WORKSHOP

Day 1
• Background and building CBTpd model
• DVD of patient
• Narrative case formulation

Day 2
• Planning therapy around formulation
• Therapy details – Self harm
  Regulating mood
  Building more adaptive behaviour
Who are we?

- Who am I?
- Who are you?
- What do we want out of the workshop?
Your opinion

Why do those with PD have a poor response to “usual therapy”? 
Cognitive behaviour therapy for violent men with antisocial personality disorder in the community: an exploratory randomized controlled trial

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Background. Little information exists on treatment effectiveness in antisocial personality disorder (ASPD). We investigated the feasibility and effectiveness of carrying out a randomized controlled trial of cognitive behaviour therapy (CBT) in men with ASPD who were aggressive.

Method. This was an exploratory two-centre, randomized controlled trial in a community setting. Fifty-two adult men with a diagnosis of ASPD, with acts of aggression in the 6 months prior to the study, were randomized to either treatment as usual (TAU) plus CBT, or usual treatment alone. Change over 12 months of follow-up was assessed in the occurrence of any act of aggression and also in terms of alcohol misuse, mental state, beliefs and social functioning.
THE EFFECTIVENESS OF COGNITIVE BEHAVIOR THERAPY FOR BORDERLINE PERSONALITY DISORDER: RESULTS FROM THE BORDERLINE PERSONALITY DISORDER STUDY OF COGNITIVE THERAPY (BOSCOT) TRIAL

Kate Davidson, PhD, John Norrie, Peter Tyrer, MRCPsych, Andrew Gumley, PhD, Philip Tata, CPsychol, Heather Murray, and Stephen Palmer

From Psychological Medicine, University of Glasgow (K. D., A. G.); Centre for Healthcare Randomised Trials, University of Aberdeen (J. N.); Imperial College, London (P. Tyrer); Paterson Centre for Mental Health, London (P. Tata); Robertson Centre for Biostatistics, University of Glasgow (H. M.); and Centre for Health Economics, University of York (S. P.). This manuscript was originally accepted for publication in 2005.


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## Summary main BOSCOT findings

<table>
<thead>
<tr>
<th>Outcome</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of suicidal acts</td>
<td>0.02</td>
</tr>
<tr>
<td>Anxiety</td>
<td>0.013</td>
</tr>
<tr>
<td>Beliefs (YSQ)</td>
<td>0.0064</td>
</tr>
<tr>
<td>BSI – Positive Symptoms Distress Index</td>
<td>0.0047</td>
</tr>
</tbody>
</table>
Mean number of suicide attempts at 2 years
BOSCOT TRIAL: Davidson et al. 2006 p< 0.02

TAU = 1.73(3.11) ; CBT = 0.87(1.47)
Cost efficiency of CBTpd:
30 sessions in first year + one year follow-up
Palmer et al., 2006 JPD

<table>
<thead>
<tr>
<th>Average cost pp per annum</th>
<th>CBTpd</th>
<th>TAU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Over first 2 years</td>
<td>£12785</td>
<td>£18356</td>
</tr>
</tbody>
</table>
Cognitive therapy v. usual treatment for borderline personality disorder: prospective 6-year follow-up
Kate M. Davidson, Peter Tyrer, John Norrie, Stephen J. Palmer and Helen Tyrer

Background
Long-term follow-up of patients with borderline personality disorder have found favourable clinical outcomes, with long-term reduction in symptoms and diagnosis.

Aims
We examined the 6-year outcome of patients with borderline personality disorder who were randomised to 1 year of cognitive-behavioural therapy for personality disorders (CBT-PD) or treatment as usual (TAU) in the BOSCOT trial, in three centres across the UK (trial registration: ISRCTN86177428).

Method
In total, 106 participants met criteria for borderline personality disorder in the original trial. Patients were interviewed at follow-up by research assistants masked to the patient’s original treatment group, CBT-PD or TAU, using the same measures as in the original randomised trial. Statistical analyses of data for the group as a whole are based on generalised linear models with repeated measures analysis of variance type models to examine group differences.

Results
Follow-up data were obtained for 82% of patients at 6 years. Over half the patients meeting criteria for borderline personality disorder at entry into the study no longer did so 6 years later. The gains of CBT-PD over TAU in reduction of suicidal behaviour seen after 1-year follow-up were maintained. Length of hospitalisation and cost of services were lower in the CBT-PD group compared with the TAU group.

Conclusions
Although the use of CBT-PD did not demonstrate a statistically significant cost-effective advantage, the findings indicate the potential for continued long-term cost-offsets that accrue following the initial provision of 1 year of CBT-PD. However, the quality of life and affective disturbance remained poor.

Declaration of interest
P.T. is Editor of the British Journal of Psychiatry but had no part in the evaluation of this paper for publication.
Suicidal acts over extended follow-up

TAU vs CBT

1.26 (-0.06, 2.58, p=0.061 adjusted)
Non-suicidal self harm

Average episodes per month

- Year 1: Average episodes per month
- Year 3-6: Average episodes per month

![Graph showing decreasing trend in episodes per month from year 1 to year 3-6](image-url)
BOSCOT study
PD Criteria: Presence at Baseline (n=106), Frequency %

- abandonment
- identity dist
- anger
- relationship dist
- impulsivity
- emptiness
- paranoid
- affective instability
- self harm

0 20 40 60 80 100
BOSCOT study 6 years follow-up
% change in PD criteria endorsed (n=76)

- affect dist
- anger
- emptiness
- impulsivity
- relationship
- paranoia
- abandonment
- identity dist
- self harm

% change

0 10 20 30 40 50 60 70
What changes in borderline personality disorder over 6 years?
UK BOSCOT sample

- Self harm changes the most
- Mood disturbance changes the least
Cost efficiency of CBTpd maintained over 6 years after 30 sessions of therapy

Davidson British Journal of Psychiatry 2010 197: 456-462

<table>
<thead>
<tr>
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<td>Over first 2 years</td>
<td>£12785</td>
<td>£18356</td>
</tr>
<tr>
<td>Over 6 years</td>
<td>£6582</td>
<td>£18737</td>
</tr>
</tbody>
</table>
Summary of 6 year findings

• 54% of patients diagnosed with BPD achieve remission by standardised diagnostic criteria.
• Those who received one year of CBT maintained differential gains over 6 year follow-up.
• CBT costs efficient
• (TAU £18737 vs CBTpd £6582 over follow-up period)
Influence of therapist competence and quantity of cognitive behavioural therapy on suicidal behaviour and inpatient hospitalisation in a randomised controlled trial in borderline personality disorder: Further analyses of treatment effects in the BOSCOT study

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²Institute of Health & Wellbeing, Gartnavel Royal Hospital, Glasgow, UK
³Adult Psychology Services, Central and North West London NHS Foundation Trust, London, UK

Objectives. We investigated the treatment effects reported from a high-quality randomized controlled trial of cognitive behavioural therapy (CBT) for 106 people with borderline personality disorder attending community-based clinics in the UK National Health Service – the BOSCOT trial. Specifically, we examined whether the amount of therapy and therapist competence had an impact on our primary outcome, the number of suicidal acts, using instrumental variables regression modelling.
Estimates of effect of competence and quantity of therapy from BOSCOT trial

If patients attend CBTpd (at least 3 sessions) + therapist is competent (CTRS ≥60)

- CBTpd treatment estimate:
  Competent therapist averts 5 times more suicidal acts compared to least competent

(Norrie, Davidson et al, PAPTRAP 2013)
Cognitive model of PD

- Genetic/temperament (50%)
- Childhood environment (50%)
- Personality disorder
- Beliefs about self
- Over-developed behaviours
- Under-developed behaviours
- Beliefs about others
Relationship between core beliefs and behavioural strategies

**PD**
- antisocial
- borderline

**Core belief**
- I’ll do what I want
- I am bad/unloveable

**Overdeveloped behaviour**
- Exploits others
- Neglects self. Pushes others away
Development of schemas

Where do the beliefs about self and others come from?
Early development of BPD patients

BPD patients have experienced extreme early life difficulties (Zanarini et al., 1989)

- Abuse
- Inadequate / inappropriate parenting
- Loss
- Neglect
- Situational problems

Childhood trauma produces schemas (beliefs, emotions, actions) that are attempts at compensating or avoiding these events.
The Children in the Community study

Patricia Cohen, Thomas Crawford, Jeffrey Johnson, and Stephanie Kasen
CHILDREN IN THE COMMUNITY STUDY (Cohen et al, 1996, 2005)

Later PD symptoms associated with:
Low family SES,
Family welfare support,
single parent,
parental conflict,
paternal and maternal sociopathy
parental illness and death were each independently related to later PD symptoms.

Parenting and parent-child relationships—predictive of later PD symptoms
low closeness to mother,
low closeness to father,
power assertive punishment,
maternal control through guilt,
and having been the result of an unwanted pregnancy
Predictors of PD Symptoms at age 22, assessed mean age 6 (Cohen 2005)

**Childhood characteristics:**
Behavior problems,
Social isolation
Poor health

**In adolescence**
Low social competence,
Introversion,
Low self-esteem,
Not being attractive,
High emotionality,
Abrasiveness predicted elevated symptoms (incl. those 2+ sd > mean)

The strongest long-term predictors - earlier PD, disruptive disorder, and depressive symptoms
Environmental insults

Early trauma or abuse increases the risk of PD but do not account for all, or even most cases of PD observed in longitudinal cohort.

More likely, environmental effects may be conditional on genetic factors (and vice versa) and the interplay between the two.
CORE BELIEFS

UNCONDITIONAL, RIGID,
I am no good.
I am clever.
I am special.
I am worthless.
Other people cannot be trusted.
Other people are out to get me.
People will abandon me.
Early Maladaptive Schema Questionnaire (Young 1990)

- Independence
- Subjugation/ lack of individuation
- Vulnerability to harm and illness
- Fear of losing control
- Emotional deprivation
- Abandonment & loss
- Mistrust
- Social isolation
- Unlovability/ defectiveness/ badness
- Social undesirability
- Guilt punishment
- Incompetence / failure
- Unrelenting standards
- Loss emotional control
- Entitlement/ insufficient limits
BOSCOT study 106 patients with BPD
Davidson et al 2006

Independence

- **Subjugation/ lack of individuation**
  Vulnerability to harm and illness
  Fear of losing control

- **Emotional deprivation**

- **Abandonment & loss**

- **Mistrust**
  Social isolation

- **UNLOVABILITY/ DEFECTIVENESS/ BADNESS***
  Social undesirability
  Guilt punishment

- **Incompetence / failure**
  Unrelenting standards
  Loss emotional control
  Entitlement/ insufficient limits

BPD**
Changing beliefs

Weaken old beliefs by building new, more adaptive beliefs.

Too problematic to adjust or modify old beliefs.

Need to assess old beliefs and build new beliefs.
Information to help identify schemas

- Important memories across successive ages
- Relationship with parents
- Implicit & explicit family rules
- Significant geographical moves
- Significant separations from loved ones
- Incidents of abuse, verbal emotions, sexual and who was involved in those
- Family history substance abuse & mental illness
- Quality of parents relationship (divorce separations)
- Relationship with siblings
- Important memories about school/ social adjustment, confidence etc
Implications for therapy

- History taking and case conceptualisation
- Role of schemas in past and present difficulties
Cognitive model of PD

- Genetic/temperament (50%)
- Childhood environment (50%)
- Beliefs about self
- Personality disorder
- Beliefs about others
- Over-developed behaviours
- Under-developed behaviours
Relationship between core beliefs and behavioural strategies

PD

antisocial

Core belief

I’ll do what I want

Over developed behaviour

Exploits others

borderline

I am bad/unloveable

Neglects self. Pushes others away
## Typical beliefs and strategies

<table>
<thead>
<tr>
<th>PD</th>
<th>Core belief</th>
<th>Over developed behaviour</th>
<th>Underdeveloped behaviour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antisocial</td>
<td>Others will humiliate me</td>
<td>Avoids close relationships</td>
<td>Reciprocity</td>
</tr>
<tr>
<td>Borderline</td>
<td>I am bad</td>
<td>Self neglect / harm</td>
<td>Self nurturance</td>
</tr>
<tr>
<td>Dependent</td>
<td>I cannot cope on my own</td>
<td>Help seeking</td>
<td>Self sufficiency</td>
</tr>
</tbody>
</table>
Phases 1 & 2 of therapy

Engagement.
Identify core beliefs & over-developed behaviours.
Develop & agree formulation. Agree problems & goals.
Decrease self destructive behaviour.

Work on under-developed behaviours and goals.
Work on new core beliefs.
Core beliefs and behaviour

Develop new core belief

Increase under-developed behaviours

ENVIRONMENT
Phases 3 & 4 of therapy

Reinforce new behaviours & thinking about self and others

Review & encourage new sense of self and accompanying behaviour change

Ending therapy
BPD problems & targets of CBT

- **Interpersonal self & others**
  - Others will let me down/leave me/
  - are bad/
  - others don’t understand me

- **Emotion**

- **Behaviour**

- **I am bad/ not lovable failure**
BPD problems & targets of CBT

- Behaviour
- Emotion
- Interpersonal self & others

Others will let me down/ leave me/ are bad/ others don’t understand me

I am bad I am a failure

Anger depression anxiety
BPD problems & targets of CBT

- Self harm & negative behaviour towards others
- Anger, depression, anxiety
- Emotion
- Interpersonal self & others
- Behaviour
- I am bad/I am a failure
- Others will let me down/leave me/are bad/others don’t understand me

Self harm & negative behaviour towards others

Anger, depression, anxiety

Emotion

Interpersonal self & others

Behaviour

I am bad/I am a failure

Others will let me down/leave me/are bad/others don’t understand me
Central problems in BPD

- Emotional regulation
- Cognitive regulation
- Interpersonal regulation/Interpersonal
Formulation

Childhood environment

Under-developed & overdeveloped behavioural patterns

Core beliefs
  view of self
  view of others

Current relationships

Affect

Interpersonal difficulties which may impact on therapy

Environmental and interpersonal factors which mitigate against change
Exercise

Case formulation
Day 2

- Planning therapy around formulation
- Therapy details
  - Self harm
  - Regulating mood
  - Building more adaptive behaviour
Importance of a narrative formulation in CBTpd

- Provides therapist and patient with joint understanding of why the patient’s view of self and others has arisen and why maladaptive behavior patterns have developed.

- Childhood negative experiences acknowledged and validated

- Provides a coherent sense of self to patient
How would you convey your formulation to someone with PD?

Why would a narrative formulation be more helpful than a diagrammatic one?

Advantages and disadvantages
….the formulation

- Crucial in allowing therapy to be structured around a shared understanding of experiences, problems, under-developed and over-developed behaviour and associated beliefs about self and others.
The case

Feeding back: the narrative formulation letter
Importance of a narrative formulation in CBTpd

- Creates a more empathic response from therapists
- Knowledge about the patient is increased
- Aids reflection on patient’s experience and mental states
- Short cuts crisis reactions
Aims

• Build therapeutic alliance
• Motivational enhancement of change
• Promote more adaptive and coherent view of self and others
• Managing emotions and behaviour
• Improved self nurturance
• Improved communication
Cognitive therapy for personality disorder

Differences from standard Cognitive therapy

Greater emphasis on therapeutic relationship
More session over longer time period
Levels of affect higher during sessions focused on core beliefs
More emphasis on developing new ways of behaving and thinking
Past history more important
CBTpd

Formulation

Developmental perspective

Interpersonal focus

Structured

Under-developed behaviours

Core beliefs
Targets of CBTpd

- Behavioural regulation
  - Develop new beliefs about self and others
  - Behavioural experiments to test out assumptions self & others

- Emotional regulation
  - Changes in interpretation of view of self & others changes emotional response

- Interpersonal sensitivity
  - Interpersonal problem solving
Aims of therapy

Enhance quality of life, reduce self-harm & improve interpersonal functioning by developing new ways of thinking & new ways of behaving.
General principles of change

- Therapy alliance
  - Empathy, positive regard, respect, limits set but also some flexibility.
  - Therapist honest about own limitations
  - Clarity about what the treatment is and is not.

- Shared understanding of problem development through formulation

- Shared agreement in treatment goals
Therapy change procedures

- Focus on core beliefs
- Focus on under-developed behaviours
- Focus on change but balance with empathy regarding how change is difficult to come about
- Promote more positive and adaptive ways of thinking and behaving
- Work with others if possible to promote and reinforce change
Phases 1 & 2 of therapy

Engagement.
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Work on new core beliefs.
Core beliefs and behaviour

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ENVIRONMENT
Phases 3 & 4 of therapy

- Reinforce new behaviours & thinking about self and others
- Review & encourage new sense of self and accompanying behaviour change
- Ending therapy
BPD problems & targets of CBT

- Behaviour
- Emotion
- Interpersonal self & others

I am bad/not lovable/failure

Others will let me down/leave me/are bad/others don’t understand me
BPD problems & targets of CBT

Behaviour

Emotion

Interpersonal self & others

Anger
Depression
Anxiety

I am bad
I am a failure

Others will let me down/
leave me/
are bad/
others don’t understand me
BPD problems & targets of CBT

- **Behaviour**
  - Others will let me down/leave me/are bad/others don’t understand me

- **Emotion**
  - I am bad
  - I am a failure

- **Interpersonal self & others**
  - Self harm & negative behaviour towards others

- **Anger depression anxiety**
Central problems in BPD

- Emotional regulation
- Behavioural regulation
- Cognitive regulation/Interpersonal regulation
Self harm & regulation of affect

Negative affect

Self harm

Affect improves
Reducing deliberate self-harm

Main strategies

- Increase understanding of self-harm through formulation of problems - relationship between core beliefs and self-harm behaviours
- Explore consequences of self-harm, both short and long term
- Attend to self-nurturing behaviours (eating, sleeping, activity etc.)
- Shift focus to increasing awareness of more adaptive coping responses
- Attend to when the patients manages not to self-harm.
Central problems in BPD

- Behavioural regulation
- Emotional regulation
- Cognitive regulation/Interpersonal
Cognitive behaviour therapy working on different levels of cognition

<table>
<thead>
<tr>
<th>Structural level</th>
<th>Treatment technique</th>
</tr>
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<tbody>
<tr>
<td>Automatic thoughts</td>
<td>Thought records</td>
</tr>
<tr>
<td>Assumptions</td>
<td>Behavioural experiments</td>
</tr>
<tr>
<td>Core beliefs</td>
<td>Continuum</td>
</tr>
<tr>
<td></td>
<td>Historical test of schema</td>
</tr>
<tr>
<td></td>
<td>Notebook to strengthen more adaptive beliefs</td>
</tr>
</tbody>
</table>
New belief

I am able cope on my own

0% x ___________________________ 100%
## Historical test of belief (5 to 10 years)

**Old belief:** I am not worthy of love  
**New belief:** Others may like me & I can be loved

### Evidence for the old belief

- My mother criticised me a lot
- I was bullied at school
- The teachers never said I was good at anything

### Evidence for my new belief

- My aunt cuddled me
- My mother was unhappy because my father was often drunk, not because of me
- Susie liked me
Central problems in BPD

- Emotional regulation
- Behavioural regulation
- Cognitive regulation/Interpersonal regulation
How do you self soothe?

Please think of 3 ways from your repertoire?
How do you self soothe?

Please think of 3 ways from your repertoire?

NOW

How would you teach that to a patient?
Why Behavioral Experiments?

Clinicians’ experience:

- “..offer the most powerful means to cognitive change in cognitive therapy” (Wells, 1997)

- “..best way to increase the believability of your alterative or balanced thoughts is to try them out in your day-to-day life” (Greenberger & Padesky, 1995)
Behavioral Experiments

- Patients may find these experiments are:
  - Scary
  - Challenging
  - Unthinkable!

- So require bravery, persistence, trust in therapist
Behavioral Experiments

- Relationship very important - based in trust
- Induce spirit of curiosity & willingness to experiment
- Guided discovery & Socratic questions
- Also a number of other skills: e.g. encouragement, coaxing, modelling, coaching, creativity, use of humour, think on your feet.
Types of Experiment

Active Experiments
1. Real situations
2. Simulated (e.g. role-plays)

Observational Experiments
1. Direct observation
2. Surveys
3. Data gathering from other sources (e.g. internet)
Planning the experiment

- Be specific
- Be clear
- Elicit what is being predicted?
- How will expt be carried out? When Where With whom?
- Worst case scenario/ ways of coping
- Reporting what happened
The How of Behavioral Experiments

The Lewin/Kolb Experiential Learning Circle

**ACT**
Carry out the experiment

**PLAN**
1. Plan experiment
2. Plan next experiment

**OBSERVE**
What happened?

**REFLECT**
1. Identify assumption to be tested
2. Reflect on meaning of experiment
Behavioral Experiments

I. Behavioral experiments are:

- Usually planned (occasionally spontaneous)
- Experiential activities
- Undertaken by participants in or between sessions
- Based on experimentation or observation
Planning the experiment

- Be specific
- Be clear
- Elicit what is being predicted?
- How will expt be carried out? When Where With whom?
- Worst case scenario/ ways of coping
- Reporting what happened
Designing Behavioral Experiments

Testing a hypothesis (could be a belief or assumption)

Example
Old belief - I am unlovable
New belief - Some people might like me some of the time.

How would you tell if some people liked you?
What proof would you take as acceptable?
Evidence from the past?
From an experiment now?
# Planning the experiment: Form

<table>
<thead>
<tr>
<th>Prediction or Theory</th>
<th>Experiment</th>
<th>Results</th>
<th>Conclusions/Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>State the thought, belief, or theory you are testing.</td>
<td>Plan what you will do (where, when, how, with whom).</td>
<td>Record what actually happened. Include relevant thoughts, emotions, physical sensations, other people’s behaviour.</td>
<td>What have you learned about your prediction or theory in light of your results?</td>
</tr>
<tr>
<td>Rate how strongly you believe it 0-100%</td>
<td></td>
<td></td>
<td>Re-rate how strongly you believed it 0-100%</td>
</tr>
</tbody>
</table>
Ending &
the final phase of CBTpd
Review of progress and new learning

- Discuss progress with problems
- What has been learned about pattern of problems.
  (e.g. stress/ alcohol use etc and how this has an effect on self-harm, relationships)
- Discuss how the patient’s response has changed over time of therapy. What more adaptive strategies have been acquired? How did they develop these new strategies?
- Discuss how old and new core beliefs influence emotions and behaviour
Deal with separation issues

- Be clear that therapy is structured, has finite number of sessions.
- Increase frequency of sessions to weekly at end (if necessary).
- Discuss how the patient will cope without therapy and what supports and new ways of behaving are available to them.
- Acknowledge the quality and meaning of the relationship.
What if there is a crisis?

Don’t panic
Try to deal with crisis within time frame outlined to patient.
Review patient’s new ways of coping (from previous sessions)
Discuss patient’s anxieties about end of therapy.
Conclusions

- Evidence base for personality disorders is improving with more systematic rigorous studies now being carried out
- Psychological treatments helpful
- Systematic good clinical management also helpful
- Needs to be delivered by experienced & competent therapists
- Level of impairment is severe
- High costs (£) associated with PD
References

Thank you

Email: kate.davidson@glasgow.ac.uk