Internet Interventions 3 (2016) 18–24

Contents lists available at ScienceDirect

Internet Interventions

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

A pilot study of self-guided internet-delivered cognitive behavioural therapy for anxiety and depression among Arabs

Rony Kayrouz *, Blake F. Dear, Eyal Karin, Milena Gandy, Vincent J. Fogliati, Mathew D. Terides, Nickolai Titov

Department of Psychology, Macquarie University, Sydney, Australia

ARTICLE INFO

Article history:
Received 21 August 2015
Received in revised form 20 October 2015
Accepted 23 October 2015
Available online 19 December 2015

Keywords:
Arabs
Anxiety
Depression
Internet-delivered treatment
Transdiagnostic

ABSTRACT

This pilot study examined the efficacy and acceptability of a self-guided and culturally modified internet-delivered Cognitive Behaviour Therapy (iCBT) treatment for Arab people, aged 18 and over, with symptoms of depression and anxiety. Thirty-six participants from seven countries, with at least mild symptoms of depression (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 and presented in the English language. Standard measures of depression, anxiety, distress and disability were administered at pre-treatment, post-treatment and 3-month follow-up. Thirty-six percent of participants completed the five lessons over eight weeks, with 61% and 36% providing post-treatment and 3-month follow-up data respectively. Participants reported significant improvements (within-group Cohen's d; avg. reduction) in depression (ds ≥ 1.20; avg. reduction ≥46%), anxiety (ds ≥ 1.15; avg. reduction ≥45%), disability (ds ≥ 0.81; avg. reduction ≥35%) and psychological distress (ds ≥ 0.91; avg. reduction ≥24%) immediately post-treatment, which were sustained at or further improved to 3-month follow-up. Participants rated the *Arabic Wellbeing Course* as acceptable. Notwithstanding the absence of a control group, low follow-up questionnaire completion rates and the Course not being translated in Arabic, these results are encouraging and contribute to a growing body of literature indicating that, with minor modifications, internet-delivered interventions have the potential of increasing access to treatment for immigrant groups.

1. Introduction

Anxiety and major depressive disorders are among the most common mental conditions in the Western (Kessler et al., 2009; Slade et al., 2009) and Arab worlds, as reflected in epidemiological surveys conducted in Lebanon (Karam et al., 2006), Iraq (Alhasnawi et al., 2009), Morocco (Kadri et al., 2010) and Egypt (Ghanem et al., 2009). The Arab world refers to countries from the Middle East and North Africa where Arabic is the national language, has a current population of 377 million (The World Bank, 2014), and represents 5.4% of the world's population.

Unfortunately, recent studies indicate that only a small minority of Arab people with mental health problems seek treatment. For example, a recent survey of Arabs worldwide ($n = 818$) found that 46% of the sample had elevated levels of psychological distress, but only 8% of these people reported seeking treatment from a mental health professional (Kayrouz et al., unpublished). Barriers to treatment for Arab people appear to be similar to those experienced by people living in Western countries, and include low mental health literacy, lack of time and the shame associated with seeking mental health treatment (Gearing et al., 2012; Kayrouz et al., 2014; Kayrouz et al., unpublished).

One strategy that may improve access to mental health services for Arab people is to deliver psychological treatments, such as cognitive behavioural therapy (CBT), via the internet. Internet-delivered cognitive behavioural therapy (iCBT) interventions typically provide the same therapeutic content as provided in conventional face-to-face psychotherapy, but modified for online delivery (Andersson and Titov, 2014). Such treatments are typically highly structured, aim to impart practical skills, and can be delivered with or without therapist-guidance; but with some important exceptions (Berger et al., 2011a; Berger et al., 2011b; Dear et al., 2015a; Dear et al., 2015b; Dear et al., 2015c; Titov et al., 2013; Titov et al., 2015), results are typically stronger with therapist support (Titov, Dear & Andersson, 2014). While the use of such interventions has considerable meta-analytic support in predominantly Western samples (e.g., Andersson et al., 2014; Andrews et al., 2010; van Ballegooijen et al., 2014), there is emerging evidence to indicate their potential in Arab populations. For example, several small but promising trials have recently demonstrated that Arab people can benefit from iCBT interventions (Kayrouz et al., 2015; Knaevelsrud et al., 2015; Wagner et al., 2012). Among these, Knaevelsrud et al. (2015)

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

http://dx.doi.org/10.1016/j.invent.2015.10.005

provided therapist-guided online treatment for Iraqis ($n = 47$) with Post-Traumatic Stress Disorder (PTSD) and reported that 62% of those in a treatment group had recovered from post-traumatic stress symptoms at post-treatment, and that gains were maintained at three month follow up. More recently, Kayrouz et al. (2015) examined the feasibility of therapist-guided iCBT for Australian Arabs ($n = 11$) with anxiety and depression using a treatment course called the *Arabic Wellbeing Course*, which was presented in the English language. Significant reductions in symptoms of anxiety, depression and disability at post-treatment and three month follow up, with more than 90% reporting they would recommend the Course to a family member or friend.

The potential utility of iCBT for Arab populations is also consistent with clinical observations of therapists who have reported that Arabs prefer short-term and directive psychological treatments that have a focus on practical skills and the here-and-now, and that do not require them to divulge their story (Abudabbeh and Hays, 2006; Al-Krenawi and Graham, 2000; Chaleby, 1992). Consistent with this, the aforementioned international survey ($n = 818$) of Arabs (Kayrouz et al., unpublished) found that 82% of respondents reported they would be willing to try internet-delivered treatment if they experienced symptoms of anxiety and depression. Thus, internet-delivered treatment may be an acceptable option to address barriers and reduce psychological distress for Arabs worldwide.

The present study aims to extend this small but promising literature by exploring the feasibility and efficacy of a self-guided version of the *Arabic Wellbeing Course*, to treat symptoms of anxiety and depression among Arabs worldwide. To date, the published trials of internet-delivered treatments with Arab people have reported results of therapist-guided treatments. Self-guided treatments, if effective, have considerably more potential as a public health intervention, by virtue of lower delivery cost and increased anonymity. Because of the absence of previous studies of self-guided treatments for Arab people, a single group design was used in order to examine the acceptability of the self-guided internet-delivered treatment and inform the power requirements of a large randomised controlled trial.

2. Method

2.1. Design and hypotheses

A single-group open trial design was utilised to examine the feasibility, acceptability and preliminary efficacy of the self-guided and culturally modified iCBT *Arabic Wellbeing Course* for Arab consumers worldwide. A sample size of 15 was determined as sufficient (one-tailed test, power at 80%, and alpha at .05) to detect 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; Titov et al., 2014b). 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, ACTRN12614000124639.

Based on the results of the previous therapist-guided trial of the Arabic Wellbeing Course (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 via various traditional and Facebook (FB) recruitment strategies. Traditional strategies included the following: (1) media release by the University media and communications department; (2) emails to relevant Arab organisations (medical, secular and religious), health professionals and interested individuals; (3) newspaper advertisements in English and in a Lebanese and Australian Arabic newspaper; and (4) advertisements in English in religious organisations' newsletters. As traditional strategies yielded very few participants, FB promotion strategies were used. These included (1) promoting posts; (2) promoting FB public page (i.e., ECC Arabic Wellbeing); (3) promoting website (www.ecentreclinic.org) and (4) promoting events (for more details see Kayrouz et al., submitted). Interested adults applied online through a clinical research website (www.ecentreclinic.org), which provides information about anxiety and depression, and conducts clinical research concerning internet-delivered treatment. Because of the slower than expected recruitment, participants were recruited over a 12-month period from 10 February 2014 to 2 March 2015.

Eighty-one people initially provided informed consent and volunteered to participate. Inclusion criteria were: (1) person who self-identified as being of Arabic ancestry; (2) between the ages of 18 and 70; (3) having reliable internet access; (4) 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 very severe depression (defined as a total score ≥ 23 or a score > 2 on question 9 of the PHQ-9) (Kroenke et al., 2001); and (5) if taking medication for anxiety or depression, having been on a stable dose for at least one month.

Of the 81 applicants, 45 were excluded (see Fig. 1) for the following reasons: (a) 6 for incomplete applications; (b) 9 for low symptoms of anxiety and depression (i.e., PHQ-9 and GAD-7 < 5); (c) 4 participants for very severe depression (i.e., defined as a total score ≥ 23 on the PHQ-9 or PHQ-9 Q9 > 2); (d) one for unreliable internet access; (e) one for seeing a psychologist face-to-face for CBT treatment; (f) 20 for non-completion of the pre-treatment questionnaires; and (g) 4 for not starting the course.

The final sample of 36 participants had a mean age of 36.23 years ($SD = 12.14$; range = 19–67) and 58% (21/36) were females. The majority of participants were married (53%, $n = 19$), with the remainder single (30%, $n = 11$) or separated/divorced/other (17%, $n = 6$). Sixty-four per-cent of the sample ($n = 23$) had attained at least a bachelor's degree, 22% ($n = 8$) attained a trade certificate/apprentice or completed at least up to Yr10, and 14% (n = 5) attained a diploma. Sixty-one percent of the participants (22/36) reported they were in full-time or part-time employment, 17% (6/36) were full-time or part-time students, 17% (6/36) unemployed, 2.5% (1/36) reported not being able to work because of disability and 2.5% (1/36) was retired. Fifty-three percent participants (19/36) reported residing in Australia, 17% (6/36) residing in Lebanon, 8% (3/36) residing in Egypt, 8% (3/36) residing in Saudi Arabia, 5.5% (2/36) in the UK, 5.5% (2/36) in the USA and 3% (1/36) in Algeria. Forty-four per cent of the sample (16/36) reported having had previous mental health treatment and 25% (9/36) reported taking medication related to their symptoms.

2.3. Questionnaire measures

2.3.1. Primary measures

2.3.1.1. 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. It has a clinical cut-off score of 10 that is predictive of a DSM-IV diagnosis of depression, with higher PHQ-9 scores indicating greater symptom severity. Internal consistency of the questionnaire is high ($\alpha = .74–.89$) (Kroenke et al., 2001), and the questionnaire has good clinical sensitivity to change (Titov et al., 2011). Cronbach's alpha in the present study was acceptable ($\alpha = .73$).

2.3.1.2. Generalised Anxiety Disorder — 7-item scale (GAD-7; Spitzer et al., 2006). The GAD-7 is a brief seven-item screening questionnaire that has been found to be sensitive to generalised anxiety disorder, social phobia