Journal of Psychotherapy Practice and Research* 5: 57-71.
- Stein, D. J., D. Simeon, *et al.* (1995) An open trial of valproate in borderline personality disorder. *Journal of Clinical Psychiatry* 56(11): 506-10.
- Stevenson, J. and R. Meares (1992) An outcome study of psychotherapy for patients with borderline personality disorder. *American Journal of Psychiatry* 149(3): 358-62.
- Stevenson, J. and R. Meares (1999) Psychotherapy with borderline patients: II. A preliminary cost benefit study. *Australian & New Zealand Journal of Psychiatry* 33(4): 473-7.
- Stravynski, A., M. Belisle, *et al.* (1994) The treatment of avoidant personality disorder by social skills training in the clinic or in real-life settings. *Canadian Journal of Psychiatry Revue Canadienne de Psychiatrie* 39(8): 377-83.
- Swinton, M. (in press). Clozapine in severe personality disorder.
- Taylor, R. (2000). *A seven year reconviction study of HMP Grendon Therapeutic Community*, Home Office.
- Teasdale, C. (1997) Art therapy is a shared forensic investigation. *Inscape* 2(2): 32-40.
- Thornton, D., R. Mann, *et al.* (1996) *Sex Offenders in a Therapeutic Community. A compilation of Grendon research*. J. Shine. Grendon Underwood, Bucks, HMP Grendon
- Verkes, R. J., R. C. Van der Mast, *et al.* (1998) Reduction by paroxetine of suicidal behavior in patients with repeated suicide attempts but not major depression. *American Journal of Psychiatry* 155(4): 543-547.
- Wheelis, J. and J. Gunderson (1998) A little cream and sugar: Psychotherapy with a borderline patient. *American Journal Psychiatry* 155(1): 114-22.
- Wilberg, T., S. Friis, *et al.* (1998) Outpatient group psychotherapy: A valuable continuation treatment for patients with borderline personality disorder treated in a day hospital? A 3-year follow-up study. *Nordic Journal of Psychiatry* 52(3): 213-221.
- Wilberg, T., S. Karterud, *et al.* (1998) Outcomes of poorly functioning patients with personality disorders in a day treatment program. *Psychiatric Services* 49(11): 1462-7.
- Wilcox, J. A. (1995) Divalproex sodium as a treatment for borderline personality disorder. *Annals of Clinical Psychiatry* 7(1): 33-7.
- Winston, A., M. Laikin, *et al.* (1994) Short-term psychotherapy of personality disorders. *American Journal of Psychiatry* 151(2): 190-4.
- Young, S. and M. Harty (2001) Treatment issues in a personality disordered offender: a case of attention deficit hyperactivity disorder in secure psychiatric services. *Journal of Forensic Psychiatry* 12(1): 158-67.

Appendix 7: Glossary

Addiction Severity Index (ASI). 30-45 minute structured clinical Interview based on last 30 days. McLellan T, Kushner H, Metzger, D, Peters R, Smith I, Grissom G, Pettinati H, Argeriou M (1992). *The fifth edition of the Addiction Severity Index*. J Substance Abuse 9 199-213.

Adult Suicidal Ideation Questionnaire (ASIQ). Reynolds WM: (1991) *Adult Suicidal Ideation Questionnaire: Professional Manual*. Odessa, FL, Psychological Assessment Resource.

Alternative Thinking Test (ATT). Describes four interpersonal situations and requires participants to generate as many ideas as possible to help solve the situation. (Spivak G, Platt JJ (1980) *Measures of social problem-solving assessment for adolescents and adults: manual*. Hahnemann University of Philadelphia; preventive intervention Research Centre: Philadelphia.)

Anti-social personality Disorder (ASPD). One of the 11 personality disorders listed under the DSM-III-R classificatory system.

Automatic thoughts Questionnaire (ATQ). (Hollon, SD & Kendall, PC (1980). *Cognitive self-statements in depression: development of an automatic thoughts questionnaire*. Cognitive Therapy and Research, 4 (4) 383-95).

Avoidant Personality Disorder) AVPD. One of the 11 personality disorders listed under the DSM-III-R classificatory system.

Beck Depression Inventory (BDI). A self-rating questionnaire measuring depression, well validated. (Beck A T, Beck R W. *Screening Depressive Patients in Family Practice*. Postgrad. Med. 1972: 11, 561-79.)

Beck Anxiety Inventory (BAI). A self-rating questionnaire measuring anxiety. (Beck AT, Epstein N, Brown G, Steer RA. (1988). *An inventory for measuring clinical anxiety: psychometric properties*. Journal of Consulting and Clinical Psychology 56, 893-97).

Beck Hopelessness Scale (HS). (Beck AT, Weissman A, & Lester, D *et al* (1974) *The measurement of pessimism: the hopelessness scale*. Journal of Consulting and Clinical Psychology 42 861-5).

Beck Scale for Suicidal Ideation (BSSI). (Beck AT, Kovacs M, & Weissman A (1979). *Assessment of suicidal intention: the scale for suicidal ideation*. Journal of Consulting and Clinical Psychology 47 343-52).

Benzodiazepines. A class of drugs used to treat anxiety.

Borderline Personality Disorder (BPD). One of the 11 personality disorders listed under the DSM-III-R classificatory system.

Borderline Personality Organisation (BPO). A set of structural criteria designed and devised by Otto Kernberg is a wider classification than the borderline personality disorder classification of DSM-III-R. Based on Kernberg's borderline personality organisation and other borderline personality characteristics. (Kernberg O. *The Structural Diagnosis of Borderline Personality Organisation*. In: Hartocollis P, Editor. *Borderline Personality Disorders : the concept, the syndrome, the patient*. New York: International University Press, 1978.)

Borderline Personality Organisation Questionnaire (BPOQ). Self-report measure based around a five-point scale designed to capture borderline personality disturbances. (Oldham J, Clarkin J, Appelbaum A *et al* (1985). A self-report instrument for borderline personality organisation. In McGlashen TH (ed): *The Borderline: Current Empirical Research*. Washington, DC: American Psychiatric 3-18).

Borderline Syndrome Index (BSI). A fifty-two item self-report questionnaire developed to provide a rapid clinical assessment of the borderline syndrome. Also used to measure change as it records internal shifts in cognitive and affected areas of experience in relation to the internal world and the external reality (Conte H R, Plutchik R, Karasu T B and Jorrett I. *A Self-Report Borderline Scale: Discriminant validity and preliminary norms*. Journal of Nervous and Mental Disease: 168:428-35).

Brief Psychiatric Rating Scale (BPRS). Overall JE, Gorham DR (1962) *The Brief Psychiatric Rating Scale*. Psychological reports 10 799-812.

Brief Symptom Inventory. A fifty-three item self-report questionnaire which is a cut down version of the SCL-90 and assess symptom levels across 9 axis. (Derogatis L R and Melisaratos N. *The Brief Symptom Inventory. An introductory report.* Journal of Psychological Medicine: 13:595-605. 1983).

Bromocriptine. A dopamine agonist drug used primarily in patients with Parkinson's disease.

Citalopram. An example of an SSRI drug.

Clinical Global Impressions of Severity of Illness (CGI-S). Likert-type scores of administrator's impression of severity of illness. Guy W (1976). *Clinical global Impressions.* In: ECDEU manual. NIMH Rockville, Maryland: US dept of Health and Human Services; 1976 pp217-222.

Clinical Global Impressions of Global Improvement (CGI-I). Likert-type scores of administrator's impression of global improvement. Guy W (1976). *Clinical global Impressions.* In: ECDEU manual. NIMH Rockville, Maryland: US dept of Health and Human Services; 1976 pp217-222.

Clozapine. An atypical neuroleptic, now quite widely used in schizophrenia.

Cluster A. A sub-group of paranoid, schizoid and schizotypal personality disorders according to DSM-III-R criteria.

Cluster B. A sub-group of borderline, histrionic, narcissistic and antisocial personality disorders according to DSM-III-R criteria.

Cluster C. A sub-group of avoidant, dependent, obsessive-compulsive and passive-aggressive personality disorders according to DSM-III-R.

Cognitive-Analytic Therapy (CAT). A brief focal therapy and formed by cognitive therapy, psychodynamic psychotherapy and cognitive psychology. Developed for treatment approaches of short duration. Has been used in the treatment of borderline personality disorder. (Ryle A, (1990) *Cognitive Analytical Therapy: Active Participation in Change.* Chichester. Wiley).

Coopersmith Self-Esteem Scale (SE). Participants agree or disagree with a number of statements from which a global score is calculated from the number of positive self-esteem responses. Coopersmith, S (1967). *The antecedents of self-esteem.* San Francisco: W H Freeman.

Cornell Index (CI). Symptom checklist completed by participant. (Weider A, Wolff H, Brodman K, Mihelman B, Wechslev D. *Cornell Index.* New York: Psychological Corporation, 1948).

Creative coping Questionnaire (CCQ). 32-item questionnaire rated on a 7-point Likert type scale. Covers emotional control, interpersonal effectiveness and distress tolerance. (Springer T (1994) *Short term cognitive behavioural group therapy for inpatients with personality disorders.* Doctoral dissertation, University of Michigan. Dissertation Abstracts International 55 317-324).

CRD. Centre For Reviews And Dissemination, York.

Desipramine. An example of a TCA drug.

Diagnostic and Statistical Manual of Mental Disorders. Third Revised Edition. (DSM-III-R). Categorical classificatory system of the American Psychiatric Association which places personality disorder on the second axis of its system. (*American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. Third Revised Edition.* Washington DC: APA, 1988.)

Diagnostic and Statistical Manual of Mental Disorders. Fourth Edition. (DSM IV). Categorical classificatory system of the American Psychiatric Association which places personality disorder on the second axis of its system. (*American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. Fourth Edition.* Washington DC: APA, 1994).

Diagnostic Interview for Borderlines (DIB). A structured interview yielding a total score of borderline pathology and 4 sub-scales, i.e. impulses, affects, interpersonal relationships and psychosis. (Gunderson J D, Kolb J E, Austin V.) *The Diagnostic Interview for Borderline Patients.* Am. J. Psychiatry : 138:896-903, 1981.

Diagnostic Interview Schedule (DIS). Robins, LN, Helzer, JE & Croughan, J et al (1981) *National Institute of mental health diagnostic interview schedule: its history, characteristics and validity.* Archives of General Psychiatry 38 381-89.

Dialectical Behaviour Therapy (DBT). A type of cognitive-behavioural treatment developed specifically for Borderline Personality Disorder, based on a model of BPD which is biosocial and dialectical. The treatment approach is manualised (Linehan 1993) Cognitive-behavioural Treatment of Borderline Personality Disorder. New York, The Guilford Press.

Dissociative Experiences Scale (DES). (Bernstein EM & Putnam FW (1986). *Development, reliability and validity of a dissociation scale.* Journal of nervous and mental disease. 174 (12) 727-35.)

Divalproex sodium. See valproate.

Electro-Convulsive Therapy (ECT). Treatment used for depression. Patient receives controlled pulses of electricity to the brain whilst under general anaesthetic.

Fear Questionnaire (FQ). Self-rated inventory for the evaluation of any fear-based disorder. (Marks IM, Mathews AM (1979) *Brief Standard rating for phobic patients.* Behaviour research and therapy 17, 263-7).

Feminist-Cognitive- Behavioral-Therapy (FCBT). Uses skills training and gender role resocialisation through lectures, homework and role-plays. (Saunders DG (1984). *Helping husbands who batter.* Social Casework 65 (6) 347-353).

Fluoxetine. An SSRI drug, now widely used to treat depression, and better known under its commercial name, Prozac.

Fluphenazine. An example of a neuroleptic drug.

Functional Activities Questionnaire. (Pfeiffer E (1979). *A short psychiatric evaluation schedule: a new 15-item monotonic scale indicative of functional psychiatric disorder.* In Brain function and old age (ed. Pfeiffer, E) Berline: Springer Verlag).

Global Assessment Scale (GAS). An anchored rating scale that evaluates patient's general outcome in accordance with level of functioning assessed during a specified time period. The rating is on a continuous 0 (completed suicide) to 100 (perfect functioning) scale representing a range from psychological sickness to health. (Endicott J, Spitzer R L, Fleiss J L et al 1976. *The Global Assessment Scale.* Archives of General Psychiatry, 33, 766-71.)

Global Assessment of Functioning (GAF). A single global rating scale assessing psychological, social and occupational functioning. American Psychiatric Association (1994) Global assessment of functioning scale (GAF scale). DSM-IV Washington DC

Global Severity Index (GSI). A global index on the SCL-90-R instrument. The GSI is computed by summing the scores on the nine symptom dimensions and the additional items. (Derogatis L R, SCL-90-R. *Administration, Scoring and Procedures.* Towson M D. Clinical Psychometric Research, 1983.)

Haloperidol. A widely used neuroleptic drug.

Hamilton Depression Rating Scale (HDRS Ham-D as alternative abbreviation). An observer-rated measure of depression, well validated (Hamilton M. *A Rating Scale for Depression.* Neurol Neurosurg Psychiatry 1960; 23:56-62; and Hamilton M (1967). *Development of a Rating Scale for Primary Depressive Illness.* British Journal of Psychiatry; 6:278-96.)

Hamilton Anxiety Rating Scale (HARS/ Ham-A). An observer-rated measure of anxiety. (Hamilton MA (1959) *The Assessment of Anxiety states by rating.* British Journal of Medical Psychology. 32, 50-55).

Health-Sickness Rating Scale (HSRS). (Luborsky L and Bachrach H) *Factors Influencing Clinician's Judgement of Mental Health.* Archives of General Psychiatry: 31:292-299. (1974).

Histrionic Personality Disorder (HISTPD). One of the 11 personality disorders listed under the DSM-III-R classificatory system.

Hopkins Symptom Check List (HSCL). An earlier version of the SCL-90-R. Derogatis L R, Richels K, Uhlenhuth E H, Covi L. *The Hopkins Symptom Check List (HSCL): a self-report symptom inventory.* Behav Ci 1974; 19:1-5.

Hospital Anxiety and Depression Scale (HADS). Zigmond, AS & Snaith, RP (1983) *The hospital Anxiety and Depression Scale.* Acta Psychiatrica Scandinavica 67, 361-70.

Hostility and Direction of Hostility Questionnaire (HDHQ). 51-item questionnaire comprised of five subscales giving intropunitiveness and extrapunitiveness scores. Philip AE (1973). *Assessing Punitiveness with the Hostility and Direction of Hostility Questionnaire (HDHQ).* British Journal of Psychiatry 123, 435-9.

Impulsiveness Questionnaire (IVE). This measures impulsiveness, true risk taking and empathy. Eysenck HJ & Eysenck SBG (1991) *Manual of Eysenck Personality Scales (EPS Adult).* Hodder and Stoughton: London.

Impulsiveness Scale (IS). Eysenck HJ and Eysenck SBG (1991) *Manual of Eysenck Personality Scales.* London. Hodder & Stoughton.

Individual Assessment Profile (IAP). Structured interview providing demographic and substance use information. Flynn P, Hubbard R, Luckey J et al (1995). *The individual Assessment Profile (IAP): Standardising the Assessment of substance abusers.* Journal of Substance Abuse treatment 12 213-221.

Insight Scale (for Psychosis). Birchwood M, Smith J & Drury V. (1994) *A self-report insight scale for psychosis: reliability, validity and sensitivity to change.* Acta Psychiatrica Scandinavia 89 (1) 62-7.

Internal-External Locus of Control Scale. Rotter JB (1966) *Generalised expectancies for internal versus external control of reinforcement.* Psychological Monographs 80 (1) monograph 609.

International Classification of Diseases 10 (ICD-10). The International Classification of Mental and Behavioural Disorders: diagnostic criteria for research 1993. Geneva, Switzerland. WHO.

International Personality Disorder Examination (IPDE). A semi-structured interview based on the international classification of diseases version 10 (Loranger A W, Janca A and Sartorius N. *Assessment and Diagnosis of Personality Disorder. The I.C.D-10 International Personality Disorder Examination.* Cambridge University Press. 1997). See also PDE.

Interpersonal Behaviour Scale (IBS). Piper WE, Debbane EG, Garant J (1977). *An outcomes study of group psychotherapy.* Archives of General Psychiatry 34 1027-32.

Inventory of Interpersonal Problems (IIP). Contains 127 items around difficulties in interpersonal relationships. Each item rated on a five-point scale- Horowitz L M, Rosenberg S E, Bauer B A, Ureno G and Villaseñor V S. (1988). *Inventory of Interpersonal Problems: Psychometric properties and clinical applications.* Journal of Consulting and Clinical Psychology, 56.885-92.

Irritability Depression Anxiety Scale (IDAS). Snaith RP, Constantopoulos AA, Jardine MY et al (1978). *A clinical scale for the self-assessment of irritability.* British Journal of Psychiatry 132 164-171.

Lamotrigine. An anticonvulsant drug with mood-stabilising properties.

Liebowitz Social anxiety Scale (LSAS). Assessor-rated 24-item instrument separated into scores for fear and avoidance. Yao SN, Note I, Fanget F et al (1999). *L'Anxieté sociale chez les phobiques sociaux: validation de l'échelle d'anxiété sociale de Liebowitz – Version Française.* Encephale 25, 429-35.

Lifetime Parasuicide Count (LPC). Used to measure frequency of self-harm incidents within a given period. Bohus M, Haaf B, Stiglmayr C, Bohme R, Linehan M (2000). *Evaluation of inpatient Dialectical-Behavioral-Therapy for Borderline Personality disorder – A prospective study.* Behaviour Research and therapy 38, 875-887.

Manual Assisted Cognitive Therapy (MACT). Based on Linehan's Dialectical Behaviour Therapy. Evans K, Tyrer P, Catalan J et al (1999) *Manual Assisted Cognitive-behaviour therapy (MACT): a randomised control trial of a brief intervention with bibliotherapy in the treatment of recurrent self-harm.* Psychological Medicine 29, 19-25.

Millon Clinical Multiaxial Inventory (MCMI). 175 true/false questions representing 20 scales deriving from Millon's theory of personality. Millon, T (1981) *Disorders of Personality: Axis II.* New York, Wiley.

Minnesota Multiphasic Personality Inventory (MMPI). Used to measure personality status, designed as diagnostic instrument. Extensively used. Morey LC, Waugh MH, Blashfield RK (1985) *MMPI scales for DSM-III personality disorders: their derivation and correlates*. Journal of Personality Assessment 49 245-51.

Montgomery Ashberg Depression Rating Scale (MADRS). Depression scale specifically used to measure change in symptoms over time. Montgomery S, & Ashberg M (1979): *A new depression scale designed to be sensitive to change*. British Journal of Psychiatry 134 382-89.

Multi Impulsivity Scale (MIS). A twenty-two item questionnaire designed to assess a patient's feelings about 11 possible areas of self-harm, including misuse of food, drugs, alcohol, sex, overdoses, cutting and violence. (Evans C, Searle Y and Dolan B. *Two New Tools for the Assessment of Multi-impulsivity, the M.I.S. and C.A.M.* European Eating Disorders Review: 6(1): 48-57. 1988)

Monoamine oxidase inhibitors (MAOIs). A class of drugs which act by inhibiting enzymes that breakdown monoamine neurotransmitters, thereby increasing monoamine availability at synapses. Widely used as treatments for depression. Examples include phenelzine, brofaromine.

Naltrexone. A drug that acts by blocking opiate receptors.

Neuroleptic. A class of drugs classically used to treat psychoses. Examples include haloperidol and fluphenazine.

Nortriptyline. A TCA drug. It acts as an adrenergic reuptake inhibitor but also has serotonergic properties

Objective Behaviors Index (OBI) Interview to elicit responses on behavioural dysfunction. Measures number of items as well as frequency and intensity of occurrence. Munroe-Blum H, and Marziali E. (1986). *Objective Behavioral Index: Scoring Manual*. McMaster University, Hamilton Ontario.

Overt Aggression Scale (OAS). A self-rated scale recording anger and aggressive behaviour. Yudofsky SC, Silver JM, Jackson W *et al.* (1986) *The Overt Aggression Scale for the objective rating of verbal and physical aggression*. American Journal of Psychiatry 143 35-9.

Overt Aggression Scale-Modified for Outpatients (OAS-M). Clinician administered assessment of anger and aggressive behaviour over a specific period of time. Coccaro EF, Harvey PH, Kupshaw-Lawrence E *et al* (1991) *Development of neuropharmacologically based assessments of impulsive aggressive behaviour*. Journal of Neuropsychiatry And Clinical neuroscience 3 (suppl) 44-51.

Paroxetine. An example of an SSRI drug.

Personality Assessment Inventory (PAI). A self-report instrument that assesses Axis II pathology providing dimensional scores for borderline, paranoid and antisocial features. It also provides dimensional scores of important Axis I dimensions such as depression and mania. (Morey L C. *Personality Assessment Inventory*. Odessa et al, Psychological Assessment Resources, 1991.)

Personality Assessment Schedule (PAS). Measures 24 traits and adopts a dimensional approach rated on social impairment rather than intrinsic nature. Tyrer, P and Alexander, J (1979) *Classification of personality disorder*. British Journal of Psychiatry 135, 163-167.

Personality Disorder (PD). ICD-10 defines personality disorders as: "deeply ingrained and enduring behaviour patterns, manifesting themselves as inflexible responses to a broad range of personal and social situations. They represent either extreme or significant deviations from the way the average individual in a given culture perceives, thinks, feels and particularly relates to others. Such behaviour patterns tend to be stable and to encompass multiple domains of behaviour and psychological functioning. They are frequently, but not always, associated with various degrees of subjective distress and problems in social functioning and performance". *The ICD-10 classification of mental and behavioural disorders*. World Health Organisation (1992).

Personality Disorder Examination (PDE). Interview arranged by six areas of functioning. Usually lasts 2 hours. Used to make categorical diagnoses. Loranger A W. (1988). *Personality Disorder Examination (PDE) Manual*. Yonkers NW:DV Communications. (see also IPED).

Personality Diagnostic Questionnaire (PDQ-4). An 85 item self-report questionnaire that gives an index of overall personality disturbance for the 10 sub-types of personality disorders described in DSM-III. Most often used as a screening questionnaire, which has been found to function as a personality trait measure rather than a measure of personality disorder. Using this measure alone to diagnose personality disorder can result in

overdiagnosis. (Hyler S E, Skodol A E, Oldham J M, Kellman H D and Doidge N. The Validity of the PDQ-4. A replication in an outpatient sample. *Comprehensive Psychiatry*: 33:73-7. 1992.)

Personality Diagnostic Questionnaire Revised (PDQ-R). Self-report Questionnaire. Hyler SE, Rieder RO (1987) *PDQ-R: Personality Diagnostic Questionnaire Revised*. New York, New York State Psychiatric Institute.

Process-Psychodynamic Therapy (PPT). Based on supportive group relationships in which members can share and learn to empathise. Jennings (1987). *History and Issues in the treatment of battering men: A case for unstructured group therapy*. *Journal of Family Violence*, 2, 193-214.

Profile of Mood States (POMS). Measure of self-rated symptoms. McNair, D.M., Lorr, M., & Droppleman, L.F. (1981). *Edits manual for the Profile of Mood States (POMS)*. San Diego: Educational and Industrial Testing Service.

Psychiatric Diagnostic Interview-Revised (PDI-R). Structured interview based on psychiatric diagnosis. Series of reliability and validity in manual. Othmer, E., Penick, E.C., Powell, B.J., Read, M.R., & Othmer, S. (1989). *The Psychiatric Diagnostic Interview-Revised*. Los Angeles: Western Psychological Services.

Psychopathy Check List - Revised (PCL-R). The PCL-R is a 20 item rating scale derived from Cleckley's 1996 Concept of Psychopathy. Scores are obtained from both interview and casenote data. Hare R D. 1991. *The Hare Psychopathy Check List - Revised*. Toronto, Ontario: Multi-health Systems. Cleckley H. 1976. *The Mask of Sanity* (5th Edn.). St. Lewis M O: Mosby.

Quality of Life (QOL) Scale for Social Phobia. Self-rating of five areas on scales of 0-8. The higher the scale the more quality of life is impaired. Cottar *et al* (2000). *Cognitive Behaviour Therapy versus Supportive Therapy in social phobia: a randomised controlled trial*. *Psychotherapy and Psychosomatics*. 69 137-146.

Quality of Life Scale. Heinrichs DW, Hanlon TE, Carpenter WT (1984). *The quality of life scale: an instrument for rating the schizophrenia deficit syndrome*. *Schizophrenia Bulletin* 10 388-98

Reasons for Living Inventory (RFL). Linehan M, Goodstein, Nielson, Chiles (1983).

Reciprocal role Procedure (RRP). Describes two poles within a relationship which account for the enactment of roles between people. Ryle A, (1985) *Cognitive Theory, Object relations and the self*. *British Journal of Psychiatry* 38: 1-7.

Schedule for Affective Disorders and Schizophrenia (SADS). Endicott J and Spitzer RL. (1978) *A diagnostic interview: the schedule for affective disorders and schizophrenia (SADS)* *Archive of General Psychiatry* 35 837-844.

Social Avoidance and Distress (SAD). A 28 item true-false inventory about stress in social interactions and about avoidance of such situations. Watson D, Friend R. (1982) *Measurement of social evaluative anxiety*. *Journal of consulting and clinical psychology*. *Archives of general psychiatry*. 47 670 – 678.

Selective Serotonin Reuptake Inhibitors (SSRIs). A class of drugs which inhibit the reuptake of the neurotransmitter serotonin from the synaptic cleft thus enhancing its availability. Widely used to treat depression. Examples include citalopram, fluoxetine, paroxetine, sertraline, and venlafaxine.

Self Injurious Behaviour (SIB). Actions causing deliberate self- harm.

Sertraline. An example of an SSRI drug.

Social Adjustment Scale (SAS). This instrument yields ratings on a four-point scale of adjustment in areas of work, family of origin, marriage, sex and social leisure. A total social adjustment score is derived from the mean values of the sub-categories. (Weissman M (1975). *The Assessment of Social Adjustment*. *Archives of General Psychiatry*, 32,357-65.)

Social Adjustment Scale Self report (SAS-SR). Assesses overall social functioning. Weissman MM, Bothwell S (1976) *Assessment of social adjustment by patients self-report*. *Archives of General Psychiatry* 33 1111-1115.

Social Comparison Scale (SCS). This self-report scale measures how individuals relate to each other socially using five 1-10 scales. Allan S & Gilbert P (1995) *A Social comparison scale: Psychometric properties and relationship to psychopathology*. *Personality and Individual Differences* 19 (3) 293-299.

Social Questionnaire (SQ). Corney, RH, Clare A, Fry J (1982). *The development of a self-report questionnaire to identify social problems – a pilot study.* Psychological Medicine. 12 903-9.

Social Situations Questionnaire (SSQ). A self-report questionnaire in which the subject is asked to report items describing interpersonal activities and the associated distress on a Likert type scale. Bryant B, Trower P, Yardley K, et al (1976) *A survey of social inadequacy amongst psychiatric outpatients.* Psychological Medicine 6 101-112.

Spielberger State trait Anxiety Inventory (STAI). Spielberger CD, Gorsuch RL & Luchane R et al (1983). *Manual for the state-trait anxiety inventory.* Palo Alto, CA: consulting Psychologists Press.

State-trait Anger Expression Inventory (STAXI). Spielberger CD, Johnson EH, Russell SF et al (1985). *The experience and expression of anger: construction and validation of an anger expression scale.* In Anger and hostility in cardiovascular and behavioural disorders. (eds Chesney MA and Rosenman RH) Washington: Hemisphere.

Structured Clinical Interview for DSM-III-R Axis II Disorders (SCID-II). A semi-structured interview used to confirm the diagnosis of Axis II disorders such as depression, psychosis. Spitzer, RL, Williams, JB, Gibbon, M et al (1990). *Structured Clinical interview for DSM-III-R personality disorders (SCID-II Version 1.0)* Washington DC American Psychiatric Press.

Structured Clinical Interview for DSM-III-R Patient Version (SCID-P). A semi-structured interview used to confirm the diagnosis of Axis I disorders. Spitzer, RL, Williams, JB, Gibbon, M et al (1992). *The structured clinical interview for DSM-III-R (SCID) I: history, rationale and description.* Archives of General Psychiatry 49 624-9.

Structured and Scaled Interview to assess Maladjustment (SSIAM). 60-item interview scored on deviant behaviour, conflict with others and perceived distress in a number of areas. Garland BJ, Yorkston NJ, Stone AR et al (1972). *The structured and scaled interview to assess maladjustment (SSIAM): 1. description, rationale and development.* Archives of General Psychiatry 27 259-64.

Symptom Check List - Revised (SCL-90-R). A four-point, self-report clinical rating scale covering symptoms in nine major areas of the patient's psychosomatic and interpersonal functioning. Well-validated and frequently used in psychotherapy outcome research (Derogatis L R, SCL-90-R. *Administration, Scoring and Procedures.* Towson M D. Clinical Psychometric Research, 1983.)

Subjective Units of Distress Scale (SUDS). Distress levels are rated between 0-100. Wolpe J & Lazarus AA (1966). *Behaviour therapies Techniques:* New York, Pergamon Press.

Therapeutic Community (TC). A treatment philosophy based on empowerment of patients and a collaborative engagement of staff and patients in treatment. Also emphasises peer group, group working and learning from living. See introduction to the section on therapeutic communities.

Time-Line follow-back (TLFB). Interview used to estimate number and type of standard drinks consumed during the 120 days before treatment. Sobell & Sobell (1992) *A technique for assessing self-reported alcohol consumption.* In Litten R & Allen JP (eds) *Measuring alcohol consumption: psychosocial and biochemical methods* (pp 41-42) Totowa, NJ: Humana Press.

TAU. Treatment as Usual.

Treatment History Interview (THI). Structured Interview for psychiatric treatment history for a target period. Linehan MM, Armstrong HE, Suarez A, et al: *Cognitive behavioural treatment of chronically parasuicidal borderline patients.* Archives of General Psychiatry (1991) 48.

Tricyclic Antidepressants (TCAs). A class of drugs which, as the name implies, are primarily used to treat depression. Examples include desipramine and nortriptyline.

Valproate. See also divalproex sodium. An anticonvulsant drug with mood-stabilising properties.

Venlafaxine. An example of an SSRI drug.

Ward Atmosphere Scale (WAS). Measures a ward psychosocial environment from both staff and patient perspectives. (Moos RH and Houts P (1968) *Assessment of the social atmospheres of psychiatric wards.* Journal of Abnormal Psychology 73: 595-604.)

Wisconsin Personality Disorders Inventory (WISPI). 311-item self-report questionnaire assessing personality disorder characteristics. Klein MH, Benjamin LS, Treece C *et al* (1990). *The Wisconsin Personality Disorders Inventory*. (Available from: M Klein, Department of Psychiatry, University of Wisconsin, School of Medicine, Madison, WI 53706)

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Home Office
Research, Development and Statistics Directorate
Communication Development Unit
Room 275
50 Queen Anne's Gate
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Tel: 020 7273 2084 (answerphone outside of office hours)

Fax: 020 7222 0211

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