

WESTERN SYDNEY
UNIVERSITY



EVALUATION OF CULTURALLY AND LINGUISTICALLY DIVERSE teen AND YOUTH MENTAL HEALTH FIRST AID

Authors: Shameran Slewa-Younan, Gabriela Uribe, Claire Kelly, Denise Warrington,

Russell Thomson, Kathy Bond



This report was prepared by: Shameran Slewa-Younan, Gabriela Uribe. Claire Kelly, Denise Warmington, Russell Thomson, Kathy Bond

May 2019

Suggested Citation:

Slewa-Younan S, Uribe G, Kelly C, Warmington D, Thomson R, Bond K. Evaluation of Culturally and Linguistically Diverse teen and Youth Mental Health First Aid., Funded by the South Western Sydney Primary Health Network, 2019.

Contents

Executive summary	Page 5
Background to research	Page 10
Method	Page 20
Results	Page 28
Discussion	Page 43
Conclusion	Page 47
Acknowledgements	Page 48
Funding	Page 49
References	Page 50

Abbreviations

ABS	Australian Bureau of Statistics
CALD	Culturally and Linguistically Diverse
MHFA	Mental Health First Aid
MHL	Mental Health Literacy
NSW	New South Wales
PTSD	Posttraumatic Stress Disorder
SWSPHN	South Western Sydney Primary Health Network

Executive summary

Background

Australia is an ethnically diverse nation with one of the largest refugee resettlement programs worldwide. The majority of these ethnically diverse groups choose to resettle in major cities in Australia, and predominately in South Western Sydney, New South Wales (NSW). Research has indicated that exposure to trauma, particularly on the part of refugee groups, in addition to resettlement challenges such as discrimination, low English proficiency, acculturation can contribute to poor mental health outcomes in these groups. Children and youth from culturally and linguistically diverse (CALD) and/or refugee backgrounds can also be subjected to significant resettlement stressors, in addition coping with the usual stressors associated with the adolescent age period. Thus, it is not surprising that adolescence can be a peak period for the emergence of mental distress and onset of some mental illnesses. Despite this however, mental health service utilisation in CALD youth is low with evidence suggesting that children from ethnic minority groups can be reluctant to seek and report health concerns, due to stigma and concerns about the attitudes of their family and community. Relatedly, research has also demonstrated that poor mental health literacy (MHL) of CALD groups in Australia may be a factor in low help-seeking of such populations.

One established and effective method for increasing MHL, reducing stigma and improving supportive first aid behaviours, in youth and in adults wishing to assist adolescents, are the teen and Youth Mental Health First Aid (MHFA) training programs offered by Mental Health First Aid (MHFA) Australia. However, prior to this project, programs that aimed at equipping adolescents and responsible adults with the skills to assist a peer who may be developing a mental health problem or experiencing a mental health crisis from a CALD background, remained lacking. Arising from several needs analysis projects undertaken by South Western Sydney Primary Health Network (SWSPHN), the goal of improving the MHL of young people in Fairfield, NSW was flagged. This was also in part due to Fairfield being currently without a *headspace* centre, a key component of youth mental health support in other areas across the SWSPHN's region.

This project sought to report on the evaluation of :

- The teen MHFA program with a CALD focus for educating Year 10 students on how to provide initial help to peers experiencing mental health crises or developing mental health problems,
- The Youth MHFA program with a CALD focus for educating Year 10 teachers and other responsible

adults on how to provide initial help to adolescents developing mental health problems, experiencing a worsening of existing mental health problems or in a crisis.

Method

Participants

A total of 372 Year 10 students from 2 schools (located in Fairfield, NSW) were trained in the CALD teen MHFA program. Eighty-three percent of total number trained responded the pre-training questionnaire, 59% responded to the post-training questionnaire, and 69% completed the 3-month follow-up questionnaire. A total of 34 adults were trained in the CALD Youth MHFA program. Ninety-four percent responded the pre-questionnaire and 91% responded the post-training questionnaire and, 59% completed 3-month follow-up questionnaire.

Measures

Surveys were developed to measure MHL, stigmatising attitudes, MHFA behaviours, and the help-seeking status of adolescents in Year 10. Within the adult group, questions focused on MHL, stigmatising attitudes, MHFA behaviours, and appropriate help-seeking and youth mental health knowledge.

Statistical analysis

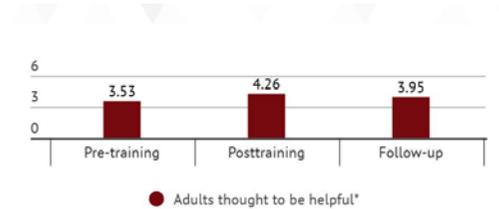
A mixed effects model was used to assess the differences between pre- and post-, and pre- and follow-up measures. Logistic mixed effects model was used for binary measures and linear mixed effects model for continuous measures. Multiple imputation was used to account for all missing data, using predictive mean matching for continuous variables, and logistic regression for categorical variables. Finally, paired sample t-tests were used to assess changes on actual helping behaviours, which were administered at two time points, pre-training and 3 months following the completion of training in both participant groups.

Results

teen Mental Health first Aid Evaluation Results

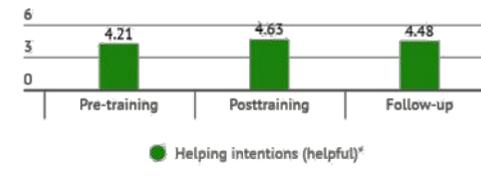
Adults thought to be helpful

Following training, students were more likely to endorse 'helpful' adults as valid source of help ($p < .001$) and these gains were maintained at follow-up ($p < .01$).



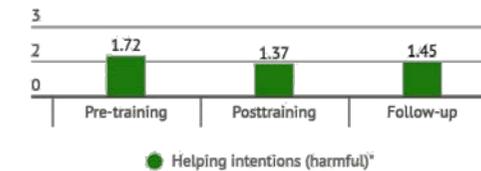
Helping intentions – helpful

Significant higher levels of consistent (helpful) helping intentions were found after training ($p < .01$), and this was maintained at follow-up ($p < .05$).



Helping intentions – harmful

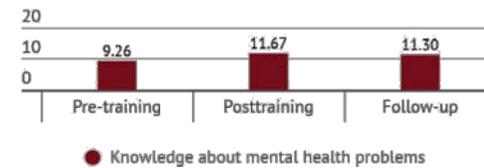
Significant lower levels of discordant (harmful) helping intentions were found after training ($p < .001$), and this was maintained at follow-up ($p < .01$).



Youth Mental Health First Aid Evaluation Results

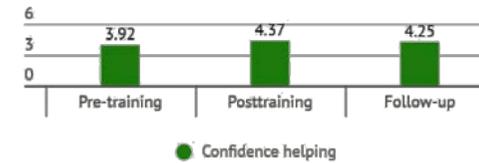
Knowledge of mental health problems

A significant improvement in participants' knowledge about youth mental health problems and youth mental health first aid was noted from pre- to post-training ($p < 0.01$) and were maintained at follow-up ($p < 0.01$).



Confidence helping

Confidence when helping a young person with mental health problems increased significantly after training ($p < .001$) and this was maintained at follow-up ($p < .05$).



Discussion of Key Findings

The results demonstrated that the CALD teen MHFA was effective in increasing the knowledge of the trained adolescents in approaching appropriate adults when experiencing mental health problems or crises and improving their quality of helpful intentions, while reducing harmful intentions. Within adults that attended the CALD Youth MHFA program, our results indicated the adapted training was effective in increasing confidence when helping a young person, improving knowledge of youth mental health and youth MHFA actions towards adolescents with CALD background. These findings would indicate that the teen and Youth MHFA training programs with the contextualised resources (CALD focus) were successful in developing the required knowledge of the adolescents to encourage early and appropriate help-seeking and for those adults in positions of responsibility to be able to respond appropriately.

Conclusion

Programs focused on improving the MHL, reducing stigma and improving supportive first aid behaviours, in youth and in adults wishing to assist adolescents from a CALD background were lacking. This project reported on the findings of the evaluation of the CALD teen and Youth MHFA programs, delivered in Fairfield, NSW. Our results indicate that CALD teen and Youth MHFA are a recommend way of upskilling those trained and thereby leading to the improvement youth mental health in areas with high proportion of ethnically diverse groups.

Background to research

Diversity in Australia

Australia is an ethnically diverse nation. In the latest national census undertaken in 2016 [1], approximately half (49 per cent) of Australians reported as being born overseas (first generation Australian) or had one or both parents that had been born overseas (second generation Australian) [1]. In addition, of the 6,163,667 people born overseas, nearly one in five (18%) had arrived since the start of 2012 [1]. Australia has one of the largest resettlement programs worldwide [2] providing durable solutions and protection to individuals through its Humanitarian Visa Program and Permanent Migration Program. It is reported that for the period 2018-19, the Australian Government will allocate 18,750 places to refugees and others who are displaced as a result of conflict, persecution and human rights abuses [3]. Along with the Humanitarian program, Australia will offer in 2018-19, a total of 190,000 places which covers skilled, family and special circumstances permanent migration to Australia [3]. Data from the Australian Bureau of Statistics (ABS) indicates that a majority of these ethnically diverse groups choose to resettle in major cities in Australia, and predominately in New South Wales (NSW) (33%) [4]. Relatedly, metropolitan Sydney had the largest overseas-born population of all the capital cities [4], concentrating primarily in South Western Sydney, one of the most culturally-diverse districts nationwide [5].

The mental health of culturally and linguistically diverse communities

High prevalence rates of post-traumatic stress disorder (PTSD) and major depression among refugee populations resettled in Western countries have been clearly identified [6]. While reported prevalence rates can vary, data from one of the largest meta-analyses to date indicated rates of 30.6% and 30.8% for PTSD and depression, respectively [7]. Exposure to high levels of trauma [7] in addition to resettlement challenges (e.g. discrimination, low English proficiency, employment, cultural adjustment difficulties) are all thought to contribute to poor mental health outcomes in refugee groups [8].

Similarly, migrants from culturally and linguistically diverse (CALD) communities often face similar resettlement stressors and as such are at an increased risk of developing mental health conditions [9]. In an Australia based study [10], it was reported that foreign born (non-English speaking) groups had higher rates of depression (19.7%) compared with Australian counterparts (English-speaking), with resettlement challenges being one of the strongest predictor for poor mental health in minorities (e.g. discrimination, lack of opportunities, low English proficiency, unemployment, cultural adjustment difficulties) [9-11].

The mental health of culturally and linguistically diverse youth

Migration and resettlement also impose challenges to children and youth from CALD and/or refugee/asylum seeker backgrounds [12]. Exposure to traumatic events and its impact on their mental health – mainly PTSD related problems – have been researched extensively in refugee children and youth [13, 14]. Prevalence of PTSD amongst this group varies greatly from 20% to 84% with traumatic exposure demonstrated as being strongest predictor of poor mental health [13]. In addition, literature indicates that migrant children may present with poorer mental health than their mainstream population peers. Stress, anxiety and depression in migrant children are strongly influenced by psychological adaption within the host country [13]. It is important to note that the ability to participate in social activities and in schooling allows children to build necessary social skills and develop a sense of belonging within the host country [13] allowing young people to make a successful transition and settle in their new environment. It should be noted that in addition to the stressors of resettlement, adolescence itself has been indicated as the peak period for onset of mental illness.

Professional help-seeking in culturally and linguistically diverse communities

Professional help-seeking is defined as assistance from professionals who have a legitimate and recognised professional role in providing relevant advice, support and/or treatment. These include specialist and generalist health care providers [15]. It has been reported that people with mental health problems tend to avoid seeking professional help and those who eventually do receive treatment may have taken as long as 30 years to seek professional assistance [16, 17]. Failure or delay in seeking treatment can have serious implications for people with mental disorders, with research indicating a worsening of outcomes [18]. As with the general population, it is estimated that only a small number of refugees seek professional help for their mental health concerns [19, 20, 21]. Indeed, rates of mental health service utilisation in refugees [21] and

migrants [22] tend to be even more limited than in the general population. Similarly, there is evidence to suggest that such a trend is also presented in CALD children and youth [12]. Research has noted that ethnic minority children are often reluctant to seek and report health concerns, due to stigma associated with their status as migrants [12].

The mental health of adolescents in Australia

Nearly half of all people who experience a mental illness in their lifetime will have had their first episode by the age of 18 [23]. Common mental disorders (e.g. anxiety and mood disorders) affect 14% of children and adolescents aged 8-18 years over 12 months in Australia [24]. While the need for early intervention is widely recognised, only a minority of young people with clinically significant symptoms will seek appropriate professional help [25, 26]. It is vital that early and appropriate help is sought because adolescence is a time where important social, emotional and physical developmental goals are occurring [27]. Adolescents are known to have several barriers to help-seeking for mental illnesses [26, 28], and are also poorly equipped to address the disclosure of a peer's mental health problem [29]. Increasing help-seeking for adolescents with mental illness is particularly important. Improved help-seeking in youth and adolescent populations can result in increased likelihood that developmental goals will be attained, may arrest the progression of illness, and can increase the quality of life in those with established mental illness even where pathology remains unaffected by treatment interventions [30, 31]. However, for this to occur, it is essential that adolescents showing symptoms of mental illness are supported to engage appropriate help-seeking and access effective treatment interventions early in the course of illness. To improve outcomes and reduce the burden mental illness can place on young people, their families and communities, support for help-seeking in adolescence needs to be improved. Research on factors influencing help seeking in young people indicate three possible factors, MHL, stigma and social support [32].

Mental health literacy (MHL)

MHL is defined as knowledge and beliefs about mental illness that aid recognition, treatment and prevention [33].

MHL has multiple aspects and can include:

- The ability to recognise specific disorders,
- Knowing how to seek information about mental health,
- Understanding risk factors and causes of mental illness,
- As well as knowledge and attitudes that promote appropriate professional help-seeking and engagement in suitable self-help treatments [34].

Research has demonstrated that MHL levels in youth is rather low. They have poor recognition and poor knowledge around mental health problems, poor knowledge of helpful (evidence-based) interventions and/or professionals for mental health concerns. They are also often unwilling to disclose their mental health concerns to adults or family members, or to facilitate or encourage professional help for friends or themselves [28, 35].

Negative attitudes: Stigma

Stigmatising attitudes about mental illness have been defined as attributions of an individual that are deeply discrediting or which taint, discount or disapprove of the person because of a mental illness or related symptoms [36, 37]. Stigma can be personal (i.e., negative beliefs about the self-due to mental illness) or public (i.e., widely communicated stereotypes about those with mental illness) and is associated with prejudice and discrimination [38]. Importantly, stigma has been found to be associated with lower rates of help-seeking and reduced social support for people with mental health problems [38]. For example, people who hold self-stigmatising beliefs are more likely to believe that they should be able to deal with the symptoms of depression and not seek out professional help [39]. In young people, attributing a mental health problem to a personal weakness rather than illness is associated with less intention to seek help from a doctor and less positive beliefs about professional help. *Social distance* is the desire to avoid contact with a group of people who have the stigmatised attribute (e.g., mental illness). It is one component of stigma that has been studied and measured for over a decade [40].

Higher levels of social distance have been associated with less knowledge of mental illnesses, lower levels of contact with individuals with mental health problems, lower likelihood of seeking help from a friend or teacher if experiencing symptoms of mental illness, and lower likelihood of assessing for suicide risk in a peer [28]. In a systematic review of social distance, Jorm and Oh (2009) reported that social distance should be a strong target for reducing the stigma of mental illness, as it can be reliably measured and effectively reduced in planned interventions [41].

Social support

Social support is the functional and emotional assistance provided by the social network (e.g. friends, peers, family) of an individual [42]. One essential aspect of social support for adolescents with mental health problems is *mental health first aid*. This is the help provided to a person who is developing a mental health problem, experiencing a worsening of an existing mental health problem or in a mental health crisis, until appropriate professional help is received or until the crisis resolves [43]. Research suggests that young people's knowledge of effective first aid strategies is inadequate. In a large longitudinal survey of youth, it was found that only 15% of 534 respondents who reported trying to help someone with a mental health problem in the last 12 months had encourage the person to seek professional help, and only 3% reported encouraging their peer to tell someone else (such as an adult) about their problem [44]. Other research has found that young people are also less likely to ask about suicidal thoughts of their peers [45]. Importantly, these findings demonstrate that although adolescents have a strong preference for disclosing personal problems such as symptoms of mental illness to their friends, adolescents are not well equipped to cope with the disclosure [35, 44, 46]. Nevertheless, the peer group of a young person with a mental illness can be a source of great support, comfort and information [26]. Help-seeking studies in young people suggest that the decision to seek help, to engage in appropriate treatments and adhere to its course, are all heavily influenced by the attitudes and suggestions of the social network or peer group [32, 47, 48]. Therefore, improving young people's ability to support a peer with an emerging mental health problem to seek out appropriate help should be a priority in reducing the burden associated with mental illness amongst young people.

Mental Health First Aid Course: a way forward

One established and effective program for increasing MHL, reducing stigma and improving supportive first aid behaviours, is the Standard Mental Health First Aid (MHFA) training provided by Mental Health First Aid Australia [43]. The Standard MHFA course teaches about a range of mental disorders such as anxiety disorders (e.g. generalized anxiety disorder), mood disorders (e.g. depression), and crises (e.g. non-suicidal self-injury, panic attacks). It is an evidence-based program that has been found effective in multiple settings and population groups [49]. Relevant to this project are the training programs developed by MHFA Australia [50] labelled teen and Youth MHFA. The primary aim of the program is to increase MHL in youth and the details of the programs will be revised next.

teen Mental Health First Aid

The teen Mental Health First Aid Program (teen MHFA) is an initiative of Mental Health First Aid Australia (MHFA). teen MHFA involves the delivery of a short course to adolescents in Years 10-12 of secondary school. It uses age-appropriate materials developed from research with experts and consumers in the field of youth mental health [50], and consultation with the education sector.

The aims of the teen MHFA program is to give young people the skills they need to offer help to a friend experiencing mental health problems or who is in crisis. To do this, the objectives of the teen MHFA program are to:

- Increase MHL.
- Increase knowledge of appropriate mental health first aid strategies.
- Increase supportive actions provided to peers with mental health problems.
- Increase the likelihood that early and appropriate treatment is sought through decreasing barriers such as stigmatising attitudes, negative beliefs about mental health professionals or concerns about privacy.
- Increase young people's ability to recognise thoughts of suicide and act to keep a friend safe.

The teen MHFA training intervention involves three 75-minute classroom sessions facilitated by an accredited teen MHFA Instructor with specific training and experience in youth mental health. Sessions are presented to regular class groups of between 15-30 students. Training is normally completed within five to eight school days, depending on timetabling at each school, with at least one day between each session. The training involves: PowerPoint presentations, videos, role plays, group discussion and small group activities. A student booklet is provided for each participant, for use in sessions and for reference following the completion of the course [50]. All instructor training is supplemented with a teaching manual in order to guide facilitation and ensure fidelity and consistency. Table 1 outlines the teen Mental Health First Aid course content.

Table 1 Structure and content of the teen Mental Health First Aid training

Session 1: 75 minutes	Session 2: 75 minutes	Session 3: 75 minutes
Mental health problems	Helping a friend in a mental health crisis	Helping a friend who is developing a mental health problem
Topics presented:	Topics presented:	Topics presented:
<ul style="list-style-type: none"> • What is mental health? • What are mental health problems? • Types of mental health problems • Impact on young people • Stigma • Appropriate help 	<ul style="list-style-type: none"> • What is mental health first aid? • What is a mental health crisis? • Using the teen MHFA action plan to help a friend in crisis • Recovery position 	<ul style="list-style-type: none"> • Helping a friend who is developing a mental health problem • Importance of acting early • Using the teen MHFA action plan to help a friend developing a mental health problem • Helpful links and resources
Videos:	Video:	Videos:
<ul style="list-style-type: none"> • Talking about it 1 (4:50sec) • Getting help (5:32) 	<ul style="list-style-type: none"> • Mates (13:55) 	<ul style="list-style-type: none"> • Talking about it 2 (4:14) • Talking about it 3 (6:02)
Activities:	Activities:	Activities:
<ul style="list-style-type: none"> • Group discussion of how mental health problems impact on young people • Identifying supportive adults • Relaxation 	<ul style="list-style-type: none"> • Group discussion of confidentiality vs safety • Role play recovery position 	<ul style="list-style-type: none"> • Group discussion of Luke and Ali's stories • Role play using the action plan

Broadly, the program focuses on developing knowledge and skills in:

- Recognising warning signs that a peer is developing a mental health problem,
- Understanding how to talk to a peer about mental health and seeking help,
- When and how to tell a responsible adult,
- Where to find appropriate and helpful resources about mental illness and professional help, and how to respond in a crisis situation.

Because a central teaching of the teen MHFA training is to seek assistance from a trusted and reliable adult when a peer is experiencing a mental health problem, the Youth MHFA course is also provided to staff and parents at students' schools. This is to ensure that adults who are called upon to assist adolescents are confident in providing support and can facilitate appropriate referral pathways to effective treatment interventions.



Figure 1 - teen Mental Health First Aid action plan

The central teaching of teen Mental Health First Aid training is a five point action plan [47]. It is designed to communicate five first aid strategies in an easy to remember format; once the each action has been explained and discussed in detail throughout the course, the action plan is then referred to in short as "Look, Ask, Listen, Help, Your Friend".

Youth Mental Health First Aid

The 14-hour Youth MHFA course, launched in 2007, teaches adults how to support adolescents who might be developing a mental health problem or in a mental health crisis, and to assist them to receive professional help. The course content and manual provide information which is specific to adolescents [51]. In addition to the mental health problems covered in the standard MHFA course [43], Youth MHFA covers eating disorders. There is also information provided about how to assist a young person who has been engaging in non-suicidal self-injury. There is a strong theme throughout the whole program about the importance of early intervention to minimise the impact of mental health problems on adolescent development. The course can be delivered flexibly as either two full days (which do not have to be consecutive) or over four sessions of 3.5 hours each. Targets for the training include parents, school professionals, adults involved in recreational activities with adolescents (e.g., sport coaches and scout leaders) and other adults who work with or care about adolescents. The Action Plan does not differ from that provided in the standard MHFA course, although the application is tailored to the needs of adolescents.

teen and Youth Mental Health First Aid with a Culturally and Linguistically Diverse Focus

This project reports on the evaluation of the teen MHFA program that was developed to be responsive to youth from CALD background. It is important to note that there are currently no programs available which aim to equip adolescents with the skills to assist a peer who may be developing a mental health problem or experiencing a mental health crisis with a CALD focus. SWSPHN flagged the need for an improvement in young people's mental health literacy in Fairfield, NSW. This was informed by SWSPHN's Needs Assessment and mental health and suicide prevention Activity Work Plan and hence forth SWSPHN scoped the overall need and commissioned this project.

The adaption of the teen and Youth programs was undertaken by Mental Health First Aid Australia and details of this process are not elaborated within this report. However, briefly this process involved the development of new case scenarios which better represented the needs of the young people in the area, the development of a resource list with relevant local services, and two videos featuring interviews with mental health professionals in the Fairfield area. The first of the two videos was designed to help adults to tailor their communication to the needs of young people from a different cultural background to their own, and the second assisted adults to adjust their communication to the needs of students who have (or are like to have) a history of trauma as part of their migration experience, e.g. those who have arrived as refugees and have experienced unrest in their country of origin and those who have experienced war or torture. In addition, ensuring that the instructors of both the Youth and teen MHFA programs were from CALD backgrounds themselves we were able to ensure that language and examples were tailored to the audience. The courses retain all of the elements of the main teen and Youth MHFA programs and the Action Plans were not altered in any way. An advisory group was convened to contribute their expertise and feedback on all of the culturally adapted resources.

Project aims and objectives

● To evaluate the teen MHFA with a CALD focus for educating Year 10 students on how to initially provide help to a peer experiencing mental health crises or developing mental health problems, using an uncontrolled pre, post, and follow-up design:

We measured changes following training of:

- a. Recognition of mental health problems
- b. Helping intentions towards an adolescent with mental health problems
- c. Confidence when helping someone with a mental health problem
- d. Level of stigma towards mental health problems
- e. Knowledge of appropriate help-seeking sources (adults thought to be helpful)
- f. Quality of supportive actions provided to and received by peers with mental health problems.

● To evaluate the Youth MHFA with a CALD focus for educating Year 10 teachers and other responsible adults on how to provide initial help to adolescents developing mental health problems, experiencing a worsening of existing mental health problems or in a crisis using an uncontrolled pre-, post-, and follow-up design.

We measured changes following training of:

- a. Recognition of mental health problems
- b. Helping intentions towards adolescents with mental health problems
- c. Confidence when helping someone with a mental health problem
- d. Level of stigma towards mental health problems
- e. Knowledge about appropriate help-seeking and youth mental health problems
- f. Quality of supportive actions provided to adolescents with mental health problems.

Method

Participants

The training was delivered in South Western Sydney, specifically Fairfield. This area is particularly relevant to this adapted training as it receives and resettles a high influx of refugees and migrants. As such the proportion of adolescents with CALD background enrolled in the local targeted schools was significant. Participants of this evaluation study were Year 10 students and responsible adults and teachers from two high schools located in Fairfield Local Government Area. These schools were selected on the basis of their location (within Fairfield area), the access to a high number of students with CALD background and their capacity to host the research throughout 2018 (e.g. able to provide computers for their students to complete surveys on, have classrooms equipped with audio-visual equipment, and have a timetable which will accommodate the teen MHFA program).

Students

Year 10 was selected as the target group because these students are considered to be located between the junior years (years 7-9) and senior years (years 11-12) and may have contact with both groups. All year 10 students attending the teen MHFA training were invited to participate in the evaluation surveys by their year coordinators and/or the student wellbeing staff. Passive parental consent ("opt-out consent") with adolescent assent were obtained for this research.

A power analysis on the number of Year 10 students required was undertaken to inform the sample size required for the evaluation. Using Cohen's effect size estimates for statistical analyses in the behavioural sciences and making the conservative assumption of no correlation between pre- and post- tests, a sample of 198 participants was calculated to give 80% power to detect a small effect size ($d=0.2$) from pre to post-test with $\alpha=0.05$ (Sample Power 3.0). This power analysis was considered balance between reducing probability of Type I and Type II error, allowing enough power to detect plausible effects, and selection of a suitable, achievable sample size.

A total of 372 Year 10 students were trained. Eighty-three percent of total number trained responded the pre-training questionnaire, 59% responded to the post-training questionnaire, and 69% completed the 3-month follow-up questionnaire.

Teachers/responsible adults

All teachers/responsible adults attending the YMHFA training were invited to participate in the research evaluation component. A power analysis is not calculated for the YMHFA training as we recognise the numbers may be underpowered however the primary purpose of this training was to support the year 10 students.

A total of 34 adults were trained, 94% responded the pre-questionnaire and 91% responded the post-training questionnaire and, 59% completed 3-month follow-up questionnaire.

Approval for this research was sought and granted by the Western Sydney University Human Research Ethics Committee (reference number H12695) and the Department of Education (SERAP number 2018334).

Measures

The surveys were distributed online hosted by www.qualtrics.com. The questions were developed to measure MHL, stigmatising attitudes, MHFA behaviours, and the help-seeking status of adolescents in Year 10. Within the adult group, questions were designed to measure mental health literacy, stigmatising attitudes, MHFA behaviours, and appropriate help-seeking and youth mental health knowledge.

Surveys were administered at three time points: before, immediately after, and 3 months following completion of the training (see table 2).

Table 2. Variables measured in Year 10 students and teachers/responsible adults across time

Variable measured	Pre-training	Post-training	3-month
Demographics	✓		
Recognition of mental health problem – General	✓	✓	✓
Confidence helping	✓	✓	✓
Helping intentions – Helpful ⁱ	✓	✓	✓
Helping intentions - Harmful ⁱ	✓	✓	✓
Helping intentions -ALGEE ⁱⁱ	✓	✓	✓
Offering help ⁱⁱ	✓	✓	✓
Adults thought to be helpful	✓	✓	✓
Social distance	✓	✓	✓
Stigma			
<i>Weak-not-sick subscale</i>	✓	✓	✓
<i>I would not tell anybody</i>	✓	✓	✓
<i>Dangerous/unpredictable subscale</i>	✓	✓	✓
Quality of MHFA provided to peer ⁱ	✓		✓
Quality of MHFA received from a peer ⁱ	✓		✓
Quality of MHFA provided to students ⁱⁱ	✓		✓
Knowledge of youth mental health quiz ⁱⁱ	✓	✓	✓

ⁱonly measured in Year 10 students

ⁱⁱonly measured in teachers/responsible adults

The questionnaires included items adapted from the Australian National Survey of Youth Mental Health Literacy [52], and were focused on a hypothetical case vignette of a CALD adolescent experiencing social anxiety symptoms (Eman). The vignette is provided in appendix 2. All the open-ended responses were coded by a researcher (GU).

Recognition of mental health problems

Problem recognition was assessed by asking students/teachers to identify what, if anything, was wrong with Eman (the character in the vignette). Responses were open-ended. The labels given to these vignettes have been previously validated against the diagnoses of mental health professionals [53]. Coding for recognition of mental health problem was based on responses using key words. The labels were included in the '*mental health problem*' category were '*anxiety*', '*anxious*', '*depression*', '*mental illness*', '*mental disorder*', '*mental problem*', '*trauma*' and/or '*traumatic*'.

Helping intentions

Mental Health First Aid intentions were assessed in Year 10 students by asking: '*If Eman was someone you knew and cared about, what would you do to help (her)?*'. There was a total of 12 possibilities, 6 were consistent (rated as helpful) with the action plan taught in the course and 6 were discordant (harmful) with the action plan. The total score ranged from 0 to 6 in each subscale. Higher scores in the helpful subscale mean higher quality of helping intentions whereas, in the harmful subscale higher scores reflected poorer quality of helping intentions.

In the adult group, participants were asked to '*Describe all the things you would do to help Eman*'. De-identified responses were scored by a researcher (GU). A quality scoring system was utilised to measure the quality of these helping intentions devised by Yap and Jorm [54].

This scoring system is based on the MHFA Action Plan taught in the fourth edition of the MHFA course [42]. Responses are awarded a point for each component of the Action Plan they mention (i.e. Approach the person, Assess and Assist with any crisis, Listen and communicate non-judgementally, Give support and information, Encourage appropriate professional help and Encourage other supports) and an additional point per category where specific details are given (e.g. '*Encourage the person to see a psychologist*' would receive two points as this was an example of Encourage appropriate professional help). Responses ranged from a minimum of 0 to a maximum of 2 points per component. This resulted in total score representing quality of help intention that ranged from 0

to 12. This score has previously been found to predict quality of subsequent helping behaviours, indicating its validity [55].

Offering help

To measure willingness to offer help responsible adults/teachers were asked '*Eman was one of your students, I would help her*'. Rating for this item was made on a 7-point Likert scale ('1 = Strongly disagree', '2 = Mostly disagree', '3 = Somewhat disagree', '4 = Neither agree nor disagree', '5 = Somewhat agree', '6 = Mostly agree', '7 = Strongly agree').

Confidence when helping someone with a mental health problem

Confidence with providing mental health first aid, considered the primary outcome of interest, was assessed by asking how confident (using a 5-point Likert scale) both the student and adult participants felt in helping the person in the vignette. Scores ranged from 1 to 5 with higher scores reflecting greater degree of confidence.

Adults thought to be helpful

Both groups of participants were asked to rate a range of potential sources of help as likely to be helpful for '*Eman*'. Potential sources of help included: close friend, counsellor, family member, general practitioner, minister/priest, parent, psychologist, school counsellor and teacher. These items were used to measure belief in seeking adult help, which is a key message of the training [56]. Scores range from 0 to 6, with 1 point assigned for endorsing each helping adult.

Negative attitudes towards mental health problems

Personal stigma

Both participant groups were asked to respond to seven questions assessing personal stigma towards '*Eman*'. These questions were measured using a Likert scale (1 = 'strongly disagree' to 5 = 'strongly agree'). The questions were: (1) (*Eman*) could snap out of it if (she) wanted; (2) (*Eman*)'s problem is a sign of personal weakness; (3) (*Eman*)'s problem is not a real medical illness; (4) (*Eman*) is dangerous to others; (5) It is best to avoid (*Eman*) so that you don't develop this problem yourself; (6) (*Eman*)'s

problem makes (her) unpredictable; (7) If I had a problem like (Eman)'s I would not tell anyone.

Social distance

An additional five items were adapted for student group from the Social Distance Scale [40, 41]. These questions asked whether the participant would be happy to: (1) develop a close friendship with (Eman); (2) go out with (Eman) on the weekend; (3) go to (Eman)'s house; (4) invite (Eman) around to your house; (5) work on a project with (Eman). Each question was rated on a 4-point Likert scale (1 = 'yes definitely' to 4 = 'definitely not'). Higher scores in both, personal stigma and social distance measures, denoted higher negative attitudes towards mental health problems.

Mental health first aid provided to a peer and received from a peer

Adolescents' mental health first aid experiences were assessed at pre-training and follow-up by asking if in the last 3 months they had contact with anyone who they thought might have a mental health problem or experienced a mental health crisis. A mental health problem was defined as a major change in a person's normal way of thinking, feeling or behaving, which interferes with the person's ability to get on with life, and does not go away quickly or lasts longer than normal emotions or reactions would be expected to. Participants were told that this might involve a diagnosed mental illness, a worsening of a mental health problem, an undiagnosed problem, or a drug or alcohol problem [50]. A mental health crisis was defined as when a person is at increased risk of harm to themselves or to others. Participants were told that crisis situations might include having thoughts of suicide, engaging in self-injury, being very intoxicated with alcohol or other drugs, or experiencing bullying or abuse.

Participants who indicated having contact with a peer with a mental health problem were asked 'What did you do to help the person?'. For this question, a series of consistent helping behaviours based on the action plan were presented. In addition, students were asked about their own mental health and if they had received help in the past. For those who responded 'yes' to both of these questions, a third question 'Who provided support or help for the problem?' was displayed. Further, if they were helped by a 'peer' (friend), they were next asked to select multiple options of 'What did your friend do to help you?'. Again, these options were consistent with helping behaviours based on the action plan though in the course. Scales of help provided to or received from a peer ranged from 0 to 6 points, where higher scores indicated higher quality of help provided or received.

Mental health first aid actions provided to adolescents

In order to assess actual helping behaviours, teachers/responsible adults (only) were asked 'Over the last 12 months, has any young person (12-18) you know had any sort of mental health problem?' at pre-training and 3-month follow-up. Participants were also asked to describe all the things they did to help the person (adolescent) retrospectively at pre-training and 3-month follow-up. Open-ended response rating was performed by a researcher(GU) based on the scoring system devised in a previous study [57].

Knowledge of youth mental health problems in teachers/responsible adults

Knowledge of mental health problems was measured by an 18-item questionnaire specifically designed to cover information in the course. This was a modified version of a questionnaire previously used in MHFA evaluation trials [57]. The questionnaire included statements reflecting general knowledge of youth mental health. Some examples of these items were 'Recovery from anxiety disorders requires teenagers to face situations which are anxiety provoking'; 'Antidepressant medications can be an effective treatment for most anxiety disorders' and 'Cognitive behaviour therapy (CBT) can help relieve depression in teenagers'. Response options for each item were 'Agree', 'Disagree' or 'Don't know'. Scoring was based on 1 point per correct response, providing a maximum score of 18.

Satisfaction with teen and Youth MHFA

Adolescents and teacher/responsible adults' satisfaction with the training was assessed at post training using questionnaire designed to elicit information about how the course presentation, materials and content was received by the participants.

Statistical analysis

A mixed effects model was used to assess the differences between pre- and post-, and pre- and follow-up measures. For the binary outcome measures, a logistic mixed effects model was used, and the effect sizes were presented as odds ratios. For the continuous outcome measures, a linear mixed effects model was used, and the effect sizes were presented as marginal differences in the means (or the beta coefficient for the effect of age). P-values were calculated from the Wald's tests. Analyses were performed using R (v3.5.1 Feather Spray) were fitted in R with the functions lme and glmmPQL in libraries nlme and MASS respectively.

Multiple imputation was used to account for all missing data, using predictive mean matching for continuous variables, and logistic regression for categorical variables. The number of imputations performed per analysis was 20, and the results were pooled using Rubin's method [58]. The R library, mice was used to perform the multiple imputation.

Finally, paired sample t-tests were used to assess changes on actual helping behaviours, which were administered at two time points, pre-training and 3 months after the training completion for both participant groups. For the adolescent group, the quality of MHFA provided to or received from a peer was compared at pre-training to that reported at 3-month follow-up. For the adult group, the quality of MHFA provided to an adolescent by a teacher/responsible adult was compared pre and follow-up. This analysis was undertaken using SPSS version 25. An alpha level of 0.05 for all statistical tests was used.

Results

Figures 2 and 3 present a chart of the training and evaluation numbers for the Year 10 students and responsible adults respectively. Demographic characteristics of both groups are presented in tables 3 and 4.

Figure 2. teen MHFA participants' flowchart

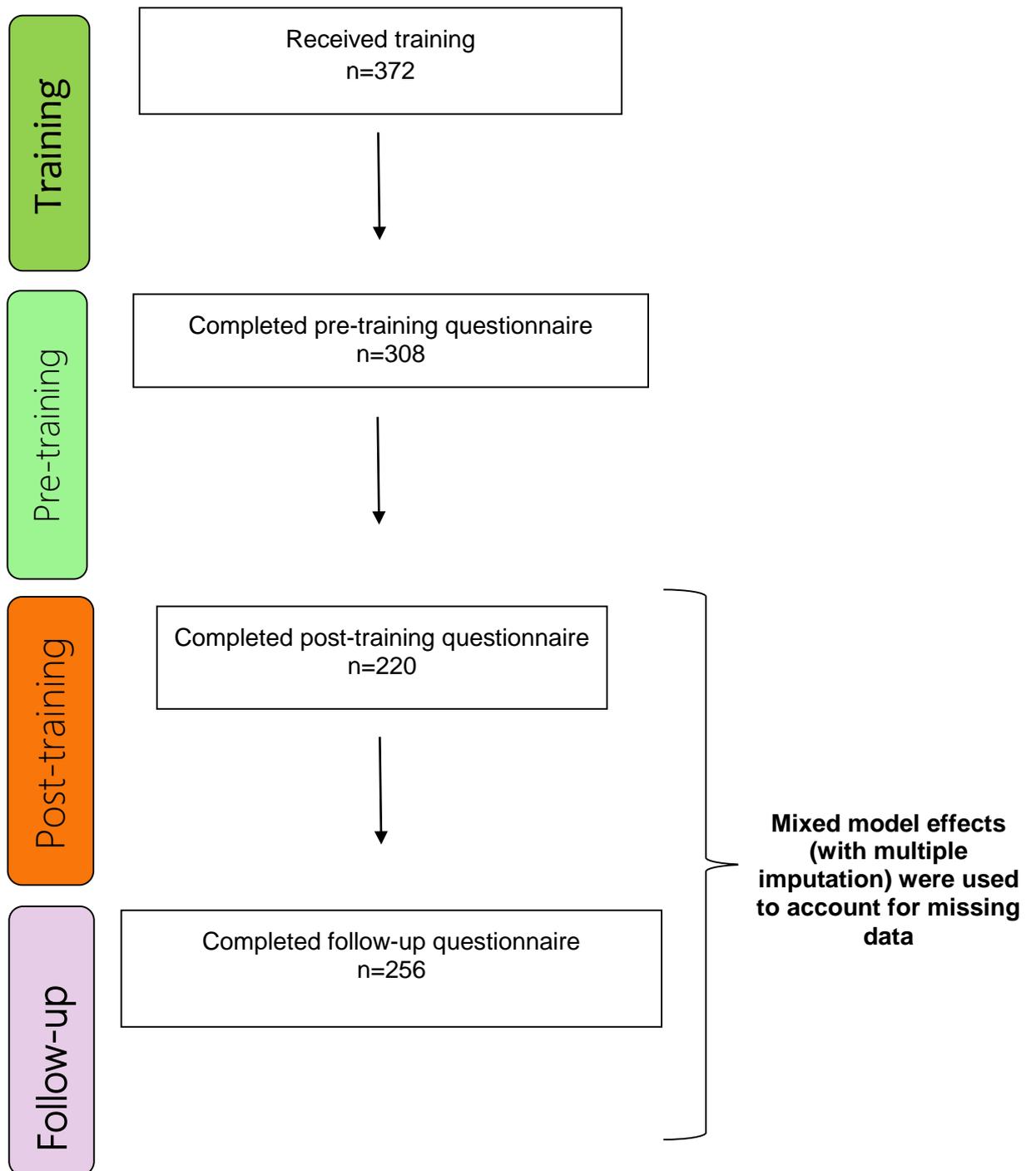


Figure 3. Youth MHFA participants' flowchart

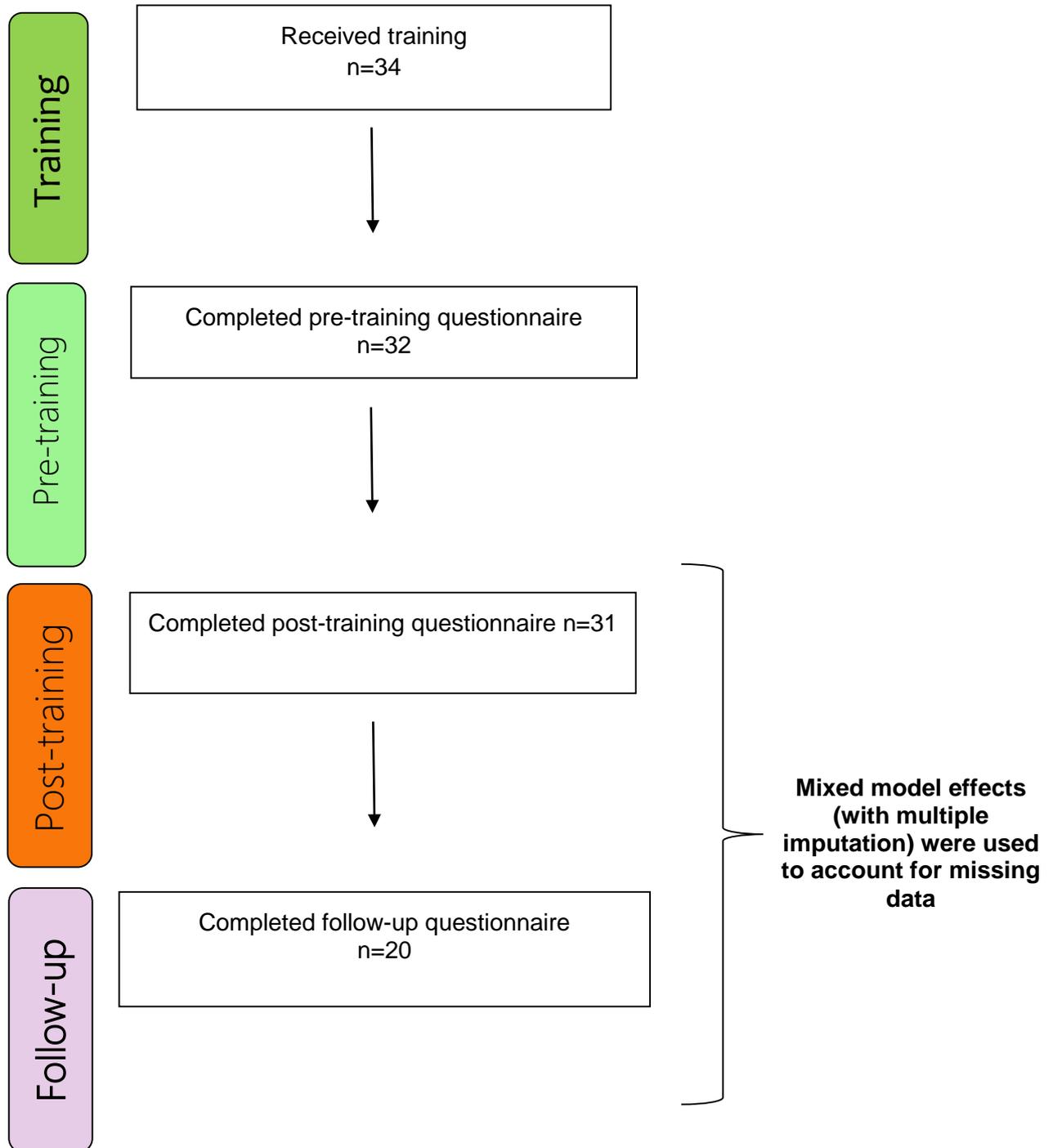


Table 3. Demographics characteristics of Year 10 students

Characteristics	Pre- training (n= 308) ⁱ	%
Gender		
Male	148	48.2
Female	155	50.5
Identify with another term	4	1.3
English as first language		
Yes	145	47.1
No	163	52.9
Language other than English (top 3)		
Vietnamese	59	21.9
Assyrian	22	7
Arabic	20	6.4
Age (years old)		
14	1	3
15	221	71.8
16	81	26.3
17	5	1.6
14 years old or older in 2018		
Yes	295	95.8
No	13	4.2

ⁱMay not add to 308 due to missing data.

Table 4. Demographics characteristics of teachers/responsible adults

Characteristics	Pre- training (n= 34) ⁱ	%
Gender		
Male	9	28
Female	23	72
Country of origin		
Australia	22	63
Other	10	37
Age (years old)	38.38 (13.50)	-
Occupation		
Teacher	28	13
Other	4	87
Qualifications*		
Certificate	2	6.3
Bachelor degree	19	59.4
Masters degree	11	34.3

ⁱMay not add to 34 due to missing data.

teen Mental Health First Aid

Table 5 presents the data on adolescent participants' recognition, knowledge, attitudes towards mental health problems and helping behaviours across pre-training, post-training and 3-month follow-up.

Table 5. Students' data across time

Variables	Pre-training	Post-training	Follow-up	Mean difference for pre- versus post	OR for pre versus post	Mean difference for pre versus follow-up	OR for pre versus follow-up
Problem recognised as 'mental health problem' ⁱ (%)	35.90%	39.70%	36.60%	-	1.81	-	1.03
Adults thought to be helpful (mean, CI 97.5)	3.53 (3.77)	4.26 (4.49)	3.95 (4.19)	0.72***	-	0.41**	-
Social Distance Scale (mean, CI 97.5)	9.73(10.27)	9.46(9.94)	9.19(9.64)	0.25	-	0.53	-
Personal stigma (mean, CI 97.5):							
<i>Weak-not-sick subscale</i>	2.23(2.33)	2.12(2.24)	2.09(2.20)	0.11	-	0.13*	-
<i>I would not tell anybody</i>	2.57(2.70)	2.42(2.56)	2.53(2.67)	0.14	-	0.03	-
<i>Dangerous/unpredictable subscale</i>	2.21(2.32)	2.13(2.24)	2.15(2.25)	0.08	-	0.05	-
Confidence helping (mean, CI 97.5)	3.59(3.71)	3.68(3.82)	3.66(3.80)	0.09	-	0.07	-
Helping intentions – helpful (mean, CI 97.5)	4.21 (4.43)	4.63(4.81)	4.48(4.67)	0.41**	-	0.27*	-
Helping intentions – harmful (mean, CI 97.5)	1.72/(1.86)	1.37(1.52)	1.45(1.58)	0.34***	-	0.25**	-
Quality of MHFA provided to a peer (mean, SD) ⁱⁱ	3.32(1.53)	-	3.68(1.71)	-	-	0.36	-
Quality of MHFA received from a peer (mean, SD) ⁱⁱ	2.62(1.71)	-	2.69(1.65)	-	-	0.07	-

ⁱMultiple responses are permitted

ⁱⁱCompleters only

*P<0.05 **p<0.01 ***p<0.001

Recognition of mental health problems

To assess whether recognition of the problem in the vignette as just a 'general mental health problem' improved over time, the frequencies of all other responses representing a mental health related label ('*anxiety*', '*anxious*', '*depression*', '*mental illness*', '*mental disorder*', '*mental problem*', '*trauma*' and/or '*traumatic*') were included. Results indicated that 35.9% of students recognised the problem in the vignette as '*general mental health problem*', 39.7% did after training and 36.6% of them did at follow-up. This small increase was not significant across times.

Adults thought to be helpful

Following training, students were more likely to endorse 'helpful' adults as valid source of help ($p < .001$) and these gains were maintained at follow-up ($p < .01$).

Social distance towards a peer with a mental health problem

Social distance attitudes towards mental health problems in students were not significantly reduced following training or at follow-up.

Personal Stigma towards mental health problems

Lower levels of stigma in the weak-not-sick subscale were found after training, although this was not significant. However, a significant reduction in the weak-not-sick subscale was found at 3-month follow-up ($p < .05$). '*I would not tell anybody*' subscale and '*Dangerous/unpredictable*' subscale scores were not reduced significantly after training or at follow-up.

Confidence in providing help

Although confidence when helping a peer with mental health problems slightly increased following training this was not significant at post training or at follow-up.

Helping intentions – helpful

Significant higher levels of consistent (helpful) helping intentions were found after training ($p < .01$), and this was maintained at follow-up ($p < .05$).

Helping intentions – harmful

Significant lower levels of discordant (harmful) helping intentions were found after training ($p < .001$), and this was maintained at follow-up ($p < .01$).

Quality of MHFA provided to a peer

A total of 75 students provided responses to indicate that they had in fact actually tried to help a peer and selected the interventions that allowed for measure of helping behaviours to be scored, with a comparison undertaken between pre-training and follow-up time points. Although not statistically significant, there was a slight increase in scores between the two time points.

Quality of MHFA received from a peer

A total of 13 students provided responses to indicate that they had in fact actually received help from a peer and selected the received interventions that allowed for measure of helping behaviours to be scored, with a comparison undertaken between pre-training and follow-up time points. Although not statistically significant, there was a slight increase in quality of help received from a peer between the two time points.

Satisfaction with the teen MHFA training:

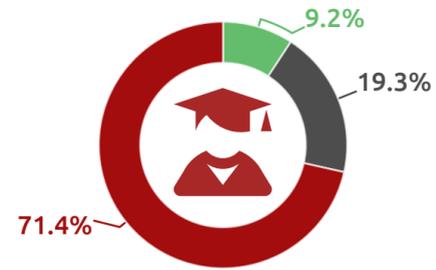
Measures of satisfaction with the training and associated resources were collected from both schools and are depicted in infographics 1 and 2.



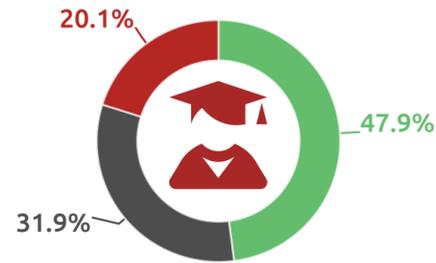
teen MHFA evaluation school one 2018



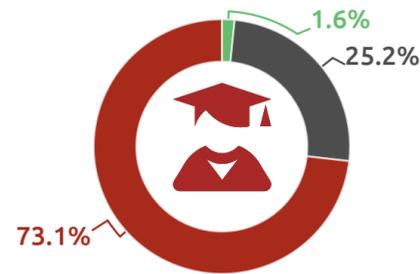
Number of sessions attended



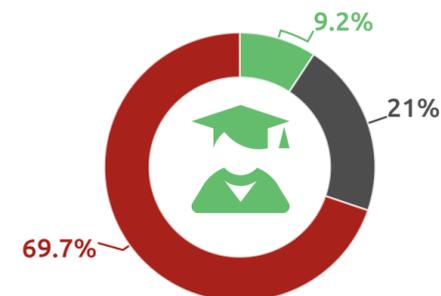
How new was the information to you?



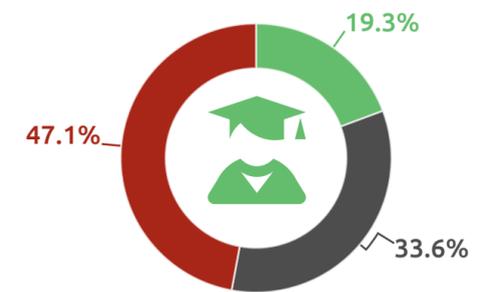
How easy was the information in the program to understand ?



How well was the program presented ?



How relevant were the case studies to you?



● One session ● Two sessions
● Three sessions

● Not new/slightly new ● Moderately new
● New/very new

● Very hard/hard ● Neutral
● Very easy/easy

● Very badly/badly ● Moderately
● Very well/well

● Not useful/slightly useful ● Moderately
● Very useful/useful



64%

of students liked the powerpoint presentation



61%

of students liked the student's manual



79%

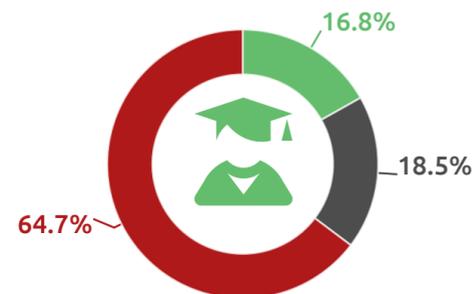
of students liked the videos



61%

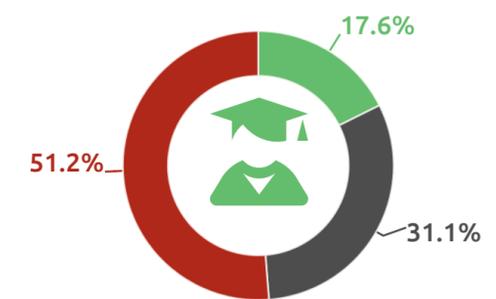
of students liked the activities

How useful do you think the program's information will be for you in the future ?



● Not useful/slightly useful ● Moderately
● Very useful/useful

How useful was the program to you?



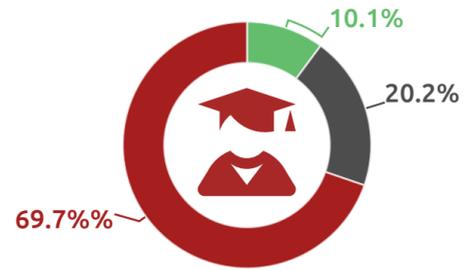
● Not useful/slightly useful ● Moderately
● Very useful/useful



teen MHFA evaluation school two 2018

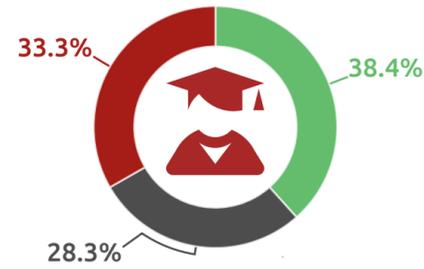


Number of sessions attended



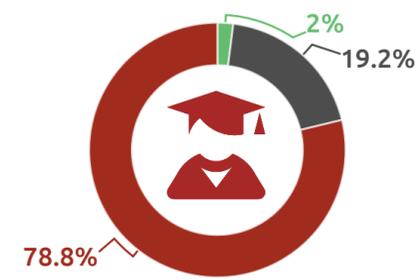
● One session ● Two sessions
● Three sessions

How new was the information to you?



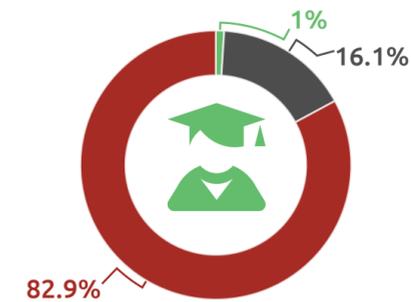
● Not new/slightly new ● Moderately new
● New/very new

How easy was the information in the program to understand ?



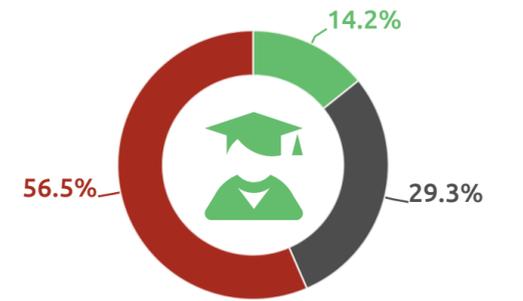
● Very hard/hard ● Neutral
● Very easy/easy

How well was the program presented ?



● Very badly/badly ● Moderately
● Very well/well

How relevant were the case studies to you?



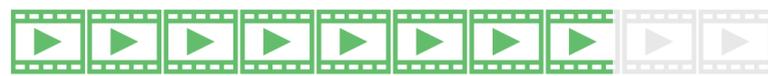
● Not useful/slightly useful ● Moderately
● Very useful/useful



71% of students liked the powerpoint presentation



64% of students liked the student's manual

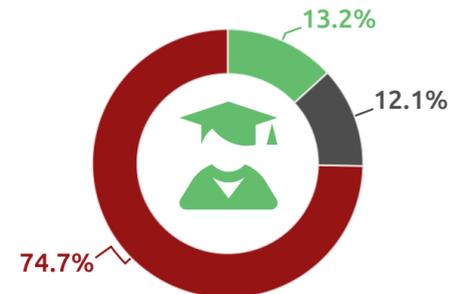


73% of students liked the videos



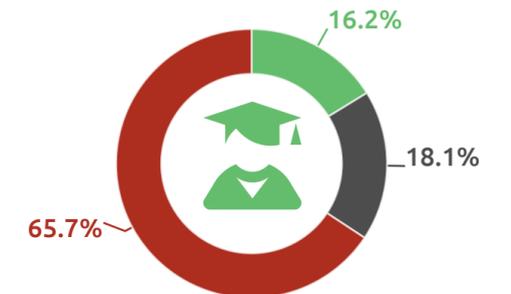
68% of students liked the activities

How useful do you think the program's information will be for you in the future ?



● Not useful/slightly useful ● Moderately
● Very useful/useful

How useful was the program to you?



● Not useful/slightly useful ● Moderately
● Very useful/useful

Youth Mental Health First Aid

Table 6 presents detailed data on participants' recognition, knowledge, attitudes towards mental health problems and helping behaviours across pre-training, post-training and 3-month follow-up.

Table 6. Teachers/responsible adults' data across time

Variables	Pre-training	Post-training	Follow-up	Mean difference for pre versus post	OR for pre versus post	Mean difference for pre versus follow-up	OR for pre versus follow-up
Problem recognised as 'mental health problem' ⁱ (%)	84%	93%	89%	-	2.32	-	1.50
Adults thought to be helpful (mean, CI 97.5)	4.07(4.63)	4.81(5.59)	4.49(5.21)	0.73*	-	0.41	-
Social Distance Scale (mean, CI 97.5)	8.21(9.12)	7.90(8.82)	8.95(10.09)	0.39	-	0.23	-
Personal stigma (mean, CI 97.5):							
<i>Weak-not-sick subscale</i>	1.65(1.89)	1.58(1.82)	1.93(2.24)	0.06	-	0.28	-
<i>I would not tell anybody</i>	1.84(2.13)	1.54(1.82)	1.53(2.02)	0.30	-	0.31	-
<i>Dangerous/unpredictable subscale</i>	1.50(1.67)	1.41(1.59)	1.35(1.57)	0.11	-	0.15	-
Confidence helping (mean, CI 97.5)	3.92(4.11)	4.37(4.56)	4.25(4.48)	0.44***	-	0.32*	-
Helping intentions – ALGEE Score	3.17(4.02)	4.24(5.12)	4.08(5.10)	1.06	-	0.90	-
Offer help	4.40(4.71)	4.64(4.85)	4.47(4.83)	0.24	-	0.07	-
Knowledge of mental health problems (quiz)	9.26(10.37)	11.67(12.85)	11.30(12.57)	2.41**	-	2.03**	-
Helping actual behaviours ⁱⁱ	2.14(0.37)	-	2.57(1.13)	-	-	0.42	-

ⁱMultiple responses are permitted

ⁱⁱCompleters only

*P<0.05 **p<0.01 ***p<0.001

Recognition of mental health problems

To assess whether recognition of the problem in the vignette as a '*general mental health problem*' improved over time, the frequencies of all other responses representing a mental health related label ('*anxiety*', '*anxious*', '*depression*', '*mental illness*', '*mental disorder*', '*mental problem*', '*trauma*' and/or '*traumatic*') were included. Results indicated that 84% of adults recognised the problem in the vignette as '*general mental health problem*', this increased to 93% after training, moving to 89% at follow-up. However, this small increase was not significant across times.

Adults thought to be helpful

Following training, teachers/responsible adults were more likely to endorse 'helpful' adults as valid source of help ($p < .05$). However, these gains were not maintained at follow-up.

Social Distance Scale

Social distance attitudes towards mental health problems in teachers/responsible adults were not reduced after training or after 3 months of course completion.

Personal stigma

Levels of stigma in the '*weak-not-sick*', '*I would not tell anybody*', and '*Dangerous/unpredictable*' subscales were not reduced after training or after 3 months of course completion.

Confidence helping

Confidence when helping a young person with mental health problems increased significantly after training ($p < .001$) and this was maintained at follow-up ($p < .05$).

Helping intentions – ALGEE Score

Although helping intentions increased from pre-training to after-training and from pre-training to 3-month follow-up, these differences were not significant.

Offering help

Willingness to offer help to a young person with mental health problems was not significantly increased following training or at follow-up.

Knowledge of mental health problems

A significant improvement in participants' knowledge about youth mental health problems and youth mental health first aid was noted from pre- to post-training ($p < 0.01$) and were maintained at follow-up ($p < 0.01$).

Helping actual behaviours

A total of 7 teachers/responsible adults provided responses to indicate that they had in fact actually tried to help a young person and described what they did that allowed for a measure of helping behaviours to be scored, with a comparison undertaken between pre-training and follow-up time points. Although not statistically significant, there was a slight increase in scores between the two time points.

Satisfaction with the Youth MHFA training:

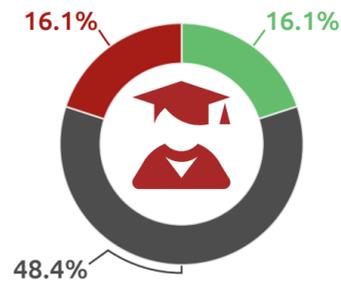
Measures of satisfaction with the training and associated resources were collected from both schools and are depicted in infographic 3.



Youth MHFA evaluation school one and two 2018

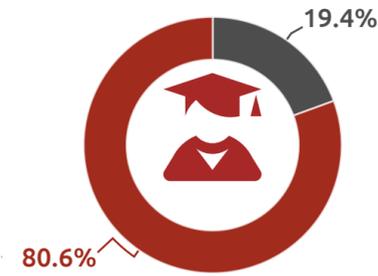


How new was the information to you?



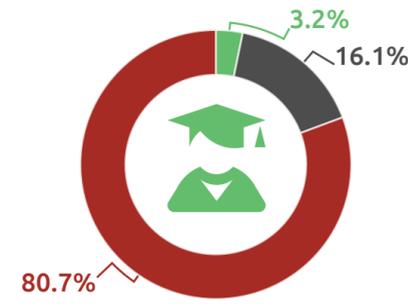
● Not new/slightly new ● Moderately new
● New/very new

How easy was the information in the program to understand ?



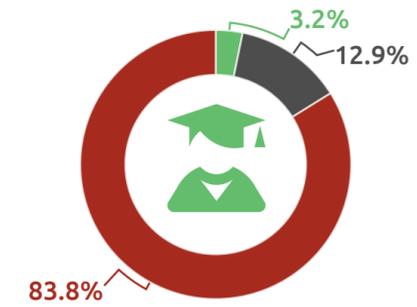
● Neutral ● Very easy/easy

How well was the program presented ?



● Very badly/badly ● Moderately
● Very well/well

How relevant were the case studies to you?



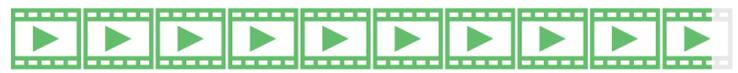
● Not useful/slightly useful ● Moderately
● Very useful/useful



77% of adults liked the powerpoint presentation



94% of adults liked the participant's manual

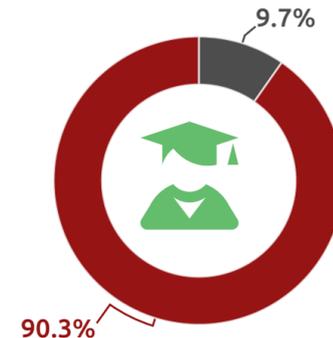


97% of adults liked the videos



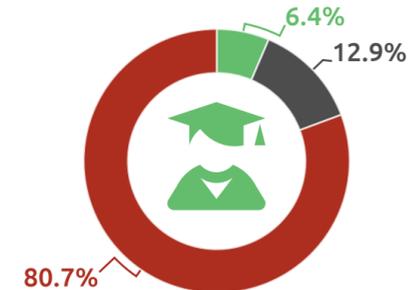
90% of adults liked the activities

How useful do you think the program's information will be for you in the future ?



● Moderately ● Very useful/useful

How useful was the program to you?



● Not useful/slightly useful ● Moderately
● Very useful/useful

Discussion

The teen Mental Health First Aid and Youth Mental Health First Aid courses represent an evidenced-based approach to increasing MHL and help-seeking [50, 51], but required contextualising for the unique needs of the Fairfield region as well as being pitched at the most appropriate level for young people and teachers/responsible adults within the school system. Fairfield is a key focus area as it is currently without a *headspace* centre, a key component of youth mental health support in other areas across the PHN's region.

This project commenced in January 2018 and was completed in March 2019. It entailed two primary components. First was the CALD adaption of the teen and Youth MHFA programs which was undertaken by Mental Health First Aid Australia in consultation with a key advisory group comprised of professionals with expertise in the mental health of CALD young people including school counsellors and community mental health professionals from the Fairfield area. Next, was the roll out of the training programs across two local high schools in Fairfield area and the evaluation of the training on the MHL outcomes and attitudes towards help-seeking and stigma of participants attending the training using an uncontrolled pre, post, three-month follow-up design. As such this project resulted in a number of key learnings that are both process and outcome based.

Process Key Learnings

In terms of school investment, it is important that the push for training (whether MHFA training or any other solution to a perceived need) comes from inside the school. Offering the opportunity to receive training free as part of a research project is attractive to schools, but when scheduling challenges arise, there is no powerful push to find a solution. More internal investment from the schools involved would have helped with this.

Part of the aims of this project included building capacity in the community to make this training feasible. We had four teen MHFA instructors available but quickly learned that it was difficult to meet the scheduling needs of the schools with fewer than six.

Large schools such as the two involved in this project do pose interesting challenges, especially with regards to the level of disruption staggered sessions can cause. A large enough group of instructors to train the entire school grade within two periods on one day would have been far easier. Thought should be given to how to build the pool of instructors in the Fairfield area and share resources in order to make the training as easy and efficient as possible. Enough instructors to cover emergencies such as illness is also important.

Another aspect of capacity is resourcing. There was some difficulty in running the Youth MHFA courses for school staff because of the difficulty in releasing teachers for two days. MHFA Australia is working towards more flexible delivery options, but in the meantime, consideration could be given to creating a region-wide training calendar for school staff, ensuring no one school is under undue pressure at any one time to provide backfill or casual relief teachers' hours.

Adequate time for scheduling is also critical. The delays to the project commencement meant we were unable to identify suitable instructors or make contact with schools until March 2018, delaying the training even further. Generally speaking, schools are planning the activities of the academic year in third and fourth term of the year before, and to complete all training activity before fourth term when schools can become more chaotic and students are facing exam stress.

Outcome Key Learnings

The current study sought to evaluate whether the teen and Youth MHFA with a CALD focus was effective in changing participants' knowledge, intentions, confidence, attitudes and behaviours. In the student group, our results demonstrated a significant impact on some of the MHL measures, such as increasing knowledge of helpful adults, improving participants' intention to help and decreasing some negative attitudes.

Significant improvements in student's knowledge of who are considered helpful adults when seeking help for mental health concerns was increased in students following training and maintained at follow-up. This improvement is a reflection of the emphasis the teen MHFA has on encouraging to trust and disclose personal issues or mental health concerns to responsible adults that can provide help at different levels (teacher, school counsellor, psychologist) [59]. Encouraging young people to keep an eye out for their friends and offer help when they notice worrying changes is the core message in the

training [59]. Trusting informed adults is key for 'close support', 'providing hope', 'recognition', 'prevention', 'treatment' or 'management of a mental disorder'.

This noted improvement is a positive achievement, especially considering young people are reluctant to trust adults or disclose their feelings for fear of being judged, especially when the conversation involves suicide or non-suicidal self-injury [35, 36, 37]. This is postulated to be more so in students with CALD backgrounds, as they are can be relatively new to the country, still forming relationships and getting to know new systems, culture, language and their school teachers, support staff and/or health providers [12]. Feelings of shame or distrust when disclosing mental health concerns in minority groups have been well-identified [12, 60] adding a new layer to the already complex help-seeking process. Thus this increase represents positive achievement of this training program to assist CALD students.

Another marked contribution of the teen MHFA was the significant increase in the knowledge of students around positive (concordant) helping intentions towards a peer with mental health problems after training and at follow-up. These positive helping intentions (e.g. encourage the friend to talk to a health professional or other adult other) are in line with what research has demonstrated to be the best first aid actions and are consistent with the teen MHFA teaching content (and the action plan). Similarly, a significant reduction of negative (discordant) helping intentions as best first aid actions was found after training and was maintained at follow-up. Negative intentions such as 'try to deal with it on my own' or 'do nothing' are at odds with the early intervention paradigm and create a barrier to mental health service provision. Increasing the knowledge around helpful and harmful interventions is particularly relevant in CALD populations given previous research has demonstrated a preference for 'dealing with mental health problems on their own' was selected by large proportion of refugees in a Australian-based study [61].

In the teachers/responsible adults group, the findings from the Youth MHFA demonstrated that the training was effective in improving confidence when helping young people and increasing the knowledge about youth mental health across times.

Knowledge on mental health problems often experiencing by youth is crucial when trying to assist a young person and our delivered training was found to successfully teach and consolidated the knowledge on youth mental health and youth mental health first aid strategies. Teachers were able to identify and endorse evidence-based interventions for depression and anxiety (e.g. CBT, exposure therapy, medication for severe cases). Additionally, it provided guidelines on how to interact with, and

approach teenagers in a range of situations including psychosis, misusing alcohol or other drugs (e.g. cannabis). It also encouraged participants to support adolescents even if they do not want any help. The training also provides accurate information about how to approach a young person with suicide ideation and encourage adults to understand that talking about suicide with young people is useful. Additionally, the increase of confidence levels reported following training and maintained at follow-up is likely to be assisted by the increase of knowledge of youth mental health and mental health first aid strategies provided by the training.

However, not all the measures demonstrated improvement. Some negative attitudes towards mental health problems in teachers and students, confidence helping in students, quality of helping behaviours and recognition of mental health problems in both groups were not found to significantly improve following the training.

Several limitations of this study must be noted. Firstly, the study utilised an uncontrolled design. An intervention with a randomised control group design using a larger sample size (in order to account for drop outs in the follow-up) would have been more ideal to have examined the impact of training on the outcome measures. In this study, there was a notable drop-out rate of participants at follow-up which was dealt with using multiple imputation. However, in future studies, we recommended that the research protocol is communicated to the schools through internal embedded champions, who can then assist with reducing drop-out rates in addition to providing students with incentives to complete follow-up surveys should be considered. It is important to note that although this trial included a 3-month follow-up, a longer follow-up timeframe would potentially give the teen and Youth MHFA aiders with more opportunities to be in contact with peers or young people experiencing mental health problems or crises, and thereby apply the knowledge and skills acquired through the training. Future research should consider a project with a 6 to 12-month follow-up arm.

Strengths of this study include being the first program of its kind that seeks to teach how to provide mental health first aid to adolescents with a CALD focus. While there has been an increased emphasis on cultural competency in mental health care and the delivery of evidence-based psychosocial services for ethnic groups [62, 63], to date, culturally-appropriate psychoeducation initiatives at a community-based level are rare and primarily focussed on adults [64, 65]. To the best of our knowledge, this adaptation represents the first of its kind. The findings have demonstrated that by utilising content from the highly successful teen and Youth MHFA training curriculum and supplementing it with some culturally adapted materials, a culturally salient training program with appropriate teaching resources

was developed that had significant impacts on improving MHL and help-seeking attitudes of participants.

Conclusion

This project reports on the evaluation of the teen and Youth MHFA programs that were developed and delivered to be responsive to youth from CALD background. There are currently no programs available which aim to equip adolescents with the skills to assist a peer who may be developing a mental health problem or experiencing a mental health crisis with a CALD focus. Further, this project was undertaken in the Fairfield area, one the most ethnically diverse area of NSW, which is also currently without a *headspace* centre. Our findings indicated the training lead to an improvement in a number of measures of MHL and helpful intentions of both the adolescents and adults evaluated. These results indicate that CALD teen and Youth MHFA are a recommend way of upskilling those trained and thereby leading to the improvement youth mental health in areas with high proportion of ethnically diverse groups.

Acknowledgements

Mental Health First Aid Australia and Western Sydney University would like to thank the principals of the schools, Dr Kathleen Seto and Ms Belinda Giudice, Year 10 Students and the teachers who provide vital assistance with this project. Special thanks goes out to Mr Anthony Karam, Ms Kathryn Efthymiades and Ms Leonie Fernando for their time and commitment to this project.

We would like to thank teen and Youth Mental Health First Aid instructors: Mr Ziyad Serhan, Miss Ornina Odisho and Ms Lina Ishu. We also thank the contribution of Alexandra Long, Julie-Anne Younis and Miguel Eduardo Hitois who participated in the professional film presented in the course.

Finally, thanks is due to the following individuals that collaborated as part of Fairfield Collaboration Advisory Group:

- Dr Rajeev Jairam, Clinical Director ICAMHS and Senior Lecturer (conjoint) UNSW and WSU, ICAMHS, Mental Health, SWSLHD
- Henry Lim, Health Promotion Officer, Mental Wellbeing Health Promotion Service, Population Health South Western Sydney Local Health District
- Alexandra Long, Executive Officer, Multicultural Youth Affairs Network NSW
- Dr Anita Datta, Child and Adolescent Psychiatrist, ICAMHS and Senior Lecturer (conjoint) UNSW and WSU
- Ann Marie De Santa Brigida, Mindways Psychological Services For Children & Adults
- Alena Farrugia, Beyond Limits Learning Clinic

Funding

Funding for this research was provided via South Western Sydney Primary Health Network to Mental Health First Aid Australia and Western Sydney University.

References

1. Australian Bureau of Statistics. Census reveals a fast changing, culturally diverse nation. Media Release 2017. Australia. Canberra, ACT: ABS. Commonwealth of Australia.
2. Department of Immigration and Border Protection. Fact Sheet 60 – Australia's Refugee and Humanitarian Programme. Australian Government. 2014. <https://www.immi.gov.au/media/fact-sheets/60refugee.htm>. Accessed Aug 2018
3. Australian Government, Department of Foreign Affairs. Migration program planning levels. 2019. <https://immi.homeaffairs.gov.au/what-we-do/migration-program-planning-levels>. Accessed March 2019.
4. Australian Bureau of Statistics. Census of Population and Housing: Reflecting Australia - Stories from the Census 2016. 2016. <http://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/2071.0Main%20Features602016?opendocument&tabname=Summary&prodno=2071.0&issue=2016&num=&view=>. Accessed March 2019.
5. Centre for Western Sydney. Data and Visualisations. Western Sydney University. 2016. http://www.uws.edu.au/cws/gws_research. Accessed Feb 2019.
6. Mollica R, Wyshak G, Lavelle J. The psychosocial impact of war trauma and torture on Southeast Asian refugees. *Am J Psychiatry*. 1987;144:1567–72.
7. Steel Z, Chey T, Silove D, Marnane C, Bryant R, Ommeren M. Association of torture and other potentially traumatic events with mental health outcomes among populations exposed to mass conflict and displacement: a systematic review and meta-analysis. *JAMA*. 2009; doi:10.1001/jama.1132
8. Porter M, Haslam, N. Predisplacement and postdisplacement factors associated with mental health of refugees and internally displaced persons: A meta-analysis. *JAMA*. 2005; doi:10.1001/jama.294.5.602.
9. Minas H, et al. Mental Health Research and Evaluation in Multicultural Australia: Developing a Culture of Inclusion 2013.
10. Straiton, M., et al. (2014). "Mental health in immigrant men and women in Australia: the North West Adelaide health study." *BMC Public Health*. doi.org/10.1186/1471-2458-14-1111.
11. Kyrmayor L, Narasiah L, Munoz M, Rashid M, Ryder A, Guzder J, et al. Common mental health problems in immigrants and refugees: general approach in primary care. *Canadian Guidelines for Immigrant Health 2011*; 183 Suppl 12: E959-E967.
12. Curtis P, Thompson J, Fairbrother H. Migrant children within Europe: a systematic review **csfo**

children's perspectives on their health experiences. *Public Health*. 2018; doi: 10.1016/j.puhe.2018.01.038.

13. Bronstein, P, Montgomery, S, Dobrowolski D. PTSD in asylum-seeking male adolescents from Afghanistan. *J Trauma Stress*. 2012; doi:org/10.1002/jts.21740.

14. Jensen K, Fjermestad K, Granly L, Wilhelmsen H. Stressful life experiences and mental health problems among unaccompanied asylum-seeking children. *Clinical Child Psychology and Psychiatry*. 2015; doi: org/10.1177/1359104513499356.

15. Rickwood D, Thomas K, Bradford S. Review of help-seeking measures in mental health: an evidence check rapid review brokered by the Sax Institute for beyondblue. Sax Institute. 2012. https://www.saxinstitute.org.au/wp-content/uploads/02_Help-seeking-measures-in-mental-health.pdf. Accessed 7 Aug 2016.

16. Altamura A, Dell'osso B, D'Urso N, Russo M, Fumagalli S, Mundo E. Duration of untreated illness as a predictor of treatment response and clinical course in generalized anxiety disorder. *CNS Spectrums* 2008; 13 Suppl 5: 415– 422.

17. Marshall M, Lewis S, Lockwood A, Drake R, Jones P, Croudace T. Association between duration of untreated psychosis and outcome in cohorts of first-episode patients: A systematic review. *Arch. Gen. Psychiatry*. 2005; doi:10.1001/archpsyc .62.9.975.

18. Jorm AF. Mental health literacy: empowering the community. to take action for better mental health. *Am Psychol*. 2012;67(Suppl 3):231–43. doi: 10.1037/a0025957.

19. Correa-Velez I, Sundararajan V, Brown K, Gifford SM. Hospital utilisation among people born in refugee-source countries: an analysis of hospital admissions, Victoria, 1998–2004. *Med J Aust* 2007; 186 Suppl 11:577.

20. Fenta H, Hyman I, Noh S. Mental health service utilisation by Ethiopian immigrants and refugees in Toronto. *J Nerv Ment Dis*. 2006; 194 Suppl 12:925-34.

21. Kayrouz R, Dear BF, Johnston L, Keyrouz L, Nehme E, Laube R, Titov N. Intergenerational and cross-cultural differences in emotional wellbeing, mental health service utilisation, treatment-seeking preferences and acceptability of psychological treatments for Arab Australians. *Int J Soc Psychiatry*. 2015; doi: 10.1177/0020764014553004

22. Durbin A, Moineddin R, Lin E, Steele L, Glazier R. Mental health service use by recent immigrants from different world regions and by non-immigrants in Ontario, Canada: a cross-sectional study *BMC Health Serv Res*. 2015; doi: 10.1186/s12913-015-0995-9.

23. Oakley Browne MA, Wells JE, Scott KM, McGee MA. Lifetime prevalence and projected lifetime risk of DSM-IV disorders in Te Rau Hinengaro: the New Zealand Mental Health Survey. *Aust N Z J Psychiatry*. 2006;40:865–74.
24. Lawrence D, Johnson S, Hakefost J, Boterhoven De Haan K, Sawyer M, Ainley J, Zubrick SR. *The Mental Health of Children and Adolescents. Report on the Second Australian Child and Adolescent Survey of Mental Health and Wellbeing*. Canberra: Department of Health; 2015.
25. Burgess PM, Pirkis JE, Slade TN, Johnston AK, Meadows GN, Gunn JM. Service use for mental health problems: findings from the 2007 National Survey of Mental Health and Wellbeing. *Aust N Z J Psychiatry*. 2009;43:615–23.
26. Rickwood DJ, Deane FP, Wilson CJ, Ciarrochi J. Young people's help-seeking for mental health problems. *Aust e J Adv Mental Health*. 2005;4:34.
27. Gore FM, Bloem PJN, Patton GC, Ferguson J, Joseph V, Coffey C, et al. Global burden of disease in young people aged 10–24 years: A systematic analysis. *The Lancet*. 2011;377(9783):2093-102.
28. Yap MBH, Wright A, Jorm AF. The influence of stigma on young people's help-seeking intentions and beliefs about the helpfulness of various sources of help. *Soc Psychiatry Psychiatr Epidemiol*. 2011;46:1257–65.
29. Rickwood DJ, Deane FP, Wilson CJ. When and how do young people seek professional help for mental health problems? *Med J Aust*. 2007;187:S35–9.
30. McGorry PD, Purcell R, Hickie IB, Jorm AF. Investing in youth mental health is a best buy. *Medical Journal of Australia*. 2007;187(7):S5-S7.
31. Patel V, Flisher AJ, Hetrick SE, McGorry P. Mental health of young people: a global public-health challenge. *The Lancet*. 2007;369(9569):11.
32. Gulliver A, Griffiths K, Christensen H. Perceived barriers and facilitators to mental health help-seeking in young people: a systematic review. *BMC Psychiatry*. 2010;10(1):113.
33. Jorm AF, Barney LJ, Christensen H, Highet NJ, Kelly CM, Kitchener BA. Research on mental health literacy: What we know and what we still need to know. *Australian and New Zealand Journal of Psychiatry*. 2006;40(1):3-5.
34. Jorm AF, Korten A, Jacomb P, Christensen H, Rodgers B, Pollitt P. "Mental health literacy": a survey of the public's ability to recognise mental disorders and their beliefs about the effectiveness of treatment. *Med J Aust*. 1997; 166:182–186.
35. Jorm AF, Wright A, Morgan AJ. Where to seek help for a mental disorder? National survey of the beliefs of Australian youth and their parents. *Medical Journal of Australia*. 2007;187(10):556-60.

36. Dunham K. Young adults' support strategies when peers disclose suicidal intent. *Suicide & Life-threatening Behavior*. 2004;34(1):56.
37. Yang LH, Cho SH, Kleinman A. Stigma of Mental Illness. In: Heggenhougen HK, editor. *International Encyclopedia of Public Health*. Oxford: Academic Press; 2008. p. 219-30.
38. Rüsç N, Angermeyer MC, Corrigan PW. Mental illness stigma: Concepts, consequences, and initiatives to reduce stigma. *European Psychiatry*. 2005;20(8):529-39.
39. Griffiths KM, Crisp DA, Jorm AF, Christensen H. Does stigma predict a belief in dealing with depression alone?. *Journal of Affective Disorders*. 2011;132(3):413-7.
40. Link BG, Phelan JC, Bresnahan M, Stueve A, Pescosolido BA. Public conceptions of mental illness: Labels, causes, dangerousness, and social distance. *American Journal of Public Health*. 1999;89:1328-33.
41. Jorm AF, Oh E. Desire for social distance from people with mental disorders. *Australian and New Zealand Journal of Psychiatry*. 2009;43(3):183-200.
42. Barrera M. Distinctions between social support concepts, measures, and models. *Am J Commun Psychol*. 1986;14(4):413-45.
43. Kitchener BA, Jorm AF, Kelly CM. *Mental Health First Aid Manual (4th edition)*. Melbourne: Mental Health First Aid Australia; 2017.
44. Jorm AF, Wright A, Morgan AJ. Beliefs about appropriate first aid for young people with mental disorders: Findings from an Australian national survey of youth and parents. *Early Intervention in Psychiatry*. 2007;1(1):61-70.
45. Yap MBH, Wright A, Jorm AF. First aid actions taken by young people for mental health problems in a close friend or family member: findings from an Australian national survey of youth. *Psychiatry Research*. 2011;188(1):123-8.
46. Rickwood DJ, Deane FP, Wilson CJ. When and how do young people seek professional help for mental health problems? *Medical Journal of Australia*. 2007;187(7):S35-S9.
47. DiMatteo MR. Social support and patient adherence to medical treatment: a meta-analysis. *Health Psychology*. 2004;23(2):207-18.
48. Yap MBH, Reavley NJ, Jorm AF. Where would young people seek help for mental disorders and what stops them? Findings from an Australian national survey. *Journal of Affective Disorders*. 2013;147(1- 3):255-61.
49. Hadlaczky G, Hökby S, Mkrтчian A, Carli V, Wasserman D. Mental Health First Aid is an effective public health intervention for improving knowledge, attitudes, and behaviour: A meta-analysis. *Int Rev Psychiatry*. 2014; doi:10.3109/09540261.2014.924910.

50. Hart L, Mason R, Kelly C, Cvetkovski S, Jorm A. 'teen Mental Health First Aid': a description of the program and an initial evaluation. *J Mental Health Sys.* 2016; doi: 10.1186/s13033-016-0034-1.
51. Kelly CM, Kitchener BA, Jorm AF. *Youth Mental Health First Aid: A manual for adults assisting young people* (4th edition). Melbourne: Mental Health First Aid Australia; 2017.
52. Reavley NJ, Jorm AF. Young people's recognition of mental disorders and beliefs about treatment and outcome: findings from an Australian national survey. *Australian & New Zealand Journal of Psychiatry.* 2011;45:890-8
53. Wright A, Jorm AF. Labels used by young people to describe mental disorders: factors associated with their development. *Aust N Z J Psychiatry.* 2009;43:946-55.
54. Yap M, Jorm A. Young People's Mental Health First Aid intentions and beliefs prospectively predict their actions: findings from and Australian National Survey of Youth. *Psychiatry Res.* 2012; <https://doi.org/10.1016/j.psychres.2011.10.004>.
55. Rossetto A, Jorm AF, Reavley N. Predictors of adults' helping intentions and behaviours towards a person with a mental illness: a six-month follow-up study. *Psychiatry Res.* 2016; <https://doi.org/10.1016/j.psychres.2016.04.037>.
56. Ross AM, Hart LM, Jorm AF, Kelly CM, Kitchener BK. Development of key messages for adolescents on providing basic mental health first aid to peers: a delphi consensus study. *Early Interv Psychiatry.* 2012;6:229-38.
57. Kelly C, Mithen J, Fischer J, Kitchener B, Jorm A, Lowe A, Scalan C. Youth Mental Health First Aid: a description of the program and an initial evaluation. *J Mental Health Syst.* 2011. <https://doi.org/10.1186/1752-4458-5-4>.
58. Rubin D. *Multiple imputation for nonresponse in surveys.* New York: Wiley; 2008.
59. Hart LM, Kelly CM, Kitchener BA, Jorm AF. *teen Mental Health First Aid: A manual for young people helping their friends*, 3rd edition. Melbourne: Mental Health First Aid Australia; 2017.
60. Uribe Guajardo MG, Slewa-Younan S, Santalucia Y, Jorm AF. Important considerations when providing Mental Health First Aid to Iraqi refugees in Australia: a Delphi study. *Int J Mental Health Sys.* 2016. <https://doi.org/10.1186/s13033-016-0087-1>.
61. Slewa-Younan S, Mond J, Bussion E, Mohammad Y, Uribe Guajardo MG, Smith M, et al. Mental health literacy of resettled Iraqi refugees in Australia: knowledge about posttraumatic stress disorder and beliefs about helpfulness of interventions. *BMC Psychiatry.* 2014. <https://doi.org/10.1186/s12888-014-0320-x>

62. Cheng IH, Wahidi S, Vasi S, Samuel S. Importance of community engagement in primary health care: the case of Afghan refugees. *Aust J Prim Health*. 2015. <https://doi.org/10.1071/PY13137>.
63. Barrio C, Yamada A. Culturally based intervention development: the case of Latino families dealing with schizophrenia. *Res Soc Work Pract*. 2010. <https://doi.org/10.1177/1049731510361613>.
64. Uribe Guajardo MG, Slewa-Younan S, Kitchener B, Mannan H, Mohammad Y, Jorm, AF. Improving the capacity of community-based workers in Australia to provide initial assistance to Iraqi refugees with mental health problems: an uncontrolled evaluation of a Mental Health Literacy Course. *Int J Ment Health Syst*. 2018; doi:10.1186/s13033-018-0180-8
65. Subedi P, Li C, Gurung A, Bizune D, Dogbey C, Johnson C, Yun K. Mental health first aid training for the Bhutanese refugee community in the United States. *J Mental Health Sys*. 2015; doi: 10.1186/s13033-015-0012-z