

# Transdiagnostic CBT Treatment of Co-morbid Anxiety and Depression in an Older Adult: Single Case Experimental Design

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**Background:** Despite the prevalence of co-morbid anxiety and depression in older adults, evaluation of suitable clinical models is rare. **Aims:** This study tested the acceptability and effectiveness of a transdiagnostic approach to treating co-morbid anxiety and depression in an older adults in a routine clinical setting. **Method:** In an A/B single case experimental design, a patient completed five daily ideographic measures of anxiety and depression across baseline and treatment and the HADS at five time points over time, including 3-month follow-up. The 8-session treatment was transdiagnostic CBT informed by the Unified Protocol. **Results:** All sessions were attended. Significant baseline-treatment improvements were found for daily structure, mood, confidence and worry, with large associated effect sizes. The HADS showed that the patient met recovery criteria by the end of treatment, with some evidence of anxious relapse at follow-up. **Conclusion:** Transdiagnostic CBT offers promise as a treatment approach to mixed anxiety and depression in older adults. The model needs to be further tested using more rigorous and suitably powered methodologies.

**Keywords:** Unified protocol, single case experimental design, older adults.

## Introduction

Co-morbidity of anxiety and depression in older adults (65+ years) is more common than each disorder independently; 50% suffering from depression also display some form of anxiety disorder (King-Kallimanis, Gum and Kohn, 2009). Co-morbidity also increases impairment

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in daily functioning, severity of symptoms and likelihood of suicide (Lenze, 2003). In recognition of such comorbidity, a “transdiagnostic” or “unified protocol” (UP) has been developed (Barlow et al., 2011). The UP is a manualized, brief cognitive behavioural treatment that formulates deficits in emotion regulation as key maintainers of anxiety and depression, through chronic and unsuccessful emotional avoidance (Barlow et al., 2011). At present, however, the UP model has only been evaluated on adult populations and urgently requires some initial testing on older adults.

In the present paper, a single case experimental design (SCED) evaluating the UP treatment of an older adult with a diagnosis of co-morbid depression and anxiety is presented. SCED is one in a range of complementary empirical frameworks regarding the scientific evaluation of “real-world” psychotherapy that places minimal restrictions on inclusion criteria, thus increasing external validity (McMillan and Morley, 2010). The study hypotheses were: H1, that the UP will be well tolerated; H2, UP treatment will improve symptoms of anxiety over time in comparison to baseline; H3, UP treatment will improve symptoms of depression over time compared to baseline; H4, UP will facilitate a reliable and clinically significant improvement to anxiety and depression.

## Method

### *Design*

An A/B SCED evaluated an 8-session transdiagnostic CBT treatment with a 3-month follow-up. The baseline (A) phase was spread over two assessment sessions (2-weeks duration), reflecting a standard assessment period in routine clinical practice (McMillan and Morley, 2010). The overall time series generated therefore consisted of 70 continuous days of an older adult patient undergoing assessment (A) and treatment (B) informed by the Barlow et al. (2011) UP.

### *Participant*

Jan (pseudonym), a 67-year old white-British female, was referred for psychological assessment following non-response to a range of medication and support. Jan presented as a “young” older person, describing herself as typically active, and reporting no physical or cognitive impairments. Jan was born in post-war Britain, adopted aged five, only for her adopted parents to die in her twenties. Jan reported herself as self-reliant and had married and raised two children. At the time of referral the patient was a reluctant carer for her husband, who had retired from work due to chronic physical ill health. Jan’s symptoms met DSM-5 (APA, 2013) criteria for the diagnosis of Major Depression and Generalized Anxiety Disorder. At screening, Jan scored in the moderate to severe range for both the HADS-D (15) and HADS-A (20).

### *Measures*

*The Hospital Anxiety and Depression Scale* (HADS; Zigmond and Snaith, 1983) was completed at five time points: (1) start of baseline; (2) end of baseline; (3) mid-treatment; (4) end of treatment; and (5) at 3-month follow-up. The HADS produces a valid and

reliable measure of depression (HAD-D) and anxiety (HADS-A) and is well accepted by patients and practitioners alike. Five ideographic anxiety and depression target measures were collaboratively designed at the first session and were then subsequently collected daily across baseline and intervention phases. The three depression measures were (1) structure: “I feel like there is structure in my day”; (2) hopefulness: “I feel hopeful about my husband’s progress” and (3) mood: “I feel happy”. The two anxiety measures were (4) confidence: “I am confident at this point” and (5) worry: “thoughts are whirring through my mind”. All daily ideographic measures were scored 0 “worst ever felt” to 10 “best ever felt”.

### Formulation

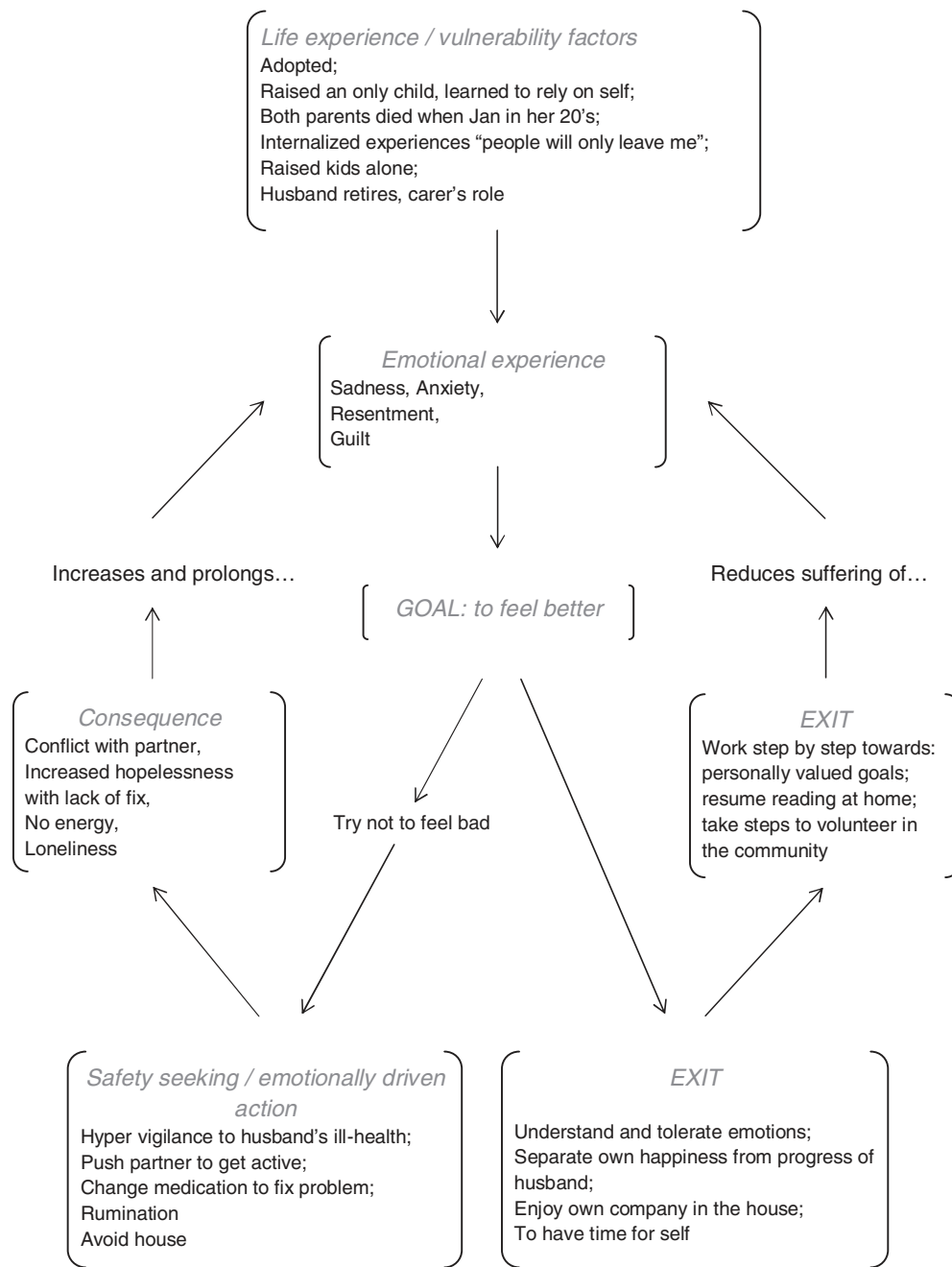
Figure 1 contextualized Jan’s current emotional distress as couched in the early life experiences of loss and abandonment, which had created a *forced independence*. Jan was never taught to manage feelings such as sadness, anxiety, anger and guilt across her life. Critically, when her husband retired due to chronic ill-health, it changed her relationship patterns (with her husband) and routines that had been relied upon for years in the attempt to manage emotions. Therefore the unintended consequences of the client’s coping strategies only served to prolong her emotional suffering (Figure 1). For example, the patient pushed her husband to increase his activity (an emotion-driven behaviour) only for this to increase conflict and so maintain anxiety and depression. Clinically, the formulation highlighted the key role of emotion in on-going unhelpful patterns and also provided hope in that working towards acceptance and creating personally valued goals, suffering would reduce.

### Intervention

Treatment consisted of delivery of the UP (Barlow et al., 2011), with associated between-session-tasks agreed after each session. Sessions therefore consisted of the following: (1) validation of extant coping strategies through the formulation; (2) understanding the adaptive properties of emotions; (3) identifying and modifying maladaptive emotion-driven behaviors; (4) countering emotional avoidance and emotionally-driven behaviours, via behavioural experiments; (5) working towards value-driven behaviour; and (6) accomplishments, maintenance and relapse prevention. Specifically with Jan, exits included anchoring in the present in her house (countering rumination), resuming reading in the house as a valued activity and taking steps to volunteer in the community. No adjustments were made to the content of the UP, but minor adaptations to suit therapy with an older adult were possible. For Jan this included slower paced sessions, focusing on behavioural change to suit her cultural norms and domiciliary visits when Jan could not access transport via her husband.

### Data analysis

First, reliable and clinically significant change analyses assessed change over time on the HADS. To be “clinically” improved following treatment, patients need to score below 7 on the HADS-D and below 9 on the HADS-A. To be considered “reliably” improved following treatment, patients need to lose a total of 8 points on the HADS-A and 5 points on the HADS-D. Patients simultaneously achieving both clinical and reliable change are labelled as “recovered”. Second, time series analyses (% of data exceeding the median [PEM]) compared



**Figure 1.** Transdiagnostic (UP) formulation of Jan's presenting distress

baseline to treatment ideographic scores; >90% change signals a highly effective treatment. Finally, Mann-Whitney U-tests also assessed for any significant difference between baseline and treatment phases in the ideographic measures.

### Results

All scheduled sessions were attended (100%) and all collaboratively agreed homework tasks were completed, indicating that the UP was well tolerated (H1). HADS scores for both anxiety and depression were below the clinical cut-off by the end of UP treatment (HADS-A = 5; HADS-D = 2). Baseline to end of treatment outcomes indicate “recovery” in terms of both anxiety (RCI = 4.31,  $p < .05$  and termination score in the normal range) and depression (RCI = 5.39,  $p < .05$  and termination score in the normal range) during treatment. At 3-month follow-up, the anxiety score at follow-up was just in the clinical range (HADS-A = 9), indicating clinically significant deterioration in anxiety, whereas the depression score remained below the clinical cut-off (HADS-D = 4). The treatment to follow-up deteriorations evident on the HADS did not meet the criteria for a reliable deterioration in terms of anxiety (RCI = 4.31,  $p = ns$ ) or depression (RCI = 5.39,  $p = ns$ ).

Significant improvement was found between baseline and treatment phases in idiographic measures of daily structure ( $U [45] = 71.0$ ,  $Z = -3.87$ ,  $p < .001$ ), mood ( $U [50] = 57.0$ ,  $Z = -4.32$ ,  $p < .001$ ), confidence ( $U [46] = 28.0$ ,  $Z = 4.83$ ,  $p < .001$ ) and worry ( $U [49] = 41.4$ ,  $Z = -4.60$ ,  $p < .001$ ). However, no differences were found in hopefulness concerning the partner’s health-related progress ( $U [50] = 239.5$ ,  $Z = -.425$ ,  $p = ns$ ). PEM and NAP results indicate that all measures (except hopefulness) showed a high proportion of non-overlapping data between baseline and treatment phases, indicating clinical change during the treatment phase. PEM results show large effect sizes for the improvements in daily structure (91%), mood (97%), confidence (97%), and worry (97%).

### Discussion

This study reported the first attempt to test the UP in a co-morbid older adult patient, via a SCED evaluation. A reliable and clinically significant reduction in anxiety and depression was found during treatment (meeting recovery criteria), although there was some evidence of (non-reliable) relapse over the follow-up period in terms of anxiety. Baseline-treatment comparisons did note significant improvements in terms of daily structure, self-confidence, low mood and intensity of daily worry. The UP enabled the patient to better understand the adaptive properties of her emotions, with treatment helpfully focussing on reducing emotional avoidance and countering the extant emotionally-driven behaviours. This facilitated appropriate acceptance of her partner’s retirement and also placing less emphasis on the partner’s health as the sole marker for her own on-going well-being and recovery (Barlow et al., 2011). Loss of hope (ideographic measure 2) was therefore consistent with UP treatment and the acceptance of reality by the patient.

In terms of the limitations of the current research, the ideographic measures were only collected during baseline and treatment phases and the study would have been much improved by the collection follow-up data. This would have usefully contextualized the slight increase in anxiety observed on the HADS-A at follow-up and also been a good test of the durability of the effectiveness of the UP in an older adult. All the data were self-report and the evaluation would

have been improved with the addition of a clinician-rated outcome measure and also gathering outcomes from the partner. The most obvious limit to any SCED is the degree to which results generalize to other patients. Further research is indicated concerning the acceptability, efficacy and effectiveness of transdiagnostic approaches with older adults. Testing the of the group delivery of UP is particularly indicated. In conclusion, this study offers initial encouragement concerning the adoption and further testing of the UP within older adult populations. Transdiagnostic approaches have the potential to widen treatment choices for older adults with co-morbid problems, who are at risk of attrition and relapse when treated with disorder-specific psychological models (NICE, 2009).

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