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Article

Evaluation of the acceptability and clinical utility of an Arabic-language mindfulness CD in an Australian community setting

Ilse Blignault
Western Sydney University

Hend Saab
St George Community Mental Health Service, Australia

Lisa Woodland
South Eastern Sydney Local Health District

Elizabeth Comino
UNSW Sydney

Abstract

The cultural, linguistic, and religious diversity of Australia's population presents challenges for mental health service delivery. Arabic-speaking communities in Australia underutilise mental health services despite high levels of trauma and psychological distress. Clinicians who work with this population lack linguistically and culturally appropriate clinical resources. The aim of this study was to explore the acceptability and clinical utility of a *Mindfulness Skills* CD translated into formal Arabic. The 70 participants were Arabic-speaking adults, mostly Lebanese-born Muslim women, who enrolled in a 5-week mindfulness program using the CD and agreed to follow-up at 12 weeks. Both recruitment and data collection were undertaken by a female project officer who is a widely respected member of the Arabic community in south-east Sydney. Compliance with the program protocol was high and all but 4 participants continued to use the CD beyond the 5 weeks. Overall, participants reported that mindfulness techniques fitted well with their way of life and were compatible with their cultural and religious practices. Most found mindfulness complementary to their regular reflective prayer. Using the *Mindfulness Skills* CD was associated with statistically significant

Corresponding author:
Ilse Blignault, Translational Health Research Institute, Western Sydney University, Locked Bag 1797, Penrith, NSW 2751 Australia.
Email: i.blignault@westernsydney.edu.au

reductions in psychological distress as measured by the Kessler Scale (K10) and the Depression, Anxiety, and Stress Scale (DASS21) postprogram (K10; DASS21 Depression and Stress subscales) and at follow-up (all measures). The evaluation showed that the Arabic *Mindfulness Skills* CD is an effective and culturally appropriate mental health resource for this population group. This low-cost, easily distributed resource is suitable for use in individual self-management and as an adjunct to primary and specialist mental health care.

Keywords
Arabic speakers, cultural adaptation, cultural competence, evaluation, mental health care, mindfulness

Introduction

Australia is a multicultural, multilingual, and multifaith society. At the last census, 33.3% of the population was born overseas and 27.3% spoke a language other than English at home (Australian Bureau of Statistics [ABS], 2016a). In New South Wales (NSW), Australia's largest state with Sydney as its capital, 31.5% of residents spoke a language other than English at home (ABS, 2016b). People living in the St George region within the South Eastern Sydney Local Health District (SESLHD) originate from over 51 countries and speak over 39 languages. Among the 18,546 residents (2.1% of the region's population) who speak Arabic at home (calculated from ABS, 2016b), many have experienced war-related trauma and displacement (SESLHD, 2018).

Arabic-speaking communities in Australia underutilise mental health services (McDonald & Steel, 1997; Steel et al., 2006), preferring to rely on family, family doctors, traditional healers, and religious leaders (Tobin, 2000; Youssef & Deane, 2006). Among all non-English speakers in NSW, Arabic speakers are the largest group of carers (individuals who provide unpaid support and care to a family member or friend with a disability, mental illness, or who are frail-aged), with almost double the number of carers compared with other migrant communities (NSW Mental Health Commission, 2014).

Language is a major barrier to professional mental health help-seeking. Other identified barriers include shame and stigma due to the strong cultural prohibitions on exposing any personal or family matters to outsiders; the perceived negative effect of mental illness on important cultural institutions such as marriage; and strong confidentiality concerns and lack of trust in service providers (Youssef & Deane, 2006). Where Arabic-speaking mental health professionals are employed, as is the case at St George Mental Health Service, they face a scarcity of linguistically and culturally appropriate clinical tools. This situation prompted development of the Arabic *Mindfulness Skills* CD whose evaluation is reported here.

Originally derived from Buddhist practices, mindfulness has been popularised in the West for the management of clinical problems through the work of

John Kabat-Zinn, who described it as "paying attention in a particular way: on purpose, in the present moment, and non-judgmentally" (Kabat-Zinn, 1994, p. 4, as cited in Baer, 2003). Mindfulness is often taught through a variety of meditation exercises (Baer, 2003), and mindfulness-based interventions (MBIs) usually incorporate meditation practice together with various cognitive and/or behavioural techniques (Mirdal, 2012). Although the existing literature has many methodological flaws, a recent systematic review and meta-analysis found that MBIs, such as mindfulness-based stress reduction (MBSR) and mindfulness-based cognitive therapy (MBCT), may significantly improve depressive symptoms, anxiety, stress, quality of life, and physical functioning (Gotink et al., 2015). MBSR has more generic application—it is applied to stress that arises from a variety of life events, including physical or mental illness—whereas MBCT is typically used to target specific conditions or vulnerabilities (Tobler & Hermann, 2013).

There is a dearth of English-language literature on MBIs among Arabic-speaking populations, either in the Middle East or among immigrant communities in the West. The report by Pigni (2010) of mindfulness-based psychotherapy with two women in the Palestinian territories and a randomised controlled trial of trauma-focused cognitive therapy, which incorporated relaxation and stress management skills with 18 physically abused children in Jordan, by Damra, Nassar, and Ghabri (2014) are notable exceptions.

The Arabic-speaking world is not homogeneous but encompasses a range of ethnic groups and cultural and religious traditions, including Islam and Christianity. While the source of inspiration for mindfulness has traditionally been Buddhism, it has been suggested that Islamic traditions, in particular Sufism and the teaching of Mevlana Jalal-ad-Din Rumi "can constitute a meaningful alternative to Buddhist-inspired practices in the transcultural clinic, especially in encounters with clients with Muslim background" (Mirdal, 2012, p. 1202).

Intervention and cultural adaptation

The Arabic *Mindfulness Skills* CD is a cultural adaptation of *Mindfulness Skills Volume 1 – Learn "Mindfulness" Skills* produced by Dr Russ Harris whose self-help books and CDs have become very popular in Australia. The educational CD is 60 minutes in duration and contains five tracks. Track 1 contains a short introduction to the concept of mindfulness. Track 2, "Mindfulness of the Breath," teaches the fundamental skills of mindfulness. Track 3, "Mindfulness of Emotions," is an exercise designed for use when in the grip of strong feelings, such as anger, fear, guilt, anxiety, and depression. Track 4, "Leaves on a Stream," is an exercise to help develop the skill of letting thoughts come and go, without getting caught up in them. Track 5, "The Observing Self," is an exercise to help connect with a "place inside" from which one can safely observe and make room for even the most painful thoughts and feelings.

Cultural adaptation has been defined as "the systematic modification of an evidence-based treatment or intervention protocol to consider language, culture,

and context in such a way that it is compatible with the client's cultural patterns, meanings, and values'' (Bernal, Jimenez-Chafey, & Domenech Rodríguez, 2009, p. 362, cited in Barrera, Castro, Strycker, & Toobert, 2013). Consistent with contemporary models (Barrera et al., 2013; Marsiglia & Booth, 2015), our approach was staged, iterative, and collaborative. The translation process involved five steps: (a) initial translation into formal Arabic by the second author (HS), a bilingual (Arabic–English) senior psychologist who also amended Track 1; (b) review by a bilingual mental health nurse and five bilingual community members; (c) review and modification by a translator nationally accredited at the highest level; (d) rechecking by the bilingual mental health clinicians and community members; and (e) minor editing by the accredited translator. As there was no Arabic equivalent, the word mindfulness was translated as ''*alhudur althihni*,'' which means something close to ''cognitively present'' or ''consciously present.'' Track 1 was amended to emphasise the cultural and spiritual relevance of mindfulness and mindfulness practice to the Arabic culture, with the addition of the following paragraph (translated from Arabic):

> There are many who think or claim that mindfulness is limited or specific to Eastern civilizations as it originated in China and neighbouring countries, but we know very well that mindfulness is deeply rooted in our culture, the Arabic culture. Mindfulness is essential and fundamental to our religious and spiritual daily rituals or practices (for both Christians and Muslims) including prayer, hymns, and religious supplications.

During 2012–2013, the CD was informally evaluated through interviews with Arabic-speaking clients attending the St George Community Mental Health Service who used the resource in conjunction with standard therapy. Client feedback was positive, with individuals reporting that mindfulness practice allowed them to enjoy the power of being present and helped reduce stress. From a clinician perspective, mindfulness was particularly effective when integrated with cognitive behaviour therapy. These promising findings led to this formal evaluation conducted in 2014–2015.

Evaluation aim and questions

The aim of the evaluation was to explore the acceptability and clinical utility of the Arabic *Mindfulness Skills* CD for Arabic-speaking people experiencing psychological distress. Acceptability is an important dimension of access to health care, with the term used to refer to the cultural and social factors that make people more, or less, likely to accept various aspects of a service and to consider it appropriate, relevant, or helpful (Levesque, Harris, & Russell, 2013). While service availability and affordability must also be addressed, evidence-based interventions that are perceived as culturally acceptable are likely to result in greater client engagement and improved health outcomes (Barrera et al., 2013).

The specific evaluation questions were: (a) Was the Arabic *Mindfulness Skills* CD culturally acceptable to members of the Arabic-speaking community? (b) Did the use of the exercises on the CD reduce psychological distress over a 5-week period? (c) Was the reduction in psychological distress maintained over a 12-week period?

Methods

Project partners included the SESLHD Multicultural Health Service, SESLHD Mental Health Service, Al Zahra Muslim Women's Association, and the UNSW Sydney (University of New South Wales). The evaluation was conducted as a pre–post study based at St George Community Mental Health Centre.

Participants

The participants were Arabic-speaking adults, aged between 18 and 65 years, living in or accessing services within the St George region who agreed to try a mindfulness program using the Arabic *Mindfulness Skills* CD for 5 weeks and to follow-up at 12 weeks.

Procedure

Both the recruitment and the data collection were undertaken by a female project officer who was a mature and respected member of the local Arabic-speaking community and had a background in community work.

The Arabic Mindfulness Intervention Program was widely promoted through distribution of the study's participant information sheet to active clients and people on the waiting list of the St George Community Mental Health Service, clients of local Arabic-speaking general practitioners and psychologists, and community groups. Approximately 70% of participants were recruited directly from the community, with interested persons often volunteering the name of someone else. On the first contact (either in person or by phone), the project officer provided a brief overview of the program. If the person agreed, she arranged to visit them (usually at home) and go through the formal recruitment process—providing a full explanation, answering questions, obtaining written consent, and administering the baseline questionnaires. People who scored as highly or severely distressed on the psychological measures or disclosed experiencing high levels of distress were retained in the study and, with their permission, simultaneously referred to the St George Community Mental Health Centre or elsewhere for further assessment.

Following recruitment and baseline data collection, the project officer explained how to use the CD and record the experience. Participants were asked to listen to two or three tracks of the Arabic *Mindfulness Skills* CD at least three times a week for a period of 4 weeks, and one track three times a week in the fifth week. It was estimated that this would take approximately 60 minutes per week.

During the study, participants were contacted by phone to arrange the postprogram and follow-up visits and data collection. They were also encouraged to contact the project officer at any time if they had any questions or were feeling anxious or worried.

Data were collected at baseline, after 5 weeks (postprogram), and after 12 weeks (follow-up).

Measures

At baseline, participants completed a two-page questionnaire in Arabic beginning with sociodemographic items: age, gender, postcode, country of birth, years of residence in Australia, language spoken at home, religion, and education. There was a six-part question about health professionals seen in the last 4 weeks: GP, psychologist, psychiatrist, counsellor, emergency department or hospital, and other health professional. Finally, there were eight statements about mindfulness (see Appendix) with which participants were invited to show their agreement using a 5-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*). These were developed by the authors to assess both knowledge of mindfulness and cultural acceptability of mindfulness. The questions on health professionals seen and mindfulness were repeated postprogram and at follow-up.

Arabic translations of the Kessler Psychological Distress Scale (K10) and the Depression Anxiety and Stress Scale (DASS21) developed, validated, and distributed by the NSW Transcultural Mental Health Centre were administered at baseline, postprogram, and follow-up. The K10 is a 10-item questionnaire that yields a global measure of psychological distress based on symptoms experienced in the last 4 weeks (Kessler et al., 2002). It is routinely used in NSW mental health services and is now available in 27 community languages. The DASS21 is a 21-item questionnaire with three subscales designed to measure depression, anxiety, and stress (P. F. Lovibond & Lovibond, 1995; S. H. Lovibond & Lovibond, 1995; Moussa, Lovibond, Laube, & Megahead, 2016). During the program, participants were asked to fill out an activity log sheet recording when they listened to each track on the CD, for how long, and any comments. These were collected at the postprogram visit. The project officer also kept field notes in which she recorded other comments about the mindfulness program.

Community feedback

As part of Mental Health Month in October 2015, Arabic community members and health professionals were invited to attend an Arabic Well-Being Forum, ''Sahtak Bel Deni'' (''Your Health is Worth the World''), where the study findings were presented. Over 100 community members attended, including many study participants. Bilingual health professionals spoke about access to mental health services and resources, good nutrition, and smoking cessation, and copies of the Arabic *Mindfulness Skills* CD were distributed.

Ethics

Ethics approval was obtained from the South Eastern Sydney Local Health District (SESLHD) Human Research Ethics Committee (HREC/14/155). Informed consent was obtained by the project officer who outlined the information in the participant information sheet (available in Arabic and English) and answered any questions. The study was monitored by a steering committee comprising the principal investigators and senior managers of the SESLHD Multicultural and Mental Health Services.

Data analysis

All data were entered into an Excel spreadsheet and analysed using the SAS statistical package. Copies of questionnaires were used to verify data entry and check for any inconsistencies or queries about the data.

In the initial analysis, K10 scores were categorised according to recommended standards as moderate (score 16–21), high (22–29), or very high (30–50; ABS, 2012). A similar approach was taken with the three DASS21 subscales with depression classified as normal (score 0–4), mild (5–6), moderate (7–10), severe (11–13), or extremely severe (14+); anxiety as normal (0–3), mild (4–5), moderate (6–7), severe (8–9), or extremely severe (10+); and stress as normal (0–7), mild (8–9), moderate (10–12), severe (13–16), or extremely severe (14+; S. H. Lovibond & Lovibond, 1995). In calculating the mean changes in K10 and DASS21 scores between baseline, 5 weeks, and 12 weeks, they were treated as continuous variables.

Descriptive statistics were used to summarise the sociodemographic data, professional help-seeking, understanding of mindfulness, and the K10 and DASS21 scores. Differences across time on the K10 and the DASS21 subscales were tested for statistical significance by conducting a repeated measures analysis of variance using the mixed function within SAS (Proc MIXED) to examine the hypothesis that the mean change in score was zero, and adopting a p value of .05. We used an independent t test to examine if age, education, proportion of life spent in Australia, or use of mindfulness (≥ 3 times per week) were associated with reduction in psychological distress, again adopting a p value of .05.

Results

Participant characteristics

Eighty-one people registered for the Arabic Mindfulness Intervention Program but six lost interest when they realised the number of weeks involved. Once the program was under way, only five withdrew—three apologised that they were too busy and two went overseas. Seventy participants (93% of the starters) completed the program and were included in the analysis.

Most (72.9%) participants were female, 72.9% were aged 26–55 years, and 70% had lived in Australia for over 15 years. Countries of birth included Lebanon

(55 participants, 78.6%), Iraq (5), Egypt (4), Palestine (3), Syria (2), and Senegal (1). The Senegalese-born woman was of Lebanese background. All but four participants were of Islamic faith. Almost half (48.6%) had no postsecondary school qualifications. Around a quarter (24.3%) reported seeing a psychologist or psychiatrist at least once in the study period (12 and five participants, respectively). Just over half (51.4%) reported that they had seen a GP at least once during that time. None of them reported seeing a counsellor.

Program compliance

Compliance with the protocol was high. Based on analysis of the activity log sheets, 64 (91.4%) of the participants used the CD 15 or more times during the 5-week program, with 15 also being the mode and median. At the 12-week follow-up, all but four participants (94.3%) reported continued mindfulness practice. Over one third reported using the CD three times a week (28.6%) or more often (8.5%), and over half (57.2%) used it once or twice a week.

Understanding of mindfulness

At baseline, everyone understood that mindfulness was a form of meditation; however, 51.4% did not realise that mindfulness used the breath to improve concentration. At the 12-week follow-up, all those who continued using the CD postprogram agreed that this was the case. Indeed, most regarded mindfulness as a form of physical activity due to the breathing exercises. At follow-up, all participants agreed that mindfulness fitted in with their cultural and religious practices (32.9% strongly) and way of life (27.1% strongly). In addition, all agreed (38.6% strongly) that mindfulness provided practical strategies to reduce stress.

Psychological well-being

The K10 results are summarised by category in Table 1. At baseline, all participants reported some degree of psychological distress, with most scoring in the ''high'' or ''very high'' categories. The percentage with ''very high'' levels of distress decreased from 52.9% to 28.6% at 5 weeks, and to 14.7% at 12 weeks.

The DASS21 results for each of the three subscales are summarised by category in Table 2. The percentage classified as having ''severe'' or ''extremely severe'' depression decreased from 27.1% at baseline to 14.2% at 5 weeks, and to 10% at 12 weeks. The percentage classified as having ''severe'' or ''extremely severe'' anxiety decreased from 20% at baseline to 15.7% at 5 weeks, and to 5.8% at 12 weeks. Finally, the percentage classified as having ''severe'' or ''extremely severe'' stress fell from 45.7% at baseline to 8.5% at 5 weeks, and to 2.9% at 12 weeks. At follow-up, no one scored in the ''extremely severe'' category for depression or stress.

Table 1. K10 category at baseline, 5 weeks and 12 weeks ($N = 70$).

	Baseline		5 weeks		12 weeks	
K10 category	*n*	%	*n*	%	*n*	%
Moderate (16–21)	3	4.3	8	11.4	24	35.3
High (22–29)	30	42.9	42	60.0	34	50.0
Very high (30–50)	37	52.9	20	28.6	10	14.7

Note. K10 = Kessler Scale.

Table 2. DASS21 subscale category at baseline, 5 weeks and 12 weeks ($N = 70$).

	Baseline		5 weeks		12 weeks	
Subscales	*n*	%	*n*	%	*n*	%
Depression						
Normal (0–4)	18	25.7	24	34.3	35	50.0
Mild (5–6)	13	18.6	18	25.7	12	17.1
Moderate (7–10)	20	28.6	18	25.7	16	22.9
Severe (11–13)	8	11.4	5	7.1	7	10.0
Extremely severe (14+)	11	15.7	5	7.1		
Anxiety						
Normal (0–3)	37	52.9	40	57.1	47	67.1
Mild (4–5)	12	17.1	16	22.9	16	22.9
Moderate (6–7)	7	10.0	3	4.3	3	4.3
Severe (8–9)	4	5.7	4	5.7	2	2.9
Extremely severe (10+)	10	14.3	7	10.0	2	2.9
Stress						
Normal (0–7)	7	10.0	22	31.4	40	57.1
Mild (8–9)	8	11.4	22	31.4	17	24.3
Moderate (10–12)	23	32.9	20	28.6	11	15.7
Severe (13–16)	26	37.1	5	7.1	2	2.9
Extremely severe (17+)	6	8.6	1	1.4		

Note. DASS21 = Depression, Anxiety, and Stress Scale.

Mean scores on the K10 and DASS21 showed improvement between baseline, 5 weeks, and 12 weeks (see Table 3). On the K10, there were statistically significant changes from baseline to 5 weeks and 12 weeks, and from 5 weeks to 12 weeks (all $ps < .001$; see Table 3). At the 12-week follow-up, the change in K10 score was significantly associated with age ($p = .01$) and educational attainment ($p = .04$).

The greatest change in K10 score was observed for younger participants in the study, being significantly less for those aged 56–65 years. Similarly, participants with a trade certificate or university qualification were significantly more likely to show improved K10 scores than those with only secondary education. Changes in DASS21 depression and stress scores across the three time periods were also statistically significant. The overall change in anxiety score was significant, but intermediate changes were not (see Table 3). None of the demographic factors were associated with change in depression or stress scores. At 5 weeks, age was significantly associated with change in anxiety score ($p = .03$).

Participants reported that they enjoyed using the CD and that cultivating mindfulness helped reduce stress and improved their quality of life. Comments recorded in the activity logs and feedback to the project officer indicated that the program was culturally and religiously acceptable to both women and men, as demonstrated in the examples (translated from Arabic) below.

> Mindfulness is mentioned in a positive way in Quranic verses and certain Islamic rituals. Mindfulness is important and is considered as part of Islamic practices. Imam Ali said: "To be mindful [here "*tafkur*," the Arabic word for meditation, was used] 1 hour is better that an act of worship practised in 60 years." (Female, Muslim, 26–35 years)
>
> Thank you for the opportunity to participate. This experience made me feel as if I am performing a religious act of worship. (Female, Christian, 26–35 years)
>
> These [CD tracks] are very beneficial. They refresh our spiritual and physical ability. (Female, Muslim, 46–55 years)
>
> I felt that it helped me so I don't get distracted with thoughts while I am carrying out an activity. Especially activities that require focus such as prayers. (Male, Muslim, 36–45 years)
>
> We have been through a bad experience recently. This track helped me deal with unpleasant emotions and feel calm. (Male, Muslim, 36–45 years)

Discussion

In Australia, as elsewhere, mindfulness-based interventions are increasingly being used for the treatment of a variety of psychological, somatic, and interpersonal problems. MBIs have proved particularly effective when integrated with standard treatments such as cognitive behaviour therapy. Self-help books and audiovisual material on mindfulness have become extremely popular with the general public in Western countries. However, the reach of currently available clinical tools and other resources is limited, as they are generally produced in English. The Arabic *Mindfulness Skills* CD whose evaluation is reported here is, as far as we know, the first Arabic-language self-management resource of this type.

The high level of self-reported psychological distress at baseline was unanticipated given that over two thirds of participants were recruited directly from the

Table 3. Change in K10 and DASS21 scores from baseline to 5 weeks and 12 weeks ($N = 70$).

Variables	Mean score			Mixed procedure exploring change over time		
	Baseline *M* (*SD*)	5 weeks *M* (*SD*)	12 weeks *M* (*SD*)	Baseline vs. 5 weeks *M* [95% CI] *p* value	Baseline vs. 12 weeks *M* [95% CI] *p* value	5 weeks vs. 12 weeks *M* [95% CI] *p* value
K10	30.5 (6.0)	26.9 (4.9)	23.8 (4.2)	−3.6 [−5.3, −1.9] < .001	−6.7 [−8.4, −5.0] < .001	−3.0 [−4.8, −1.4] < .001
DASS21						
Depression	8.0 (4.6)	6.5 (3.7)	5.2 (3.2)	−1.6 [−2.8, −0.3] .02	−2.9 [−4.2, −1.6] < .001	1.3 [0.9, 1.7] < .004
Anxiety	4.3 (4.0)	3.6 (3.3)	2.8 (2.5)	−0.7 [−1.8, −0.4] *ns*	−1.5 [−2.6, −0.4] < .01	−0.9 [−2.0, −0.2] *ns*
Stress	12.0 (3.1)	9.1 (2.8)	7.5 (2.6)	−2.9 [−3.9, −2.0] < .001	−4.5 [−5.5, −3.6] < .001	−1.6 [−2.5, −0.7] < .001

Note. K10 = Kessler Scale; DASS21 = Depression, Anxiety, and Stress Scale.

community, although elevated K10 scores among Lebanese-born Australians have been recorded previously. In NSW in 2002–2005, the prevalence of "high" or "very high" K10 scores for this country-of-birth group was the highest in the state: 44.1% for women and 23.9% for men (Population Health Division, 2008). We speculate that the even higher level of distress reported here reflects the rising levels of prejudice and discrimination experienced by Middle Eastern Australians over the past decade (Pedersen, Dunn, Forrest, & McGarty, 2012).

Participants were motivated to learn new ways of improving their well-being through mindfulness. Other motivating factors were possession of a self-help resource that could be used at any time, perceived health benefits, and regular contact with the project officer who, in addition to recruiting participants and collecting data, provided a sympathetic ear. With regular use of the Arabic *Mindfulness Skills* CD (an average of three times a week over the first 5 weeks), the benefits became self-reinforcing. Three times a week or more seems to be the effective dose for mindfulness practice (Perich, Manicavasagar, Mitchell, & Ball, 2013).

Participation in the Arabic Mindfulness Intervention Program, which involved using the *Mindfulness Skills* CD, was associated with a statistically significant reduction in psychological distress as measured by the K10 and the DASS21 post-program and at the 12-week follow-up. The techniques boosted their concentration, assisted them in managing negative experiences and emotions, and refreshed them spiritually and physically. Overall, participants found that mindfulness practice fitted well with their way of life and was compatible with their cultural and religious practices. All but four of the 70 participants continued using the CD beyond the prescribed 5 weeks.

In the CD, the Arabic phrase "*alhudur althihni*" was used for mindfulness. In their activity logs and feedback, participants also used the Arabic words for contemplation (*tamal*) and meditation (*tafkur*). Mindfulness meditation and similar practices need to be considered in social and cultural context (Kirmayer, 2015.) Virtually every spiritual tradition has rituals for mindful contemplation and silence as well as direct awareness of experience, such as prayers. Commonly, prayers are conducted in a mindful and reflective manner, resulting in increased presence during worship. Praying regularly helps keep distracting thoughts at bay so that, over time, one's state of awareness and psychological focus become fully immersed with consciousness of God. Terms frequently used by Arabic speakers such as "*Insha'Allah*" (God willing) embody qualities such as patience, resoluteness, wisdom, compassion, serenity, and nonreactivity—all qualities embodied in mindfulness. The Arabic word "*sabr*" represents a calming and unconditional acceptance of what is there, here, and now; not succumbing to worry and anxiety.

Since its development, the Arabic *Mindfulness Skills* CD has been incorporated as an adjunct to specialist mental health care in St George Mental Health Service and delivered by the second author (HS) through community groups. CD tracks have been loaded onto the SESLHD website and sound cloud and can be accessed

at no cost by clinicians and community members (https://soundcloud.com/albion-centre/sets/mindfulness-skills-arabic). In the broader Australian context, the CD may be particularly relevant for the large number of newly arrived refugees from Arabic-speaking countries, including Syria and Iraq. International interest has been strong following a presentation at the International Psychology Conference in Dubai in October 2015, with clinicians from across the world contacting HS to report on the utility of the intervention in their context.

Further research is needed to determine whether similar outcomes can be obtained when community members are engaged through group programs run by trained bilingual community workers, or through general practitioners. Both service settings are more readily accessed by Arabic-speaking communities in Australia than mental health services. The Arabic-speaking and Muslim worlds are extremely diverse and there are major differences between countries and regions. The current findings also need to be confirmed with a broader sample of Australian Arabic-speakers from different countries in the Middle East and North Africa. There are opportunities—both in the Arab world where there are few studies on the treatment of mental disorders (e.g., Al-Krenawi, Graham, Dean, & Eltaiba, 2004; Fakhr El-Islam, 2008; Nasser & Salamoun, 2011) and in Western countries with substantial Arabic-speaking populations (e.g., Ciftci, Jones, & Corrigan, 2013; Padela, Killawi, Forman, DeMonner, & Heisler, 2012)—to clinically investigate the use of mindfulness in the treatment of specific psychological issues such as pain, grief, and trauma. Awad, Martinez, and Amer (2013) highlighted the mental health needs of Arabic-speaking women in the United States, particularly in the wake of 9/11. Practitioners have advocated for the development of psychotherapeutic interventions informed by Islamic tradition (Hodge & Nadir, 2008; Thomas & Ashraf, 2011).

Strengths and limitations

Study strengths include involvement of members of the target community at all stages of the project, employment of a project officer for the evaluation who was able to encourage high levels of participation and compliance, and use of validated translations of standardised psychometric measures supplemented by qualitative data. The K10 and DAS221 are widely used self-report measures of psychological distress validated with Arabic speakers. The major limitation lies in the lack of a control or comparison group. It is difficult to disentangle the effects of using the Arabic *Mindfulness Skills* CD from ongoing contact with the project officer. Given the extremely high psychological distress scores at baseline, particularly on the K10 and the DASS21 Stress subscale, some regression toward the mean is to be expected. It is also probable that the use of repeated measures had some effect. The sample size limits analysis by subgroup (e.g., gender and age group). The dominance of Lebanese-born Muslims in the sample, while reflective of the Arabic-speaking population in the St George region, limits generalisation to other Arabic-speaking populations in Australia.

Conclusion

Mindfulness practice was compatible with participants' cultural and religious practices and met their psychological needs. The Arabic *Mindfulness Skills* CD is a culturally acceptable and clinically effective mental health resource for a community with poor engagement with mental health services and high levels of psychological distress. This low-cost, easily distributed resource is suitable for use in individual self-management and as an adjunct to primary and specialist mental health care.

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ORCID iD

Ilse Blignault http://orcid.org/0000-0002-7164-2217

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Ilse Blignault, BSC (Hons), MClinPsych, MIH, PhD, is Principal Research Fellow at the Translational Health Research Institute at Western Sydney University and Senior Visiting Fellow at the School of Public Health and Community Medicine at UNSW Sydney. Her specialist expertise lies in public health and mental health,

and her research interests include the social and cultural determinants of mental health, health and community services in a diverse society, and the social and emotional well-being of Aboriginal and Torres Strait Islander Australians.

Hend Saab, BA, MA, Grad Cert Cross Cultural Mental Health, is senior bilingual consultant psychologist at St George Community Mental Health Service. She has over 22 years of experience providing individual and group psychological interventions, working mostly with migrant and refugee families and communities, and providing cultural consultations and training and education to community and health workers across NSW. For the past 20 years, she has worked extensively with the Arabic-speaking community in south-east Sydney.

Lisa Woodland, BSc (Hons), Grad Cert Health Service Research and Development, is Manager for Priority Populations within Primary, Integrated, and Community Health at South Eastern Sydney Local Health District. Lisa researches models of care for refugee and migrant populations and culturally responsive health promotion initiatives. She is currently involved in a range of research projects in the areas of youth health, refugee health, mental health, tobacco control, and child development.

Elizabeth Comino, BVSc, BSc, MPH, PhD, is Associate Professor of Primary Health Care and Equity within the Centre for Primary Health Care and Equity, UNSW Sydney. She is currently Principal Investigator of two major cohort studies: the 45 and Up Primary and Community Health Cohort Study and the Gudaga Study: Understanding the Health Development and Service Use of Aboriginal Children in an Urban Environment. Her published works focus on equity in health care, access to primary health care, cohort studies, use of administrative data collections for research into primary health care, and Aboriginal health.

Appendix

Statements about mindfulness

1. Mindfulness is a form of meditation.
2. Mindfulness is about focusing on the past and the future.
3. Mindfulness uses the breath to improve concentration.
4. Mindfulness is a type of physical activity.
5. Mindfulness is compatible with existing cultural and religious practices.
6. I would be willing to learn new ways of improving my well-being.
7. Mindfulness fits in with my way of life.
8. Mindfulness offers practical strategies to reduce stress.