Behaviour Research and Therapy 51 (2013) 779–786

Contents lists available at ScienceDirect

Behaviour Research and Therapy

journal homepage: www.elsevier.com/locate/brat

# Randomised controlled trial of group cognitive behavioural therapy for comorbid anxiety and depression in older adults☆

Viviana M. Wuthrich*, Ronald M. Rapee

*Centre for Emotional Health, Department of Psychology, Macquarie University, Sydney 2109, Australia*

ARTICLE INFO

*Article history:*
Received 5 June 2013
Received in revised form
2 September 2013
Accepted 4 September 2013

*Keywords:*
Anxiety
Depression
Transdiagnostic
Cognitive behavioural therapy
Older age

ABSTRACT

Anxiety and depression are commonly comorbid in older adults and are associated with worse physical and mental health outcomes and poorer response to psychological and pharmacological treatments. However, little research has examined the effectiveness of psychological programs to treat comorbid anxiety and depression in older adults. Sixty-two community dwelling adults aged over 60 years with comorbid anxiety and depression were randomly allocated to group cognitive behavioural therapy or a waitlist condition and were assessed immediately following and three months after treatment. After controlling for cognitive ability at pre-treatment, cognitive behaviour therapy resulted in significantly greater reductions, than waitlist, on symptoms of anxiety and depression based on a semi-structured diagnostic interview rated by clinicians unaware of treatment condition. Significant time by treatment interactions were also found for self-report measures of anxiety and depression and these gains were maintained at the three month follow up period. In contrast no significant differences were found between groups on measures of worry and well-being. In conclusion, group cognitive behavioural therapy is efficacious in reducing comorbid anxiety and depression in geriatric populations and gains maintain for at least three months.



## Objective

Epidemiological studies show that depression and anxiety are common disorders throughout the lifespan and that they are typically comorbid (Beekman et al., 1998; Kessler et al., 1996). Research indicates considerable overlap of these disorders in terms of risk factors (Vink, Aartsen, & Schoevers, 2008), phenomenology (Watson et al., 1995), and genetic factors, particularly for Generalized Anxiety Disorder (GAD) and Major Depressive Disorder (MDD) (Kendler, Gardner, Gatz, & Pedersen, 2007). Rates of comorbid anxiety and depression in older adults are similar to those in younger populations, with as many as 35% of primary care patients with major depression also reporting a life time history of an anxiety disorder and 23% reporting a current comorbid anxiety disorder (Lenze et al., 2000). In a community sample, 47% of older adults who met criteria for major depression also met criteria for an anxiety disorder and 23% with an anxiety disorder also met criteria for a comorbid major depressive disorder (Beekman et al., 2000).

In older adults, the presence of both anxiety and depression is associated with worse outcomes than either disorder alone including increased risk of cognitive decline and dementia (DeLuca et al., 2005), more severe depression and increased suicide rates (Cohen, Gilman, Houck, Szanto, & Reynolds, 2009; Lenze et al., 2000) and a chronic course (Almeida et al., 2012). Given the high prevalence of comorbid anxiety and depression, research indicating that comorbidity is associated with worse outcomes, and the large overlap in symptom profiles and risk factors, it is important to pay more attention to the comorbid presentation and treatment of these disorders in older adults.

Recent reviews of psychological treatments for depression in older adults indicate that cognitive behavioural therapy (CBT) is as effective as in younger adults and is superior to waitlist, care-as-usual, placebo and other control groups, with moderate to large effect sizes (mean $d = 0.72$) (Cuijpers, van Straten, & Smit, 2006; Mackin & Arean, 2005; Serfaty, Haworth, Blanchard, Buszewicz, & King, 2009). Reviews for psychological treatment of primary anxiety demonstrate the effectiveness of relaxation, supportive therapy, and CBT in older adults (Ayers, Sorrell, Thorp, & Wetherell, 2007; Nordhus & Pallesen, 2003). Hendriks et al. conducted a systematic review and meta-analysis of CBT for anxiety disorders in older adults and concluded that CBT was superior to waitlist and active



* Corresponding author. Tel.: +61 2 9850 4866; fax: +61 2 9850 8062.
*E-mail addresses:* Viviana.Wuthrich@mq.edu.au (V.M. Wuthrich), Ron.Rapee@mq.edu.au (R.M. Rapee).

0005-7967/$ – see front matter © 2013 The Authors. Published by Elsevier Ltd. All rights reserved.
http://dx.doi.org/10.1016/j.brat.2013.09.002

control conditions for anxiety and comorbid depression symptoms, but only superior to waitlist conditions for worry severity (Hendriks, Oude Voshaar, Keijsers, Hoogduin, & Van Balkom, 2008). A recent meta-analysis of CBT for anxiety disorders in older adults found that CBT was only marginally more effective than active control conditions and called for approaches to increase the effectiveness of CBT for anxiety in older adults (Gould, Coulson, & Howard, 2012). They suggested that targeting comorbidity might increase therapeutic outcomes.

Despite the high prevalence of comorbid anxiety and depression, and the particularly negative outcomes associated with this comorbidity, there is a striking absence of studies that have focused on the psychosocial treatment of comorbid anxiety and depression in older adults. Sallis et al. (1983) compared the effectiveness of three treatment conditions: relaxation training, pleasant event scheduling and rational disputing, and a self-disclosure discussion group on comorbid anxiety and depression in older adults. They found that depression reduced from pre to post in all conditions equally, while improvements in anxiety symptoms only occurred in the placebo condition. A major limitation of this study is that the sample size was small ($n = 24$) and lacked the statistical power to detect anything less than a very large difference between active treatments. To our knowledge, no other published trial has specifically investigated the efficacy of group CBT for comorbid anxiety and depression in older adults.

The majority of studies have focused on the treatment of primary depression or anxiety and not their comorbidity, and report that the presence of a comorbid disorder reduces the effectiveness of treatment for the primary disorder. For example, comorbid anxiety has been shown to delay and reduce treatment response to both pharmacological and psychological treatments for depression (Andreescu et al., 2007; Andreescu et al., 2009; Arnow et al., 2007; Cohen et al., 2009; Gum, Arean, & Bostrom, 2007; Hegel et al., 2005), and comorbid depression has been demonstrated to reduce the effectiveness of psychological treatment for primary anxiety in some studies (Schuurmans et al., 2009), but has not been found to impact on effectiveness in others (Wetherell et al., 2005).

Further, psychological treatments for primary depression have typically failed to produce significant reductions in comorbid anxiety symptomatology (Dombrovski et al., 2006; Gum et al., 2007; Serfaty et al., 2009). In contrast, psychological therapy targeting geriatric anxiety typically results in simultaneous reductions in post-treatment depression (Barrowclough et al., 2001; Gorenstein et al., 2005; Mohlman et al., 2003; Mohlman & Gorman, 2005; Stanley et al., 2003; Wetherell, Gatz, & Craske, 2003). However, limitations of these studies include that some studies have excluded individuals with clinically severe depression (Gorenstein et al., 2005; Mohlman et al., 2003; Mohlman & Gorman, 2005), many studies have only included a small number with comorbid depression, and none have reported post-treatment changes in mood disorder diagnostic severity using a clinical interview, so it is unclear whether these anxiety treatments produce diagnostically significant change in both anxiety and depressive disorders. Given that comorbidity reduces the effectiveness of treatments targeting one disorder only (the primary disorder) and is associated with worse long term outcomes, a program that addresses the core features of both disorders might be more efficacious.

The aim of the current study was to conduct a randomised controlled trial to evaluate the efficacy of group CBT program targeting comorbid anxiety and depression in older adults. The primary aim was to establish the program's basic efficacy by comparing it to a comparable waitlist condition. The primary outcome was changes in diagnostic severity for both the anxiety and depressive disorders. Secondary outcomes included changes on self-reported anxiety, depression and life interference. We included individuals who met criteria or subclinical criteria for both a mood and an anxiety disorder. We hypothesized that the CBT condition would result in significant improvements on all symptom measures from pre to post treatment and that these gains would be maintained at the 3 month follow up.

## Methods

### *Participants*

Sixty-two community dwelling participants aged 60–84 (mean age = 67.44, SD = 6.19, 22 = male, 40 = female) were recruited via advertisements in local newspapers. Participants attended the Centre for Emotional Health, Macquarie University, Sydney, Australia for assessment and treatment. All participants met DSM-IV criteria or subclinical criteria (see below for definition) for both an anxiety and a mood disorder, with either anxiety or mood being the primary (most interfering) problem. In fact, the vast majority of the sample met full DSM-IV criteria for both an anxiety disorder and a mood disorder with either problem being primary ($N = 55$), with the remaining 7 participants having at least subclinical levels of anxiety, depression or both. Exclusion criteria were: aged under 60 years, unable to read a newspaper, current self-harm, active suicidal intent, psychosis, or bipolar disorder. All participants were asked to refrain from engaging in additional treatment from a therapist or making changes to their medication status during the course of the trial.

### *Measures*

#### *Diagnostic clinical interview*

Participants completed the Anxiety Disorders Interview Schedule for DSM-IV (ADIS: Di Nardo, Brown, & Barlow, 1994), a semi-structured interview for diagnosing anxiety and related disorders including mood disorders according to DSM-IV criteria on a 0–8 severity rating scale where ratings of 4 and above are considered of clinical severity and meet diagnostic status. This interview was administered by five different graduate students in clinical psychology formally trained on the ADIS and given regular supervision to discuss diagnostic decisions. The primary disorder was defined as the one that most interfered with the person's life. In this study, participants with clinical severity ratings of 3 or above for their main anxiety disorder and main mood disorder were included in the study, as we were interested in also treating subclinical anxiety and depression; however, 89% of the sample met full diagnostic criteria for both an anxiety and mood disorder. The interviews were videotaped for reliability purposes and 25% were recoded after the study's completion for the purpose of reliability coding. Inter-rater reliability ($k$) for agreement on the presence of a disorder in the diagnostic profile was $k = 1.0$ (100% agreement) for mood disorder, $k = 1.0$ (100% agreement) for generalized anxiety disorder and $k = 0.81$ (92% agreement) for social phobia.

#### *Cognitive assessment*

Addenbrooke Cognitive Examination-Revised (ACE-R: Mioshi, Dawson, Mitchell, Arnold, & Hodges, 2006), is a brief rating scale for dementia that assesses five cognitive domains, namely attention/orientation, memory, verbal fluency, language and visuospatial abilities. Research indicates good sensitivity and specificity for cut off scores of 88 (sensitivity = 0.94, specificity = 0.89) and 82 (sensitivity = 0.84, specificity = 1.0) (Mioshi et al., 2006).