**Third-Generation Approaches to Behavior Therapy**

Chair: Jarrod S. Turner (Murdoch University)

**Clinical Evaluation of Behavioral Activation Treatment of Anxiety (BATA) in Three Older Adults** (Applied Behavior Analysis) JARROD S. TURNER David J. Leach (Murdoch University)

**Abstract:** This paper describes three single-case experimental evaluations of behavioral activation treatment of anxiety (BATA) applied with a 51-year-old male, a 62-year-old female, and a 53-year-old female, each of whom met DSM-IV criteria for generalised anxiety disorder (GAD). Each case was a clinical replication of an initial trial of BATA reported in Turner and Leach (2009). Treatment was delivered in twelve weekly 60-minute individual sessions and evaluated using an A-B-C phase change with repeated measurement design. Decreased scores in self-reported anxiety were obtained in each case and the improvements were maintained during a 3-month no treatment maintenance phase. Compared to baseline, each participant also recorded increases in activity levels in some key life areas during the treatment phase. These preliminary findings suggest that increased activation in functionally positive areas is associated with reported decreases in anxiety and that BATA could be an effective stand-alone treatment for GAD in adults.
Clinical Evaluation of Behavioral Activation Treatment of Anxiety (BATA) in 3 Older Adults

Dr Jarrod Turner
Associate Professor David Leach
School of Psychology, Murdoch University
Western Australia

Definition

Behavioral activation (BA) therapy includes techniques to specifically increase the level of client engagement in meaningful activities.

The aim is for the client to contact naturally occurring sources of reinforcement for overt behaviors that may have anti-depressant or anxiolytic functions.
Principles

BA is based on the principles of operant conditioning

Concurrent schedules of reinforcement maintain a person’s levels of clinically relevant behaviors (healthy and non-healthy)

Illustrated by Hornstein’s Matching Law equation:

\[ T_1 = r_1 \]

\[ T_1 + T_2 = r_1 + r_2 \]
Empirical Evidence


Gortner et al. (1998). No outcome differences at 2 year follow-up.


BA more effective than CBT with the ‘high severity’ group
The Current Model (BATA)

Discrete responses are placed within broad functional classes of behaviours (avoidance and approach)

Increased contact with (+) for approach behaviors and decreased contact with (-) for avoidance behaviors weakens the contextual support for anxiety

Increased likelihood of extinction of learned (classically conditioned) fears (i.e., accordant with two-process (factor) models)
The Present Study

Single-case within-subject experimental (A/B/C) design:

‘A’ phase was baseline (self-monitoring (SM) & standardised self-report): 16 to 35 days

‘B’ was treatment: 12 x 1hr weekly individual BA sessions (84 days)

‘C’ was no-treatment maintenance/follow-up (no SM): 84 days

Total of 7 clinical replications (3 in today’s paper)
Measures

Beck Anxiety Inventory (BAI)
Depression, Anxiety, Stress Scales (DASS)
Self-monitored Anxiety Ratings
Self-monitored Activity Recording
Daily Anxiety Rating Scale

Using the anxiety scale below, please rate your average level of anxiety during each of these time periods (A). Also, in the space provided make a note of where you were, who you were with, and what you were doing (Setting).

Anxiety Scale (%)

<table>
<thead>
<tr>
<th>No Anxiety</th>
<th>Moderate anxiety</th>
<th>Extreme anxiety</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>25</td>
<td>50</td>
</tr>
<tr>
<td>50</td>
<td>75</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Waking to 9am</th>
<th>9am to 12pm</th>
<th>12pm to 3pm</th>
<th>3pm to 6pm</th>
<th>6pm to 9pm</th>
<th>9pm to bedtime</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Setting</td>
<td>A Setting</td>
<td>A Setting</td>
<td>A Setting</td>
<td>A Setting</td>
<td>A Setting</td>
</tr>
</tbody>
</table>
## Behaviour Self-Monitoring Diary

**Day:** __________  **Date:** __________

**Time you got out of bed:** ______  **Time you put on your pedometer:** ______  **Time you removed pedometer:** ______  **Distance (kms):** ______

<table>
<thead>
<tr>
<th>Activities</th>
<th>From waking up to 12.00 midday</th>
<th>From 12.00 midday to 6.00pm</th>
<th>From 6.00pm to bedtime</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>At home</td>
<td>Out of home</td>
<td>At home</td>
</tr>
<tr>
<td></td>
<td>Alone</td>
<td>With others</td>
<td>Alone</td>
</tr>
<tr>
<td>Self (or other) care.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Housework &amp; errands.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paid or unpaid work.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interests, hobbies, and recreation.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Treatment

- (Functional Contextual) Psycho-education, e.g., 3-term contingency / ABC analysis
- Self monitoring
- Goal setting (short, medium, long)
- Activity scheduling
- Task analysis
- Activity reviews
- Avoidance blocking
- Behavioral problem solving
Case 1  Frank
51 Year old male
Artist (painter), lecturer, PHD candidate
Lengthy psychotherapy history
DSM-IV criteria –
Social Anxiety Disorder (Generalised)
Genralised Anxiety Disorder
Minutes Spent on Interests, Hobbies and Recreation

Days

0 100 200 300 400 500 600 700 800
1 8 15 22 29 36 43 50 57 64 71 78 85 92 99 106
Case 2  Mary
62 Year old female
Part time conservation worker
No psychotherapy history
Recent migration to Australia from the UK
DSM-IV criteria –
Specific Phobia (Situational)
Generalised Anxiety Disorder
Beck Anxiety Inventory Raw Scores

Weeks
DASS-21 Stress Raw Scores

Weeks

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 22 26 30
Conclusions

Effective, time efficient, and lasting treatment, yet rarely applied with anxiety

This study showed that increases in activity occurred in the context of concurrent decreases in reported anxiety and stress

In these cases, no need for adjunctive techniques

The treatment model matches the underlying principles of behavior