ENHANCING THE ACCEPTABILITY OF CBT FOR ANXIETY DISORDERS AND RELATED PROBLEMS

SAFETY BEHAVIOUR REVISITED

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Concordia University
Enhancing the acceptability of CBT

• History
  • What is the problem?
    • Why is it important?
• Cognitive, Behavioural approaches
• Safety behaviour reconceptualized
• Clinical implications
• Future directions
HISTORY
History

- Our roots are in the history of learning and behaviour change
- Exposure works (impressively well)
  - Cognitive therapy works too

- CBT works for an immense range of problems
  - Evidence shows it to be robustly effective at reducing the symptoms of a surprisingly wide variety of psychological and physiological problems
History

Ivan Petrovich Pavlov 1849-1936

- Our history comes from the science of learning and behaviour change
- Identified factors involved in classical conditioning
- Experimental method
  - Animal model
- Induced experimental neuroses
  - Lasting effect
- Sadly, he did not apply his work to treatment
A behavioural theory & therapy

Joseph Wolpe
1915-1997

• Working first with cats at Witswatersrand University
• Experimentally induced neurotic cats were soothed by feeding
• Developed theory of reciprocal inhibition
• Was foundation for systematic desensitization
Evidence base?

Hans Jürgen Eysenck
1916-1997

- Psychotherapy ineffective
  - Big problem!
- Link between science and practice
  - A strong advocate for behaviour therapy
    - Happened to meet Wolpe during his visit to London
- Other approaches should also be based on this link
Behavioural theory & therapy for anxiety disorders (the ‘B’ in CBT)

- **THEORY:** Problems are negatively reinforced by both overt and subtle avoidance (e.g., distraction)
- **PRACTICE:** Therapists use both *in vivo* and imaginal exposure along a graded hierarchy
  - Highly effective for EVERY anxiety disorder
- **BUT:** Unsupported (and disproven) guidelines for exposure often make it unnecessarily difficult
  - This may be changing (e.g., Craske et al., 2008)
  - ...but we still don’t know how exposure works
- **AND:** many therapists don’t like using exposure (e.g., Becker, 2004; Zayfert & Becker, 2000)
Cognitive theory & therapy for anxiety disorders (the ‘C’ in CBT)

• **THEORY:** It’s not what happens to you; it’s what you make of it. Problems are maintained by maladaptive beliefs, interpretations and other cognitions

• **PRACTICE:** Help clients come to alternate way(s) of understanding their thoughts, sensations, environments (collect evidence, examine beliefs, etc.)

• **BUT:** Cognitive therapy is arguably more challenging for therapists, may have implications for training

• **AND:** Some clients deny the presence of maladaptive cognitions
Treatment development, Understanding mechanisms

• *HOW* does CBT work?
  • If you can emphasize active mechanisms, outcome should be better

• Early studies on the spontaneous decay of fears and compulsive urges
  • (Likierman & Rachman, 1980; Rachman, de Silva & Röper, 1976)

• Emotional Processing
  • (Rachman, 1980; Foa & Kozak, 1984)

• Inhibitory Learning
  • (e.g., Craske, et al., 2008; Abramowitz, 2013)

• Cognitive Change
  • (e.g., Beck, 1991; Hofmann, Asmundson & Beck, 2013)

• *ALL* of the above underscore Eysenck’s emphasis on connecting the laboratory to the clinic
There were many debates over the years (...and many still continue)

With OCD as an example:

• Which is better?
  • E.g., Butler et al., 2006; Cottraux et al., 2001; Emmelkamp & Beens, 1991; McLean et al., 2001; Olatunji et al., 2013; Öst et al., 2015; Van Balkom et al., 1994; Van Oppen et al., 1995; Whittal et al., 2005

• In the end, whether you take a behavioural, cognitive, or a combined approach, you are likely to be an effective therapist
  • Evidence continues to emerge for ACT, Mindfulness-based approaches

• This means that therapists have choices, and choice is great!
BUT, *how* is it applied?

- Some experienced (and even inexperienced) therapists apply the techniques of CBT with empathy and compassion

- Many apply it in a cognitive context
  - “It’s not what happens to you; it’s what you make of it.”

- During particularly challenging exercises,
  - “I know that this is difficult, but stick with it and you’ll see that it gets easier.”
We have focused so much on outcome,

• “CBT is not easy”

• Even though the treatment is effective, it is not always acceptable to patients and clients
  • Tolerability and compliance
    • What awful terms!
We forgot to focus on acceptability

- Foa et al. (2005 example)
  - Intent-to-treat analysis, responders
    - 62% ERP, 42% Clomipramine, 70% Combo, 8% Placebo
    - 37 enrolled
    - 8 dropped out when assigned to ERP condition & 8 dropped out during ERP
    - So, 16/37 (43%) did not complete ERP treatment
- Dropouts from a generalist CBT service = 43.8% of clientele
  - Bados, Balaguer & Saldaña (2007)
- Attrition rates for OCD do seem to be higher for ERP compared to CT (Öst et al., 2015)
- Many therapists prefer not to use it
  - (Addis & Krasnow, 2000; Addis, Wade & Hatgis, 1999)
- We are not effectively delivering effective treatment
What do therapists say?

• “I don’t like making my client feel too anxious”
• “I prefer integrative therapy because it feels nicer”
• “I didn’t go into this field to make people suffer”
• “If I see that exposure is upsetting my patient, we’ll take a break and talk about early developmental crises”
• “I wish that behaviour therapy for anxiety disorders didn’t have so much exposure in it”
We need a solution

- CBT is *not* a cruel treatment,
  - but we can assess whether a gentler, kinder form of the treatment is effective and acceptable
Developments in cancer and HIV treatments

• Early vs. newer chemotherapy drugs in terms of effectiveness & of side effects
  • Goldin & Mantel, 1957; Burish & Jenkins, 1992; Dodd & Mood, 1981
• Progression of treatments for HIV
  • Kirschner, Lenhart & Serbin, 1997; Catz et al., 2000

• Initially, it was critical to discover effective treatments
• Once these were found, it was just as critical to reduce side effects, and (ideally) further increase efficacy

• We can take a similar approach in CBT
  • Requires some innovation
SAFETY BEHAVIOUR

A reconceptualization
Safety Behaviour

• Actions, thoughts, protective objects used by anxious individuals to prevent or minimize feared catastrophe
  • Overt & covert safety behaviour
• Proposed effect of preventing threat disconfirmation through a misattribution of safety if you’re a cognitivist (Salkovskis, 1991)
• OR, if you’re a behaviourist, SB is ‘bad’ because it reduces anxiety during exposure, or because it reduces the expectancy gap optimal for inhibitory learning
• A large number of studies have shown that use of SB interferes with treatment success (e.g., agoraphobia - Salkovskis et al., 1999; claustrophobia – Sloan & Telch, 2002; social anxiety disorder – Kim, 2005)
Normative SB

- How many of you would carry an umbrella with you when the probability of rain is $\geq 30\%$?
  - How many of you always (or almost always) carry an umbrella?
- How many would rehearse/practice a conference talk?
- How many check your hair in the mirror before leaving?
- Ask a partner or friend about what you’re wearing?
- Look away during a scary movie, or an inoculation?

- These are all examples of safety behaviour
SB in CBT

• Unfortunately, many CBT therapists insist on eliminating SB ASAP
  • “SB is countertherapeutic”
  • “You must not engage in SB”
  • “Sit with your discomfort”
• A cognitively-based reconceptualization (Parrish, Radomsky & Dugas, 2008; Rachman, Radomsky & Shafran, 2008)
  • The judicious use of SB might
    • Facilitate approach behaviour
    • Enhance the client’s ability to acquire disconfirming information
    • Enhance perceptions of control
    • Make CBT more acceptable
(Not a new idea, btw...)  

- “Response induction aids” facilitated better treatment outcome for snake phobia  
  - Bandura, Jeffrey & Wright (1974)  

- The option to escape during BT for agoraphobia led to better outcome than standard BT  
  - de Silva & Rachman (1984); Rachman, Craske, Tallman & Solyom (1986)
Does SB interfere with treatment?

- Concordia undergraduates and members of the community
  - (n = 62)
- “very much fear” or “terror” of snakes
- Safety behaviour (SB) condition: 25 F, 6 M
- Control condition: 23 F, 8 M
- Mean age 26.08 yrs

Milosevic & Radomsky (2008)
Fear Stimulus and Therapy Room

Milosevic & Radomsky (2008)
“Protective gear commonly used by people who handle snakes.”

Milosevic & Radomsky (2008)
Study Design

Assessment:
- ADIS-IV, BAI, BDI-II

T1 – Pre-treatment (no safety gear):
- FSQ, BAT distance, SUDS, ACQ-S, BSQ

Treatment:
- Exposure with safety gear
- Exposure w/out safety gear

T2 - End of treatment:
- BAT distance, SUDS, ACQ-S, BSQ

Time delay

T3 - Post-treatment (no safety gear):
- FSQ, BAT distance, SUDS, ACQ-S, BSQ
- Use of covert safety behaviour

Milosevic & Radomsky (2008)
Treatment

- 45-min graduated *in vivo* exposure
- 33-point hierarchy:
  1. Standing outside therapy room with door closed ...
  33. Holding the snake
- At participants’ own pace
- SUDS ratings and distance from snake recorded at 5 minute intervals

Milosevic & Radomsky (2008)
Treatment Outcome

Fear of Spiders Questionnaire

Mean FSQ scores

Significant effect of time, \( p < .001 \)

Pre-Treatment | Post-Treatment

FSQ - SB | FSQ - Control

SUDS Ratings & BAT Distance

Mean BAT Distance & SUDS Ratings

Significant effects of time, \( p's < .001 \)

Pre-Treatment | Post-Treatment

BAT - SB | BAT - Control | SUDS - SB | SUDS - Control

Milosevic & Radomsky (2008)
Approach Behaviour During Session

Significant difference during early phase, marginal during second phase, and n.s. during third phase

Milosevic & Radomsky (2008)
SUDS Ratings During Session

Sig. main effect of time, $p < .001$

Milosevic & Radomsky (2008)
A replication

Effects of safety behaviors on fear reduction during exposure

Heather K. Hood, Martin M. Antony*, Naomi Koerner, Candice M. Monson

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A focus on cognitive change

• Essentially the same design, but
  • Participants (n = 126) were highly fearful of spiders
  • Exposure was replaced with a behavioural experiment
    — “Your goal is to learn as much as possible about the spider and your reactions to it so that you can test whether your belief that ________________ is true”
    — Target belief identified idiographically using the Spider Beliefs Questionnaire (SBQ)

Milosevic & Radomsky, 2013a
Exposure Room and Spider

- 3.13 x 2.30-meter room
  - Farthest distance from terrarium 2.74 m (9 feet)

- Chilean Rose tarantula (11 cm diameter)
  - Presented in empty clear terrarium with removable lid

Milosevic & Radomsky, 2013a
Belief Change: SBQ Target Belief

- Significant between-participants post–session difference after co-varying out baseline scores
- $F(1, 123) = 4.96, p < .05$, partial $\eta^2 = .04$
Fear Change: FSQ

Significant main effect of time,
\( F(1, 124) = 151.63, p < .001, \) partial \( \eta^2 = .55 \)
Fear Change: BAT & SUDS

**Proximity to Spider**

- **Safety Gear**
- **Control**

**SUDS Rating**

- **Safety Gear**
- **Control**

**Significant main effect of time,**

\[ F(1.38, 170.26) = 242.08, \ p < .001, \ \text{partial} \ \eta^2 = .66 \]

**Significant main effect of time,**

\[ F(1.86, 221.53) = 25.14, \ p < .001, \ \text{partial} \ \eta^2 = .17 \]
Number of Participants Who Removed Lid From Spider Container During 20-min Behavioural Experiment

Milosevic & Radomsky, 2013a
A vignette-based acceptability study: Two samples

- 467 undergraduates from two Montreal universities
  - Age: $M=22.68$ (SD=4.48), range 18-59 yrs
  - 82% women
  - Years in university: $M=2.57$ (SD=1.73)

- Clinically anxious sample, $N=40$
  - Age: $M=32.80$ (SD=12.33), range 18-64 yrs
  - 70% women
  - Years in university: $M=3.17$ (SD=3.12)

Milosevic & Radomsky, 2013b
Clinically Anxious Participants

- Primary diagnosis of anxiety disorder based on Anxiety Disorders Interview Schedule for DSM-IV (ADIS-IV)
  - 27% Social Anxiety Disorder
  - 23% Obsessive-Compulsive Disorder
  - 21% Generalized Anxiety Disorder
  - 15% Specific Phobia
  - 6% Panic Disorder w/ Agoraphobia
  - 6% Panic Disorder
  - 2% Hypochondriasis

- Secondary diagnoses
  - GAD, OCD, PD, Specific Phobia, Dysthymia, Major Depressive Disorder, Hypochondriasis, Substance Dependence & Abuse Disorders

- Number of diagnoses: $M=1.90$ ($SD=.87$)

Milosevic & Radomsky, 2013b
Frequency Distribution of 1st-Choice Treatments
(Student Participants, N=467)

• Descriptions incorporating judicious use of SB were selected 4.7 times more frequently as a 1st-choice treatment than those not incorporating judicious use of SB

Milosevic & Radomsky, 2013b
• Descriptions incorporating judicious use of SB were selected 3.8 times more frequently as a 1st-choice treatment than those not incorporating judicious use of SB
Summary of Acceptability Results

• Treatment descriptions that endorsed judicious use of safety behaviour and presented a cognitive rationale were more acceptable than descriptions that discouraged safety behaviour use and presented an extinction rationale
  • Milosevic & Radomsky, 2013b; Levy, Senn & Radomsky, 2014
Safety Behaviour Enhances the Acceptability of Exposure

Hannah C. Levy and Adam S. Radomsky
Department of Psychology, Concordia University, Montreal, QC, Canada

- Following a series of exposure exercises to contaminated stimuli (i.e., dirty laundry, cat hair/insects, bed pan, toilet)
- Undergraduate participants rated ESB as significantly more acceptable than ERP
  - Those in the ESB condition also completed more BAT steps at post-treatment compared to those completing ERP
The case of SB in OCD

• We sought to compare
  • Exposure and Response Prevention (ERP), with
  • Exposure and Safety Behaviour (ESB)
    • Following exposure to a contaminated object, participants are asked to wipe their hands using an hygienic wipe

• Again, a subclinical sample (n = 80) was used

Rachman, Shafran, Radomsky & Zysk, 2011
Six contaminants

• Idiographically selected based on participant’s ratings

  • Shoe
    • Rub the bottom of your shoe
  • Money
    • Touch a grubby looking $5 bill and some old coins

• Garbage
  • Touch garbage can containing granola/candy bar wrappers, used coffee cup, tissues

• Phone
  • Touch an old discoloured lab phone

• Culture sample
  • Touch a test tube containing a coloured liquid

• Lab specimen
  • Touch a biohazard bag containing gauze and a surgical glove

Rachman, Shafran, Radomsky & Zysk, 2011
Study design

• Following baseline testing, random assignment
  • ERP or ESB

• 20 trials during visit 1
  • Touch and wait (ERP) vs. Touch and wipe (ESB)
  • Ratings of contamination, fear, danger and disgust (CFDD) taken after the touch, but before the wipe/wait

• 16 trials during visit 2, about two weeks later
  • CFDD ratings taken after each trial

Rachman, Shafran, Radomsky & Zysk, 2011
Fear ratings

Rachman, Shafran, Radomsky & Zysk, 2011
Contamination ratings

Rachman, Shafran, Radomsky & Zysk, 2011
Reducing contamination by exposure plus safety behaviour

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Marcel A. van den Hout\textsuperscript{*,} Iris M. Engelhard, Marieke B.J. Toffolo, Sophie L. van Uijen

Utrecht University, The Netherlands
A recent clinical replication and follow up study (Levy & Radomsky, 2016a)

- Testing hypotheses in a clinical sample, and
  - Does it matter WHICH safety behaviour is used?
- A sample of (n = 60) individuals diagnosed with OCD and reporting clinically significant contamination fears
- Asked to come to the lab with their most commonly used SB
  - E.g., wipes, gels, gloves, etc.
- Following the same idiographic baseline selection of most-distressing contaminant, participants were randomly assigned to conduct 20 trials:
  - ERP (touch and wait)
  - ESB with routinely-used SB (RU)
  - ESB with never-used SB (NU)
Results: Behavioural Approach
(Similar findings for anxiety, ratings of contamination)

• ANCOVA controlling for baseline scores revealed no group differences at post-treatment, $F(2, 56) = 1.72, p = .189$
  • Significant baseline differences, $F(2, 54) = 3.72, p = .031$
Results: Disgust

Disgust ratings decreased more rapidly in the NU condition as compared to ERP, $B = .98$, $t(36) = 1.84$, $p = .075$
How to fade safety behaviour? (Levy & Radomsky, 2016b)

- Subclinical participants (n = 100) with high levels of contamination fear were randomly assigned to one of three safety fading conditions during 20 exposure trials:
  - Participant initiated (PI)
  - Experimenter initiated (ET; yoked to time/trial #)
  - Experimenter initiated (EA; based on reduction in SUDS)
- All conditions showed improvement, but these were significantly greater for PI compared to ET
- Acceptability was also markedly higher for PT compared to ET
Warning!

- Safety behaviour use is often bad
  - But there are both good and bad types of SB
- This work is still in its early stages
- Please do not try using hygienic wipes with your OCD patients
- Much empirical support for many of these techniques remains to be assessed
  - Work required on treatment seeking clinical populations with a range of pathologies with long term follow-ups
    - Some of this is already underway
On the other hand, ...

- In many respects, we’re already doing it
- Consider a typical hierarchy
## Sample hierarchy for agoraphobia

<table>
<thead>
<tr>
<th>Activity</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supermarket alone</td>
<td>100</td>
</tr>
<tr>
<td>Supermarket with friend</td>
<td>85</td>
</tr>
<tr>
<td>Post office alone (no meds)</td>
<td>80</td>
</tr>
<tr>
<td>Post office with meds (in pocket)</td>
<td>70</td>
</tr>
<tr>
<td>Post office with friend</td>
<td>60</td>
</tr>
<tr>
<td>Walk around the block alone (no meds)</td>
<td>55</td>
</tr>
<tr>
<td>Walk around the block w/ meds (pocket)</td>
<td>40</td>
</tr>
<tr>
<td>Walk around the block with friend</td>
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</tbody>
</table>
Even if you disagree, ...

- *Please* be sure to assess the impact of behaviour on cognitive change (and vice versa)
  - Don’t assume that something is countertherapeutic
    - A GREAT opportunity for behavioural experiments

- Behaviour which blocks cognitive change is likely to be harmful
  - Plenty of evidence for this

- But, behaviour which facilitates cognitive change (and/or approach behaviour) is likely to be helpful

- Your clients are often the best guide to this
For us, cognition led here

• Although this could easily be applied to enhancing the acceptability of exposure-based treatments

• There may be other advantages of a cognitive approach to OCD (Shafran, Radomsky, Coughtrey & Rachman, 2013)
  • Effective strategies for working with obsessions (Rachman, 1997, 1998; Whittal et al., 2010)
  • Effective strategies for working with doubting and checking (Rachman, 2002; Alcolado & Radomsky, 2011, 2016)
  • Emerging strategies for understanding and working with mental contamination (Rachman, 2004; Coughtrey et al., 2013)

• PS – Experimental psychopathology helped us get here too!
How can we enhance CBT?

- Treatment innovations continue, many of them guided by cognitive theory
- ‘Compliance’ and ‘tolerance’ problems rest solely with the therapist
  - It is our job to make treatments more acceptable
- Much of what we do is superb and we should be proud of this
  - But opportunities to build upon these improvements will enable us to expand our ability to help those most in need without scaring them away
- We continue to work on this in the lab... and in the clinic
- Watch this space
THANK YOU