ORIGINAL ARTICLE

WILEY

A mixed-methods project on the impact of the mental health first aid training on French university students' knowledge, attitudes and practices

Nathalie Llopis[1] | Emeline Antoine[1] | Christine Grové[2,3] | Alexandra Marinucci[2] |
Florence Touchard[4] | Ilaria Montagni[1]

[1]Bordeaux Population Health Research Center, INSERM U1219, University of Bordeaux, Bordeaux, France

[2]Fulbright Association, Canberra, New South Wales, Australia

[3]Faculty of Education, Monash University, Clayton, Victoria, Australia

[4]Student Health Center, University of Bordeaux, Pessac, France

Correspondence
Ilaria Montagni, Bordeaux Population Health Research Center, INSERM U1219, University of Bordeaux, Bordeaux, France.
Email: ilaria.montagni@u-bordeaux.fr

Abstract

Aim: University students are increasingly affected by mental health problems and need prompt support. The aim of this project was to assess the impact of the mental health first aid (MHFA) training on students' knowledge, attitudes and practices (KAP) concerning mental health in the short, mid and long-term.

Methods: Three studies were conducted in Bordeaux, France, from May 2021 to March 2022. The first study collected data from 55 students 1 to 6 months after they had followed the training to examine its efficacy in the mid-long term. The second study collected data immediately before and after the training to evaluate the KAP of 52 students in the short-term (1 to 10 days). The third study consisted of 14 semi-structured interviews with students trained since 2020 to identify the training's long-term impact (3 to 18 months). Descriptive statistics were used for studies one and two, and framework analyses for study three.

Results: Most participants reported that their KAP about mental health had improved after the training. In the first study, 94.2% of students reported being ready to intervene during a psychotic crisis in their peers. In the second study, 75.0% of students reported improved mental health-related knowledge and decreased stigma. All students in the third study reported that they had assisted at least one person after the training.

Conclusions: These were the first data on the impact of the French MHFA on KAP. While not exhaustive, findings suggest that deploying the training would be beneficial to French students.

KEYWORDS
attitudes, knowledge, mental health first aid, practices, students

1 | INTRODUCTION

Many university students can experience serious mental health challenges during their studies. They can be exposed to several stressors such as limited economic resources and academic pressure, which can trigger preventable psychological problems. The most commonly reported mental health problems are anxiety, depression and/or insomnia (Strenna et al., 2009) affecting one out of five university students (Ishida et al., 2020). The Covid-19 crisis has exacerbated student's distress (Husky et al., 2020) due to, among others, isolation and limited social interactions. When the first lockdown was put in place in France (between March and May 2020), students were more

likely to experience anxiety, depression and stress than the general population. In fact, the risk of these mental health problems was more than 50% higher for students during this time (Arsandaux et al., 2020).

Several interventions exist addressing student mental health, ranging from digital tools, such as phone applications and informative videos (Lattie et al., 2019), to mindfulness-based or psychoeducation programs (Worsley et al., 2022). Low awareness of mental health is widespread (Kitchener & Jorm, 2006). Therefore some interventions seek to address the recognition of mental health problems and aim to reduce stigma of mental illness (Marinucci et al., 2021; Riebschleger et al., 2019). Increasing mental health-related awareness is key to promoting access to care, self-help and resilience (Kelly et al., 2007). This can be through a mental health literacy approach, which refers to the ability to recognize and understand the characteristics of mental health problems, including symptoms, risks and causes, and understand when and how to seek help, including how to access mental health care services. Increased mental health literacy facilitates the recognition, prevention and treatment of mental disorders (Jorm et al., 2010), thus interventions targeting mental health literacy could benefit student mental health.

Based on mental health literacy, the mental health first aid (MHFA) training has been delivered to over four million people across 24 countries (Wadsworth et al., 2022), and is a widely researched mental health literacy intervention (Liang et al., 2021). It has been defined by the French Ministry of Health as a priority measure to prevent mental health problems, especially among young people aged 15–29 years. This 2-day training was founded in Australia with the aim to teach people how to offer initial support to a person developing a mental health problem (depression, anxiety, psychosis, substance abuse, suicidal thoughts, panic attack, post-traumatic disorder) until the immediate crisis resolves or appropriate professional help is received. During these 2 days, health professionals (nurses, psychologists) give lessons and instructions for practical exercises. Trainees are provided with a manual synthetizing all the contents of the training. Trainees do not learn to make clinical diagnoses or administer a treatment. Indeed, they learn to act akin to a first responder and support an individual in need until professional help can be gained (Kitchener & Jorm, 2008). The training also aims to decrease stigma about mental health by normalizing conversation about feelings and psychological diseases and showing stories of ordinary people having a psychiatric illness. Common myths and misconceptions are dispelled and knowledge gaps are filled. All courses are based on the MHFA action plan ALGEE: Approach and assess for risk of suicide or harm; Listen nonjudgmentally; Give reassurance and information; Encourage appropriate professional help; and Encourage self-help and other support strategies.

The first studies assessing the appraisal of the contents of the training were conducted in Australia (Kitchener & Jorm, 2006). For instance, they found that those who attended the MHFA felt more capable of aiding someone in psychological distress (Crawford & Burns, 2020). Successively, several evaluation studies have been realized worldwide on different target populations. Concerning university students, literature has showed that the training produced an increase in knowledge of mental health problems (Burns et al., 2017; Liang et al., 2021), intention to help a suffering person and confidence in the abilities to intervene when needed (Boukouvalas et al., 2018; Davies et al., 2018; Lo et al., 2018). Students' mental health literacy was also significantly increased (Bond et al., 2015; Liang et al., 2021; Martin, 2016), while their stigmatization decreased (Davies et al., 2018). Some studies showed that the training helped better assess one's mental health (Jorm et al., 2010; Kitchener & Jorm, 2004; Maslowski et al., 2019). Specifically, it improved participants' self-awareness (Kidger et al., 2016), which helped them better identify their emotional and mental conditions (Hung et al., 2019). There are a small number of studies evaluating the MHFA training in Europe (Morgan et al., 2018), especially on students.

No study has been conducted in France on the impact of the training on knowledge, attitudes and practices (KAP) concerning mental health among trained students. KAP studies help objectify personal feelings and representations. Surveying KAP can enable understanding of how a training is appraised and which are its effects in terms of behavioural and cognitive patterns (Asharani et al., 2020).

This study was aimed at assessing the impact of the MHFA training on French university student trainees in terms of mental health-related KAP.

2 | METHODS

Three studies were conducted among students trained to MHFA (Premiers Secours en Santé Mentale, PSSM) at the Student Health Center of the University of Bordeaux, France, in the period 2020–2022. Both quantitative and qualitative data were collected. Different approaches for recruitment and data collection were used across the studies. The objective was to assess the impact of the training on students' KAP at different time points measuring the MHFA training effects in the short, mid and long-term. We considered that diverse methodologies could provide a larger overview of how trainees had retained the key contents of the training. Finally, feasibility conditions also influenced the choice of the methodology. The study was approved by the Student Health Center within the University of Bordeaux.

Overall, a total of 112 students were included across the three studies. Recruitment was completed via emails addressed to students registered to the training sessions from all faculties of the University of Bordeaux. The majority of participants were healthcare or PhD students as the Student Health Center invited them to attend the training in priority. Questionnaires were anonymized through coding. Only two investigators of the study had access to the student email addresses. Students signed a consent form electronically to take part in the studies based on the period when they were trained. Concerning the semi-structured interviews, they were recorded with the authorization of each participant. For all three studies prior to data collection, the objectives of the project were described with students and it was clearly stated that data would be used for scientific purposes only.

2.1 | First study: Post-training questionnaire

A first online questionnaire was administered in September 2021 to students trained in MHFA between November 2020 and July 2021. Some items were based on the Mental Health Literacy Scale (O'Connor & Casey, 2015). An invitation was sent by email to 219 students, but only 55 completed the questionnaire (25% participation rate) on a voluntary basis. The questionnaire collected information on KAP (13 items) after the training to estimate effects in the mid- and long-term. Participants' satisfaction was also evaluated. The answer options were 'True', 'False' or 'I don't know'.

2.2 | Second study: Pre-post questionnaire

In June 2022, students trained between the 12th May and the 16th June 2022 were invited to complete two new online questionnaires, 1 day before (pre) and 1 week after (post) the training. A total of 52 students answered to both questionnaires. The objective was to evaluate the short-term impact on the KAP.

The two questionnaires included 12 new questions evaluating the KAP. Response options were 'True', 'False' or 'I don't know'. Questions were based on the contents of the courses of the MHFA training. Those who answered all questions correctly obtained a score of 12.

2.3 | Third tudy: Semi-structured interviews

Fourteen semi-structure interviews were conducted with students trained in MHFA between November 2020 and March 2022. An interview guide was developed with three broad themes: satisfaction of the training (learning, contents), its application (factual aid, intention to aid) and personal benefits (confidence, de-stigmatization). The themes corresponded to KAP and specific questions on satisfaction were added to inform how the training could be improved, which was the expected outcome of the study. Interviews were recorded, fully transcribed and coded for a thematic analysis by three members of the team.

2.4 | Data analyses

For the first study, data were described through counts and percentages (categorical variables) and means and standard deviations (continuous variables).

For the second study, in addition to descriptions, a score was calculated from the 12 questions on KAP. Scores from the pre-training questionnaire and the post-training questionnaire were compared through t-test. Based on the study by Burns et al. (2017), two scores were considered as different with the threshold of 1.5 points. Furthermore, a variable corresponding to the difference between the two scores was created in order to assess the size of this difference for each participant. Stata software version 12.0 was used for analysis.

For the third qualitative study, a framework method analysis was used (Gale et al., 2013). This type of analysis consists in inserting the sentences of the interview in a matrix where rows represent individual participants, and columns represent themes. In our case, the themes were the KAP. The cell of the matrix is used to summarize the findings and to contextually compare and contrast data across participants and theme. According to the five steps of this method, first, we got familiarized with the data and sensitized to early themes. Second, we coded the data through the identification of key concepts. Third, we numerically annotated the data to observe commonalities. Fourth, we rearranged all data in a chart or matrix to compare individuals with codified themes. Finally, data were interpreted.

3 | RESULTS

Overall, results showed that the MHFA training had improved students' KAP at different degrees with short-term impact being stronger. The effects of the MHFA training on KAP decreased over time as demonstrated from long-term outcome measures. Results are presented in chronological order.

3.1 | Results of the first study: Questionnaire post-MHFA-training, effects in the mid- to long-term

The sample was composed of 55 students, mainly women (70.9%, $n = 39$). Mean age was 29 years old. Health students were the most represented (32.7%, $n = 18$). Almost half of the sample (41.8%, $n = 23$) was at the 6th or more year of study corresponding mainly to PhD students and medical students. The majority of participants had already attended mental health-related courses other than MHFA (89.1%, $n = 49$).

Concerning knowledge, a total of 90.9% ($n = 50$) of the participants correctly answered the questions about mental health problems. The most correctly answered question related to endorsement that treatment of a mental illness prescribed by a mental health professional would be effective (92.7%, $n = 51$).

Concerning attitudes, 81.8% ($n = 45$) and 87.2% ($n = 48$) of students declared being ready to work in close collaboration or to be friends with a person suffering from a mental illness, respectively. Only one person answered that a mental illness is not a real disease.

Regarding practices, the trainees seemed to have retained the ALGEE action plan. Indeed, 98.2% ($n = 54$) answered that their role was not to treat the person or find a solution for their problem, but rather assist them and recognize signs of a mental health crisis.

Table 1 presents all KAP items with corresponding counts and percentages.

TABLE 1   First study – KAP data in the medium to long term (n = 55).

	Correct answer		Wrong answer		I do not know	
	n	%	*n*	%	*n*	%
Knowledge						
People with mental illness could cope if they really wanted to.	50	90.9%	3	5.4%	2	3.6%
A mental illness is not a real illness from a medical point of view.	54	98.1%	1	1.8%	0	0.0%
People with mental illness can be a danger to themselves and to others.	40	72.7%	6	10.9%	9	16.4%
I believe that treatment of mental illness by a mental health professional would not be effective.	51	92.7%	2	3.6%	2	3.6%
For people with an anxiety disorder, it is not helpful to avoid anxiety-provoking situations.	31	56.4%	17	30.9%	7	12.7%
A person trained in MHFA can recognize a person in psychological difficulty and provide first-line help.	54	98.2%	1	1.8%	NA	NA
A psychologist can recognize a person in psychological difficulty and provide first-line help.	55	100%	0	0.0%	NA	NA
A psychiatrist can recognize a person in psychological difficulties and provide first-line help.	54	98.2%	1	1.8%	NA	NA
Can a trained MHFA diagnose a mental disorder?	54	98.2%	1	1.8%	NA	NA
Can a psychologist diagnose a psychological disorder?	18	32.7%	37	67.3%	NA	NA
Can a psychiatrist diagnose a psychological disorder?	55	100.0%	0	0.0%	NA	NA
A MHFA trained psychologist could perform psychotherapy.	55	100.0%	0	0.0%	NA	NA
A psychologist could perform psychotherapy.	48	87.3%	7	12.7%	NA	NA
A psychiatrist could perform psychotherapy.	55	100.0%	0	0.0%	NA	NA
Attitudes						
Would you be willing to befriend someone with a mental illness?	48	87.2%	1	1.8%	6	10.9%
Would you be willing to work closely with a person with a mental illness?	45	81.8%	4	7.3%	6	10.9%
Practices						
You should not hesitate to ask a person directly if they are thinking about suicide, as this will not induce suicidal thoughts or act on them.	52	94.5%	3	5.5%	0	0.0%
When assisting a person with a psychotic disorder, it is best to ask them what would help them to choose and increase their sense of security, while remaining calm and using short, clear sentences.	53	96.4%	1	1.8%	1	1.8%
MHFA program: it is not about trying to cure the person or find answers to their problems.	54	98.2%	1	1.8%	NA	NA
MHFA training consists of assisting and assessing in the event of a crisis.	54	98.2%	1	1.8%	NA	NA
MHFA training consists of comforting and informing.	54	98.2%	1	1.8%	NA	NA
MHFA training is about listening actively and without judgement.	55	100%	0	0.0%	NA	NA
MHFA training is not about encouraging people to get their act together.	52	94.5%	3	5.5%	NA	NA

3.2 | Results of the second study: Questionnaires pre-post-MHFA-training, effects in the short term

The sample of 52 students was mainly composed of female students (76.9%, n = 40). Mean age was 23 years old. Students were mostly studying health-related disciplines (55.7%, n = 29), being on the 2nd or 3rd year of study (57.7%, n = 30) and without any previous training on mental health other than MHFA (78.8%, n = 41).

The total KAP score from the questionnaires (maximum score of 12) was calculated for each participant at pre- and post-training. The

mean score for the pre-training questionnaire was 8.9/12 while 10.4/12 for the post-training questionnaire, with an increase of 1.5 points. The difference between the two KAP-related scores was significant ($p < .001$).

Concerning knowledge, correct answers were 60.8% before the training and 77.7% after. The percentage of 'I don't know' was 11.2% before the training and 1.3% after. With regards to attitudes, correct answers were 53.1% before the training and 58.5% after. Finally, as for practices, correct answers were 64.6% before the training and 72.7% after. Thus, participants increased their initial KAP score by an average of 10 percentage points after the training.

To give an example, before the training 32.7% ($n = 17$) of students considered the following statement as true: 'People with a mental disorder are a danger to others'. After the training, only 1 person answered 'True'.

Almost all trainees (94.2%, $n = 49$) reported feeling more confident about mental health-related issues after the training. All results are synthesised in Table 2.

3.3 | Results of the third study: Semi-structured interviews post-MHFA training, effects in the medium to long term

A total of 14 students were interviewed. They were studying health disciplines, educational sciences, physics and psychology.

Concerning knowledge, 13 of them stated that they had learnt new elements concerning mental health or confirmed what they already knew, as follows:

> 'The training has enriched my knowledge. [...] After this training, we know more, thus we know how better manage things. We can listen to people'.
> (M. 3rd year male student, psychology)

Participants reported that their knowledge increased through practical exercises more than with theoretical content delivered during the training:

TABLE 2 Second study – Evolution of KAP levels in the short term ($n = 52$).

	Q1[a] Correct	Q2[b] Correct	Q1 Wrong	Q2 Wrong	Q1 I do not know	Q2 I do not know
Knowledge						
Some mental disorders are hereditary.	31	20	10	32	11	0
People with a mental disorder are a danger to others.	27	49	17	1	8	2
With a little willpower, people with depression could recover.	38	45	7	6	7	1
A person with schizophrenia can recover without medication.	29	52	4	0	19	0
People with an anxiety disorder may face anxiety-provoking situations in order to recover. recovery.	32	36	7	14	13	2
Attitudes						
Generally, a person with a mental disorder can participate in decisions about their health.	40	50	3	2	9	0
If a person has a panic attack, I do not intervene, because they will eventually calm down.	48	50	0	2	4	0
I would accept to work with a person who has already been depressed.	51	52	1	0	0	0
Practices						
You should never ask a person if they are thinking about suicide, as this may give them the idea.	46	52	5	0	1	0
If your friend has a depressive disorder, he or she will need medication.	31	37	14	11	7	4
If your friend has a depressive disorder, you may want to advise him/her to seek therapy.	49	51	0	1	3	0
A person having a psychotic break could be forced to be hospitalized.	42	49	3	2	7	1

[a]Q1: Questionnaire before the training.
[b]Q2: Questionnaire after the training.

'We learnt how to react to certain situations. It's very interesting for many people to have a plan. A bit like general emergencies, emergency care. […] It's a base to learn a little by heart, but at least it is well organized'.

(A, 4th year male student, medicine)

On the other hand, a student stated that some of the topics were too basic in terms of mental health-related knowledge:

'These were relatively basic things, we feel that it is still a first level for the general public'.

(LA, 1st year female doctoral student, education and public health)

With regards to attitudes, seven students reported that the training had taught them not to stigmatize people with a mental health problem. They reported their perspective had changed after the training:

'I think I used to have a bit of the old firefighter mentality of "stop whining, it's nothing you got" [when talking to someone in psychotic crisis]'.

(T, 1st year male doctoral student and firefighter, physics)

'It allowed me to correct certain sentences or formulations [when approaching someone in distress], I think it might be clumsy to say it that way'.

(LI, 2nd year male doctoral student, mathematics)

Their anti-stigmatizing approach concerned also unknown persons they might encounter in their daily life:

'[The training] also made me notice that you could very quickly be critical, in judgment, without necessarily wanting to, but that suddenly it was super easy to think differently'.

(L, 2nd year female student, psychomotricity)

Concerning practices, following acquired knowledge from the training, interviewed students had rescued or helped someone during a crisis such as panic attack, suicidal thoughts or rape. Other situations where students had assisted related to emotional states such as sadness or stress. Interviewed students reported they had applied the MHFA skills to provide help:

'And then, in terms of impact on post-training, [the training] helped me a lot on the professional and personal side, both for those around me and for myself'.

(A, 4th year male student, medicine)

Finally, students reported that they had used the ALGEE action plan, which was perceived as an operational tool, making it possible to structure the help they could provide to others. Eight students reported that the training enabled them to better assess certain situations (emergency and non-emergency):

'Knowing a bit if it's an immediate emergency, to which professional direct the person, rather to a general practitioner or a psychologist etc. these are things you learn with the training'.

(A, 4th year male student, medicine)

4 | DISCUSSION

We conducted three studies using different methodologies and samples in order to provide a comprehensive overview of the impact of the MHFA training on French university students' KAP. Previous research had used on only one type of design, for example, randomized controlled study, and had not diversified the sample (Forthal et al., 2022). Our multilevel and mixed-methods approach produced congruous data. Furthermore, these three studies were the first ones evaluating the MHFA training in France since its introduction in 2018, and among the rare ones in Europe (El-Den et al., 2020).

The main finding was that the training was consistently beneficial to trainees shortly after the courses as well as several months later for all KAP. The analysis by KAP had not been used before, while providing straightforward information on the effectiveness of the training on future first aiders.

As for trainees' knowledge on mental health topics, our results were in line with other studies reporting that it increased after the training (Burns et al., 2017; Hung et al., 2019; Liang et al., 2021). However, compared to the literature, we provided further information on the extent of the retention of acquired knowledge from the short to the long-term. In particular, the first study showed that the knowledge acquired during the training persisted in the mid and long term. The second study showed that the knowledge score increased by 1.5 points between before and shortly after the training. Nonetheless, after some months, the trainees felt they were forgetting some information, suggesting that refresher courses would be beneficial.

In terms of attitudes, our work reported that the training was effective to combat stigma against mental illness concerning both friends and unknown people. All three studies showed a shift towards less stigmatization, with the findings aligned with previous research (Davies et al., 2018; O'Reilly et al., 2011). Researchers had especially used scales and questionnaires to measure stigma. We contributed to the quantitative research on the impact of MHFA training on reducing stigmatization with additional qualitative data. Interviews showed that students were more careful about the words they used to refer to mental health problems, avoiding any form of criticism and adopting a more empathetic approach to people in psychological distress.

Concerning practices, results confirmed that the training helped trainees identify potential resources (e.g., health professionals, emergency numbers) for them, for friends and for strangers (Kidger et al., 2016) Also, they had learnt how to react in a crisis situation by

giving specific information to the person in need. They had reported having helped friends in distress, from suicide risk to rape, providing direct information on the impact of the training on rescued people. This can be considered as an indirect measure of the effectiveness of the training from the perspective of people helped by first aiders.

After the training, students felt more self-confident, empathic and legitimized to support others (Burns et al., 2017; Davies et al., 2018; Lo et al., 2018). In particular, our results showed that almost all of them felt that the training gave them legitimacy to intervene in situations of psychic crisis. Self-assurance was the most important competence acquired by trainees to put into practice the contents of the training in their daily life.

A strength of this study is the assessment of 'the level of complete knowledge, the attitudes motivating behaviours, and the preventive and care practices of the target populations' of the MHFA training (Essi & Njova, 2013). Using mixed-methods, information about the training would not have been identified without both qualitative and quantitative data collection and analysis. For example, studies one and two identified that the training was statistically helpful for students while the third study identified why and how. In addition, the interest of carrying out several studies facilitated a broader understanding of the MHFA training by collecting data across different time periods.

However, a limitation to our study is that the use of different samples, while being original, can impair comparability. We encountered a self-selection bias due to the recruitment carried out on a voluntary basis, having, for instance, a majority of health-related students in our different samples. Furthermore, we have no knowledge of the level of KAP before the training for the first and last studies. Participants might also have been more interested in mental health than their peers not attending the training. In addition, a memory bias may appear especially in the first and last study. It is indeed possible that, for most participants, the memorization of the topics covered, the quality of the training or even its use, was biased by the time elapsed. Finally, we assume that a social desirability bias may have influenced the answers given during the interviews.

Despite these limitations, our results suggest that the MHFA training has a positive impact on students' mental health-related KAP with improved mental health literacy, prompt access to care and decreased stigmatization. It is a means to tackle the growing number of mental health problems among students.

5 | CONCLUSIONS

The high prevalence of mental disorders among students reinforces the need for trainings like the MHFA. The objective of this study was to assess the impact of this training on students' KAP about mental health. Indirectly, collected data helped evaluate the training. Overall, students who participated in the MHFA training founded it useful. Specifically, the MHFA training is useful in preventing mental health problems and supporting students to seek psychological help if needed. Results suggest that the MHFA training should be promoted to other Universities in France.

CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest.

DATA AVAILABILITY STATEMENT

Data are available from the last author upon request.

ORCID

Alexandra Marinucci https://orcid.org/0000-0002-1737-9550
Ilaria Montagni https://orcid.org/0000-0003-0076-0010

REFERENCES

Arsandaux, J., Montagni, I., Macalli, M., Texier, N., Pouriel, M., Germain, R., Mebarki, A., Kinouani, S., Tournier, M., Schück, S., & Tzourio, C. (2020). Mental health condition of college students compared to non-students during COVID-19 lockdown: The CONFINS study. *BMJ Open*, 11(8), e053231. https://doi.org/10.1136/bmjopen-2021-053231

Asharani, P. V., Abdin, E., Kumarasan, R., Siva Kumar, F. D., Shafie, S., Jeyagurunathan, A., Chua, B. Y., Vaingankar, J. A., Fang, S. C., Lee, E. S., Van Dam, R., Chong, S. A., & Subramaniam, M. (2020). Study protocol for a nationwide Knowledge, Attitudes and Practices (KAP) survey on diabetes in Singapore's general population. *BMJ Open*, 10(6), e037125. https://doi.org/10.1136/bmjopen-2020-037125

Bond, K. S., Jorm, A. F., Kitchener, B. A., & Reavley, N. J. (2015). Mental health first aid training for Australian medical and nursing students: An evaluation study. *BMC Psychology*, 3(1), 11. https://doi.org/10.1186/S40359-015-0069-0

Boukouvalas, E. A., El-Den, S., Chen, T. F., Moles, R., Saini, B., Bell, A., & O'Reilly, C. L. (2018). Confidence and attitudes of pharmacy students towards suicidal crises: Patient simulation using people with a lived experience. *Social Psychiatry and Psychiatric Epidemiology*, 53(11), 1185–1195. https://doi.org/10.1007/s00127-018-1582-2

Burns, S., Crawford, G., Hallett, J., Hunt, K., Chih, H. J., & Tilley, P. J. M. (2017). What's wrong with John? A randomised controlled trial of Mental Health First Aid (MHFA) training with nursing students. *BMC Psychiatry*, 17(1), 111. https://doi.org/10.1186/s12888-017-1278-2

Crawford, G., & Burns, S. (2020). Confidence and motivation to help those with a mental health problem: Experiences from a study of nursing

students completing mental health first aid (MHFA) training. *BMC Medical Education*, 20(1), 69. https://doi.org/10.1186/s12909-020-1983-2

Davies, E. B., Beever, E., & Glazebrook, C. (2018). A pilot randomised controlled study of the mental health first aid eLearning course with UK medical students. *BMC Medical Education*, 18(1), 45. https://doi.org/10.1186/s12909-018-1154-x

El-Den, S., Moles, R., Choong, H. J., & O'Reilly, C. (2020). Mental health first aid training and assessment among university students: A systematic review. *Journal of the American Pharmacists Association*, 60(5), e81–e95. https://doi.org/10.1016/j.japh.2019.12.017

Essi, M., & Njova, O. (2013). L'enquête CAP (Conaissances, Attitudes et Pratiques) en recherche médicale. *Health Sciences and Disease*, 14, 1–3.

Forthal, S., Sadowska, K., Pike, K. M., Balachander, M., Jacobsson, K., & Hermosilla, S. (2022). Mental health first aid: A systematic review of trainee behavior and recipient mental health outcomes. *Psychiatric Services (Washington, DC)*, 73(4), 439–446. https://doi.org/10.1176/appi.ps.202100027

Gale, N. K., Heath, G., Cameron, E., Rashid, S., & Redwood, S. (2013). Using the framework method for the analysis of qualitative data in multidisciplinary health research. *BMC Medical Research Methodology*, 13(1), 117. https://doi.org/10.1186/1471-2288-13-117

Hung, M. S. Y., Lam, S. K. K., & Chow, M. C. M. (2019). Nursing students' experiences of mental health first aid training: A qualitative descriptive study. *Collegian*, 26(5), 534–540. https://doi.org/10.1016/j.colegn.2019.02.006

Husky, M. M., Kovess-Masfety, V., & Swendsen, J. D. (2020). Stress and anxiety among university students in France during Covid-19 mandatory confinement. *Comprehensive Psychiatry*, 102, 152191. https://doi.org/10.1016/j.comppsych.2020.152191

Ishida, M., Montagni, I., Matsuzaki, K., Shimamoto, T., Cariou, T., Kawamura, T., Tzourio, C., & Iwami, T. (2020). The association between depressive symptoms and self-rated health among university students: A cross-sectional study in France and Japan. *BMC Psychiatry*, 20(1), 549. https://doi.org/10.1186/s12888-020-02948-8

Jorm, A. F., Kitchener, B. A., Sawyer, M. G., Scales, H., & Cvetkovski, S. (2010). Mental health first aid training for high school teachers: A cluster randomized trial. *BMC Psychiatry*, 10, 51. https://doi.org/10.1186/1471-244X-10-51

Kelly, C. M., Jorm, A. F., & Wright, A. (2007). Improving mental health literacy as a strategy to facilitate early intervention for mental disorders. *The Medical Journal of Australia*, 187(Suppl 7), S26-30. https://doi.org/10.5694/j.1326-5377.2007.tb01332.x

Kidger, J., Evans, R., Tilling, K., Hollingworth, W., Campbell, R., Ford, T., Murphy, S., Araya, R., Morris, R., Kadir, B., Moure Fernandez, A., Bell, S., Harding, S., Brockman, R., Grey, J., & Gunnell, D. (2016). Protocol for a cluster randomised controlled trial of an intervention to improve the mental health support and training available to secondary school teachers – the WISE (Wellbeing in Secondary Education) study. *BMC Public Health*, 16(1), 1089. https://doi.org/10.1186/s12889-016-3756-8

Kitchener, B. A., & Jorm, A. F. (2008). Mental health first aid training in a workplace setting: A randomized controlled trial [ISRCTN13249129]. *BMC Psychiatry*, 2(1), 55-61. https://doi.org/10.1111/j.1751-7893.2007.00056.x

Kitchener, B. A., & Jorm, A. F. (2006). Mental health first aid training: Review of evaluation studies. *Australian and New Zealand Journal of Psychiatry*, 40(1), 6–8. https://doi.org/10.1111/j.1440-1614.2006.01735.x

Kitchener, B. A., & Jorm, A. F. (2008). Mental health first aid: An international programme for early intervention. *Early Intervention in Psychiatry*, 2(1), 55–61. https://doi.org/10.1111/j.1751-7893.2007.00056.x

Lattie, E. G., Adkins, E. C., Winquist, N., Stiles-Shields, C., Wafford, Q. E., & Graham, A. K. (2019). Digital mental health interventions for depression, anxiety, and enhancement of psychological well-being among college students: Systematic review. *Journal of Medical Internet Research*, 21(7), e12869. https://doi.org/10.2196/12869

Liang, M., Chen, Q., Guo, J., Mei, Z., Wang, J., Zhang, Y., He, L., & Li, Y. (2021). Mental health first aid improves mental health literacy among college students: A meta-analysis. *Journal of American College Health*, 71, 1196–1205. https://doi.org/10.1080/07448481.2021.1925286

Lo, K., Gupta, T., & Keating, J. L. (2018). Interventions to promote mental health literacy in university students and their clinical educators. A systematic review of randomised control trials. *Health Professions Education*, 4(3), 161-175. https://doi.org/10.1016/j.hpe.2017.08.001

Marinucci, A., Grové, C., & Allen, K. A. (2021). A scoping review and analysis of mental health literacy interventions for children and youth. *School Psychology Review*, 52, 144–158. https://doi.org/10.1080/2372966X.2021.2018918

Martin, J. (2016). An exploratory study of the benefits of youth mental health literacy studies for social work students. *Social Work in Mental Health*, 14(1), 42–60. https://doi.org/10.1080/15332985.2015.1057312

Maslowski, A. K., LaCaille, R. A., LaCaille, L. J., Reich, C. M., & Klingner, J. (2019). Effectiveness of mental health first aid: A meta-analysis. *Mental Health Review Journal*, 24(4), 245–261. https://doi.org/10.1108/MHRJ-05-2019-0016

Morgan, A. J., Ross, A., & Reavley, N. J. (2018). Systematic review and meta-analysis of mental health first aid training: Effects on knowledge, stigma, and helping behaviour. *PLoS One*, 13(5), e0197102. https://doi.org/10.1371/journal.pone.0197102

O'Connor, M., & Casey, L. (2015). The Mental Health Literacy Scale (MHLS): A new scale-based measure of mental health literacy. *Psychiatry Research*, 229, 511–516. https://doi.org/10.1016/j.psychres.2015.05.064

O'Reilly, C. L., Bell, J. S., Kelly, P. J., & Chen, T. F. (2011). Impact of mental health first aid training on pharmacy students' knowledge, attitudes and self-reported behaviour: A controlled trial. *Australian and New Zealand Journal of Psychiatry*, 45(7), 549–557. https://doi.org/10.3109/00048674.2011.585454

Riebschleger, J., Costello, S., Cavanaugh, D. L., & Grové, C. (2019). Mental health literacy of youth that have a family member with a mental illness: Outcomes from a new program and scale. *Frontiers in Psychiatry*, 10(Feb). https://doi.org/10.3389/fpsyt.2019.00002

Strenna, L., Chahraoui, K., & Vinay, A. (2009). Santé psychique chez les étudiants de première année d'école supérieure de commerce: liens avec le stress de l'orientation professionnelle, l'estime de soi et le coping. *L'Orientation Scolaire et Professionnelle*, 38(2), 183–204. https://doi.org/10.4000/osp.1902

Wadsworth, D. P., Warren-James, M., Duncan, D., & Clegg, L. (2022). Mental Health First Aid training for paramedic students: An evaluation study. *Australasian Emergency Care*, 26(2), 142-148.

Worsley, J. D., Pennington, A., & Corcoran, R. (2022). Supporting mental health and wellbeing of university and college students: A systematic review of review-level evidence of interventions. *PLoS One*, 17(7), e0266725.

SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.