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A pilot study of a clinician-guided internet-delivered cognitive behavioural therapy for anxiety and depression among Arabs in Australia, presented in both English and Arabic languages

Rony Kayrouz *, Blake F. Dear, Eyal Karin, Vincent J. Fogliati, Nickolai Titov

Department of Psychology, Macquarie University, Sydney, Australia

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ABSTRACT

The present pilot study examined the efficacy and acceptability of an internet-delivered Cognitive Behaviour Therapy (iCBT) intervention delivered in both English and Arabic languages to Arab Australians, aged 18 and over, with symptoms of depression and anxiety. Thirteen participants with at least mild symptoms of depression on the (Patient Health Questionnaire 9-item; PHQ-9; total scores ≥5) or anxiety (Generalised Anxiety Disorder 7-item; GAD-7; total scores ≥5) accessed the online *Arabic Wellbeing Course*, which consisted of five online lessons delivered over eight weeks with weekly clinician support. Measures of depression, anxiety, distress and disability were administered at pre-treatment, post-treatment and 3-month follow-up. Data were analysed using generalised estimation equation (GEE) modelling. Seventy-seven percent (10/13) of participants completed the five lessons over eight weeks, with 10/13 providing post-treatment and 3-month follow-up data. Participants improved significantly across all outcome measures, with large within-group effect sizes based on estimated marginal means (Cohen's *d*) at post-treatment ($d = 1.18$ to 1.62) and 3-month follow-up ($d = 1.28$ to 1.72). In addition, 40% and 38% of participants obtained, at least, a 50% improvement in symptoms of both anxiety and depression at 3-month follow-up respectively. Participants rated the *Arabic Wellbeing Course* as acceptable, and 70% of those who completed follow-up questionnaires reported accessing the course in both English and Arabic languages. Notwithstanding the limitations of an open trial design, these results are encouraging and indicate that culturally modified clinician-guided internet-delivered versions of Western psychological interventions have the potential for increasing access to treatment for Arabic-speaking Australians, and potentially other groups.

1. Introduction

In the last 15 years, the size of the Arabic-speaking communities in Australia, Arab Australians, have increased by approximately 50% (Australian Bureau of Statistics, 2006, 2011) and Arabic is now the fourth most common language in Australia (Australian Bureau of Statistics, 2011). Relatively little is known about the mental health of this population; however two small surveys (Centre for Epidemiology and Research, 2010; Kayrouz et al., 2014) indicate that the prevalence of anxiety, depression and psychological distress may be higher in this group than in the general population (Slade et al., 2009).

Unfortunately, treatment seeking rates in Arab Australians appear to be lower than in the general Australian population (Kayrouz et al., 2014; Slade et al., 2009). Barriers to treatment seeking in this population include lack of culturally appropriate services and lack of services delivered in the Arabic language (Kayrouz et al., 2014; Youssef and Deane, 2006). The latter point is particularly important as data indicate that 40% of Arab Australians have difficulty speaking English (Australian Bureau of Statistics, 2011). In addition, 38.5% of Arab Australians were born in Australia (Australian Bureau of Statistics, 2011), and may have difficulty reading Arabic. Consequently, when developing culturally-appropriate mental health services for Arab Australians, it may be beneficial to provide services in both English and Arabic, allowing Arab Australians to choose their language preference. Most research to date with Arabs living in western countries do not provide this option, either presenting materials in English or Arabic only (Kayrouz et al., 2015; Kayrouz et al., 2016a; Stenmark et al., 2013; Taloyan et al., 2013; Wagner et al., 2008).

One strategy that may reduce barriers to accessing psychological treatment and provide flexibility of choice in the preferred language is to deliver psychological interventions, such as cognitive behavioural therapy (CBT), via the internet (Andersson and Titov, 2014). Two recent surveys of Arabs living in Australia and overseas found that >50% of the samples reported they would be willing try internet-delivered CBT

* Corresponding author at: eCentreClinic, Department of Psychology, Macquarie University, North Ryde 2109, Australia.
E-mail address: rony.kayrouz@mq.edu.au (R. Kayrouz).

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(iCBT) treatments to manage symptoms of anxiety and depression (Kayrouz et al., 2014; Kayrouz et al., unpublished). These findings are consistent with observations that Arab people prefer treatment that is short-term, directive, and focused on the present (Abudabbeh and Hays, 2006; Al-Krenawi and Graham, 2000; Chaleby, 1992).

Two recent feasibility pilot trials (Kayrouz et al., 2015, 2016a) explored the efficacy and acceptability of treating symptoms of anxiety and depression in Arab people using a culturally modified version of an existing evidence-based iCBT intervention, the *Wellbeing Course* (Dear et al., 2015; Kirkpatrick et al., 2013; Titov et al., 2013, 2014, 2012, 2015a,b). Results from these two trials were promising, and indicated the *Arabic Wellbeing Course* reduced symptoms of anxiety, depression and disability in Arab people, and that >90% of participants rated the intervention as acceptable (Kayrouz et al., 2015, 2016a). However, a limitation of these trials is that the intervention was delivered only in the English language and therefore would not be accessible to non-English speaking Arab people.

The present study aims to further extend this line of research by examining the efficacy and acceptability of the *Arabic Wellbeing Course* when presented in both the English and Arabic languages. Because of the absence of previous research exploring the efficacy of a translated iCBT treatment for Arab Australians experiencing depression or anxiety, an open-trial design was considered ethically appropriate to inform the power requirements of a future large randomised controlled trial. A secondary aim was to explore which language participants reported using.

2. Method

2.1. Design and hypotheses

A single-group open trial design was utilised. A GEE analysis was conducted to calculate the average group improvement in symptoms over time (Hubbard et al., 2010). This study was approved by the Human Research Ethics Committee of Macquarie University, Sydney, Australia, and registered as a clinical trial with the Australian New Zealand Clinical Trials Registry, ACTRN12163001329752.

Based on the results of a therapist-guided trial of the *Arabic Wellbeing Course* presented in the English language (Kayrouz et al., 2015) it was hypothesised that (1) Arabs would show a statistically and clinically significant reduction in the symptoms of depression, anxiety, distress and disability; and (2) Arabs would rate the course as worthwhile and would recommend the course to a friend or family member.

2.2. Participants

Details about the study were promoted using Facebook (FB) recruitment strategies including promoting posts on the FB public page of the eCentreClinic research clinic (www.ecentreclinic.org) (for more details see Kayrouz et al., 2016b). Two phases of recruitment occurred from 16 June 2015 to 13 July 2015 (Phase 1) and 16 July to 10 August 2016 (Phase 2). Interested adults applied online via the eCentreClinic website, which provides information about anxiety and depression, and conducts clinical research concerning internet-delivered treatment.

Over the two recruitment phases, eight participants in Phase 1 and five participants in Phase 2 provided informed consent and volunteered to participate. Inclusion criteria were: (1) living in Australia; (2) overseas-born or Australian-born person who self-identified as being of Arabic ancestry; (3) between the ages of 18 and 70 years; (4) having reliable internet access; (5) not receiving CBT elsewhere; (6) no history of a psychotic condition; (7) a Patient Health Questionnaire 9-item (PHQ-9) score ≥5 or a Generalised Anxiety Disorder 7-item (GAD-7) score ≥5 indicating, at least, mild depressive or anxiety symptoms, but not currently experiencing severe depression (defined as a total score ≥23 or a score = 3 on question 9 of the PHQ-9) (Kroenke et al., 2001); and (8) if taking medication for anxiety or depression, having been on a stable dose for at least one month.

Of the 30 participants who applied to participate, 13 were eligible with 17 participants excluded at assessment (see Fig. 1). During assessment, 14/17 (82%) were excluded for the following reasons: (a) five for incomplete applications; (b) eight for experiencing very severe depression (i.e., defined as a total score ≥23 on the PHQ-9 or PHQ-9 Q9 >2), and (c) one for poor internet skills and unreliable internet access. During treatment, 3/17 (18%) were excluded for not completing the pre-treatment (baseline) questionnaires. The final sample had a mean age of 37.13 years (SD = 12.48; range = 23–64) and 8/13 (62%) were males. The majority of participants were married ($n = 7$, 54%), with the remainder single ($n = 5$, 38%) or separated/divorced/other ($n = 1$, 8%). Fifty-four percent of the sample ($n = 7$) had attained at least a bachelor's degree, 31% ($n = 4$) attained a diploma, and 15% ($n = 2$) attained a trade certificate/apprentice or completed schooling, at least, up to Year 10 (approximately 15 years of age). Eight of the 13 participants (62%) reported they were in full-time or part-time employment, 3/13 (23%) unemployed, and 2/13 (15%) were full-time or part-time students. Five participants (38%) reported having had previous mental health treatment, two (15%) reported taking medication related to their symptoms, and participants reported a mean of 21.5 years of difficulties with mental health (SD = 9.2).

A sample size of 15 was determined as sufficient (one-tailed test, power at 80%, and alpha at .05) to detect a within-group Cohen's *d* effect size of .70; the minimum likely effect based on previous studies employing the *Wellbeing Course* (Kayrouz et al., 2015; Titov et al., 2013). Given the importance of the present study's research question, the difficulties in recruitment, and how close the sample is to the target, the final sample size of 13 was used with the risk of being underpowered to detect change, and less than ideal for providing reliable and robust estimations. The sample of 13 participants, available in all three-time points, is considered minimal, but sufficient in order to estimate change over time.

3. Questionnaire measures

3.1. Primary measures

3.1.1. Patient Health Questionnaire – 9-item (PHQ-9; Kroenke et al., 2001)

The PHQ-9 is a nine-item measure of the symptoms and severity of depression that has been translated and validated in several languages (Gilbody et al., 2007), including Arabic (Al-Qadhi et al., 2014; Becker et al., 2002). It has a clinical cut-off score of 10 that predicts a DSM-IV diagnosis of depression, with higher scores indicating greater symptom severity. Internal consistency of the questionnaire is high ($\alpha = 0.74$–0.89) (Kroenke et al., 2001), and the questionnaire has good clinical sensitivity to change. Cronbach's alpha in the present study was acceptable ($\alpha = 0.78$).

3.1.2. Generalised Anxiety Disorder – 7-item scale (GAD-7; Spitzer et al., 2006)

The GAD-7 is a seven-item screening questionnaire that has been found to be sensitive to generalised anxiety disorder, social phobia and panic disorder, with higher scores indicating greater symptom severity (Lowe et al., 2008). It is widely used and has been translated and validated in several languages, including Arabic (e.g., Bener et al., 2013a,b). Internal consistency of the GAD-7 scale is good ($\alpha = 0.79$–0.91). The GAD-7 has good convergent and divergent validity with other anxiety and disability scales (Dear et al., 2011; Kroenke et al., 2010). A clinical cut-off score of 8 indicated a diagnosis of anxiety disorder (Dear et al., 2011; Lowe et al., 2008; Richards and Suckling, 2009). Cronbach's alpha in the present study was acceptable ($\alpha = 0.73$).