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Mental Health First Aid: A Systematic Review of Trainee Behavior and Recipient Mental Health Outcomes

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Abstract

Objective—Mental Health First Aid (MHFA) is a globally disseminated course that trains members of the public to recognize and respond to mental health issues in their communities. Although substantial evidence suggests that MHFA training is associated with positive changes in knowledge, attitudes, and behavioral intent, little is known about how the aid delivered by its trainees supports mental health needs outside of the classroom. This systematic review summarizes the extant research evaluating behaviors taken by MHFA trainees and their impacts on recipient mental health.

Methods—Electronic databases were searched for MHFA evaluations published on or before March 9, 2021. Studies that evaluated at least one outcome related to trainee behavior or recipient mental health were included in the synthesis. Outcomes were organized into three categories: trainee use of first aid skills, helpfulness of trainee's actions, and recipient mental health. Only studies that compared pre- and post-training outcomes, included a control group, and evaluated MHFA (instead of an MHFA derivative) were used to assess efficacy.

Results—The search identified 31 studies, nine of which met criteria to assess efficacy. Based on these nine studies, MHFA had mixed effects on trainees using first aid skills and no effects on the helpfulness of trainees' actions or recipient mental health.

Conclusions—There is insufficient evidence that MHFA improves the helping behaviors of trainees or the mental health of recipients. These findings highlight a crucial research and evaluation gap that must be prioritized as MHFA continues to grow in popularity.

Introduction

In the United States, approximately 1 in 2 adults will experience a mental illness in their lifetimes, often beginning during childhood or adolescence (1, 2). Unfortunately, due to a plethora of factors including cost, stigma, availability of services, and a fragmented mental

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health care system (3, 4), less than half will receive adequate treatment (2). The combination of high prevalence and limited access to services have led to increasing efforts to train the lay public in first-line mental health response.

Based on the conventional model of first aid, Mental Health First Aid (MHFA) is a course that trains the general public to recognize and respond to mental health issues in their communities (5). MHFA was founded in 2000 in Australia and has since expanded to be taught in 24 countries, including the United States (6). Besides the standard adult course, specialized MHFA curricula exist for law enforcement, firefighters and emergency medical services personnel, teens, higher education, rural settings, workplaces, and people who work with youth, older adults, and veterans (7, 8).

To provide basic first-line assistance and make referrals to professional care, most MHFA trainees learn a five-step action plan known as ALGEE: **A**ssess for risk of suicide or harm, **L**isten nonjudgmentally, **G**ive reassurance and information, **E**ncourage appropriate professional help, and **E**ncourage self-help and other support strategies (9). Trainees of the teen MHFA course learn a modified action plan: **Look** for warning signs, **Ask** how they are, **Listen** up, **Help** them connect with an adult, and **Your Friend**ship is important (10). Course length and content can vary by country, and changes to the program are often made in light of new evidence. For example, the MHFA Australia ALGEE action plan language was recently updated to: **A**pproach the person, assess and assist with any crisis, **L**isten and communicate non-judgmentally, **G**ive support and information, **E**ncourage the person to get appropriate professional help, and **E**ncourage other supports (11). MHFA USA continues to use the original ALGEE plan. Additionally, in Australia, the standard adult course is 12 hours long and the youth course is 14 hours long (8), while in the United States, both classes are 8 hours long (12). Several MHFA courses have been adapted for specific country, cultural, and linguistic contexts (6, 13).

Since it was adapted and introduced to the United States in 2008, over two million people have been trained in MHFA (14). MHFA trainings are available to the general public and are typically voluntary. However, trainings are increasingly required by some police departments, fire departments, and schools (15), given the likelihood of encountering a person experiencing a mental health crisis in those work settings. In an effort to support mental health programming and prevention efforts, MHFA has been explored in more than 87 studies (16) and is supported by policymakers (17, 18), as well as several health, education, and police departments (19). MHFA encourages mental health literacy among the general public and professionals (e.g., paramedics, law enforcement, and teachers) that are likely to be called on to support mental health needs in their communities. Significant funding for MHFA-related projects is awarded through Project AWARE (Advancing Wellness and Resiliency in Education) state agency grants (17, 20).

MHFA has consistently been shown to reduce mental health stigma and increase mental health knowledge, recognition of mental disorders, belief in effective treatments, and confidence and intent to help among its trainees, with mixed results for its effect on the amount of actual helping behavior performed by trainees (21–26). However, because most existing program evaluations (16) and systematic reviews (21, 22, 25, 26) have focused on

evaluating direct training outcomes (e.g., changes in knowledge, attitudes, and behavioral intent), little is known about how effective MHFA is in addressing the mental health needs of its recipients. Two meta-analyses, with literature searches conducted in 2017 (22) and 2018 (24), have begun to examine this gap in the literature, finding no significant effects on the quality of MHFA trainee helping behaviors provided (22) or the mental health of recipients (22, 24). Mei and McGorry's recent commentary highlights the growing interest in and need to evaluate MHFA-related recipient mental health outcomes (27).

This systematic review looks solely at evaluations of MHFA actions taken outside of the classroom in order to provide an understanding of whether – and how – MHFA actions are helpful to those experiencing a mental health crisis. While changing the knowledge, attitudes, and behavioral intent of MHFA trainees is an important and worthwhile goal, ultimately, it is crucial to understand how MHFA affects those it intends to help. Furthermore, due to continued proliferation of programming (6, 15, 19) and evaluation studies (16), there is a need for an up-to-date synthesis of MHFA's effects. Finally, while recent meta-analyses (22, 24) have examined the evidence for MHFA's effects on trainee behavior and recipient mental health, they did so among other training outcomes, with limited attention placed on the particular challenges associated with evaluating post-training, "real-world" outcomes. To our knowledge, no other evaluations, systematic reviews, or meta-analyses have selectively focused on trainee behavior and recipient mental health outcomes. We conclude by providing several recommendations for how to strengthen this necessary evidence base.

Methods

We conducted a systematic review based on the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) Statement (online supplement p 11) (28).

Search strategy

We searched the PubMed, PsycINFO, PTSDpubs, and EMBASE electronic databases for studies published on or before March 9, 2021. Owing to linguistic similarity in intervention names, we used the search terms psychological first aid, mental health first aid, psychological crisis intervention, and mental health crisis intervention. The full search strategy and exact search terms are detailed in the online supplement (p 2). The research protocol was developed prospectively and in adherence to Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols (PRISMA-P) guidelines (29).

Selection

We included peer-reviewed studies that evaluated behaviors taken by people who participated in the MHFA course (trainees) to help people experiencing a mental health problem (recipients). We looked at outcomes that assessed trainee behavior, ranging from whether the trainee simply performed an MHFA action to the effect of MHFA actions on the recipients' mental health. Outcomes evaluating changes in trainee mental health, knowledge, attitudes, or behavioral intent were not included in order to isolate the impact of training outside of the classroom. Commentaries, book chapters, opinion pieces, protocols, reviews,

and studies not published in English were also excluded. There were no restrictions on setting.

Two authors independently reviewed the database search results by title and abstract, and selected studies based on predetermined inclusion and exclusion criteria (online supplement p 3). Fifteen percent of titles and 10% of abstracts were randomly selected to be reviewed by both authors and compared for quality control. A third, independent author compared the selections and settled any disagreements. Two authors then independently reviewed the full texts of selected studies for final inclusion.

Data analysis

Four independent authors extracted study-level data related to setting, design (including whether or not the study incorporated a control group and/or pre- and post- test results), participant characteristics, intervention details, and outcomes evaluated. Four studies were randomly selected to be independently extracted again by a different author as a quality check.

Behavioral outcomes were categorized by type (trainee use of first aid skills, helpfulness of trainee's actions, or recipient mental health) and who reported it (trainee or recipient). The main findings of each study were then summarized and identified as evidence of positive effect, partial positive effect, no effect, or negative effect, based on a 5% significance level. If studies did not compare pre- and post-training outcomes or did not have a control group, their findings were considered to have insufficient information to assess efficacy. Additionally, to ensure comparability across courses, only studies evaluating a form of MHFA that explicitly taught the ALGEE or Look Ask Listen Help Your Friend action plan were used to evaluate efficacy. Lastly, we did not report on behavioral outcomes measured immediately post-training, because trainees would not have had sufficient time to perform any "real world" MHFA actions by then.

Two authors independently assessed risk of bias using the Cochrane Risk of Bias tool, which rates studies as 'Low risk', 'High risk', or 'Unclear risk' of bias in the following domains: random sequence generation, allocation concealment, blinding of participants and personnel, blinding of outcome assessment, incomplete outcome data, selective reporting, and other sources of bias (30).

Results

The search identified 9,855 records, of which 1,093 were duplicates, 8,762 were excluded after title review, and 786 were excluded after abstract review. Of the 149 articles reviewed in full, 119 were excluded. Articles were excluded if they evaluated an intervention that was not MHFA (e.g. Psychological First Aid) (57 studies), did not measure at least one trainee behavior or recipient mental health outcome (36 studies), the full paper was unavailable or not in English (11 studies), were a systematic review (8 studies), or were another non-evaluation study (7 studies). One additional study was identified through an expert in the field (31), leaving 31 studies to be included in the synthesis.

Of these 31 studies, 9 (31–39) were rigorous enough to be used to conclude MHFA efficacy. Studies that did not meet minimum rigor criteria were uncontrolled studies with post-training outcomes only (40–47), uncontrolled studies with pre- and post-training outcomes (9, 10, 48–57), a cluster randomized controlled trial (RCT) with relevant outcomes not measured in the control group (58), and a cluster RCT which did not evaluate the ALGEE or Look Ask Listen Ask Your Friend action plan (59) (online supplement p 9).

Description of studies used to assess efficacy

Of the 9 studies used to assess efficacy, 3 (31, 38, 39) had not been synthesized in previous systematic reviews. All were RCTs (including two cluster RCTs). Follow-up periods ranged from four months to three years after the training. A summary of the studies used to assess efficacy is available in the online supplement (p 7–8).

Evaluations occurred in predominantly high-income countries, including six in Australia. Trainees came from diverse backgrounds and represented the general public, students, teachers, government employees, and parents. Nearly all MHFA courses were in-person and taught by certified MHFA instructors or mental health professionals. Course formats varied from multiple, shorter sessions to long, one-day sessions. Training totaled between 9 and 14 hours. Six studies evaluated the standard adult MHFA course and three evaluated the youth course (for adults who work with youth).

Outcomes

Trainee use of first aid skills, reported by trainee.—All of the reviewed studies measured traineereported use of MHFA skills to help a person experiencing a mental health problem (online supplement p 10), with 9 (31–39) meeting criteria to make a conclusion. Studies asked trainees if they used MHFA skills either at all (31, 33, 34, 36–39) or the frequency of use (33, 36, 37), with one study (32) not specifying questionnaire wording. Six studies (31, 33, 37–39) additionally considered the fidelity of actions taken to the ALGEE plan. Three studies found a statistically significant increase in use of first aid skills after four (34), six (31), and 24 (37) months, while six (32, 33, 35, 36, 38, 39) found no change (online supplement p 7–8). Four of the studies that found no change (32, 36, 38, 39) were underpowered at post-training due to significant loss to follow-up.

Trainee use of first aid skills, reported by recipient.—Four studies asked about receipt of MHFA help from the recipient's perspective (online supplement p 10), one of which had enough information to make a conclusion. The study (35) found that high school students reported receiving increased information about mental health problems from their trainee teachers after six months, but did not report receiving increased help from them. The study was adequately powered.

Helpfulness of trainee's actions, reported by trainee.—Seven studies asked trainees if they perceived the assistance they provided to as helpful to recipients (online supplement p 10). Because none had control groups, we were not able to make a conclusion about MHFA's effectiveness on this outcome (online supplement p 7–8).

Helpfulness of trainee's actions, reported by recipient.—Two studies (reporting on the same RCT at different follow-up periods) asked adolescents how well their parents who were trained in MHFA supported them when they experienced a mental health problem. The studies found no effect of the training at 12, 24 (39), or 36 months (38) (online supplement p 10). Both studies were underpowered.

Recipient mental health, reported by trainee.—Two studies (reporting on the same RCT at different follow-up periods) assessed the mental health of adolescents whose parents were trained in MHFA (online supplement p 10). Using the parent report version of the Strengths and Difficulties Questionnaire (SDQ), the studies found no change in parent-reported adolescent mental health problems at 12, 24 (39), or 36 months (38) (online supplement p 7–8). Again, these studies were underpowered.

Recipient mental health, reported by recipient.—Three studies assessed recipient mental health as reported by the recipient (online supplement p 10). In one study (35), recipients were high school students whose teachers were trained, and in the other two studies (reporting on the same RCT at different follow-up periods) (38, 39), recipients were adolescents whose parents were trained. None of the studies found significant changes in mental health problems using child report versions of the SDQ (online supplement p 7–8). Two studies (38, 39) were underpowered.

Risk of bias

Risk of bias according to the Cochrane Risk of Bias tool is summarized in Table 1 (40–59). Thirteen studies were identified as having overall high risk of bias (10, 40–44, 48–52, 54, 58), two as having medium-high risk (45, 57), seven as having medium risk (9, 31, 46, 47, 53, 56, 59), seven as having medium-low risk (32–37, 55), and two as having low risk (38, 39). Few studies employed an allocation strategy that included random sequence generation (31–39) or allocation concealment (32–34, 36, 38, 39). Blinding of participants and personnel was impossible for all MHFA evaluations, however, this only resulted in a high risk of bias if study participants could be aware that they were participating in an intervention evaluation and as a result respond to surveys in a systematically different way than a control group. Thus, studies with no control group (9, 10, 40–57) or with a comparable intervention as control (38, 39) were classified as having low risk of bias, while studies with as-usual or waitlist controls were classified as having high risk of bias. Very few studies blinded outcome assessors (32, 36–39). Studies that did not have control groups were again classified as having low risk of bias. Results for incomplete outcome data were mixed and dependent on loss to follow-up rates. The main other source of bias identified was not controlling for participant-level characteristics, such as trainee previous mental health response experience.

Discussion

We identified 31 studies that evaluated the behaviors of MHFA trainees and the mental health of recipients. All of the included studies asked trainees if they used first aid skills in real-life situations. However, few evaluated the helpfulness of their actions or their impacts

on recipient mental health. Only nine studies assessed efficacy in a rigorous manner. Based on these nine studies, there was mixed (positive and neutral) evidence of changes in trainees' use of first aid skills, and no evidence of improvements in the helpfulness of trainees' behaviors or recipient mental health.

Few of the included studies utilized rigorous study designs needed to establish program effect. Although several included pre-and post- training outcomes (9, 31–33, 35–39, 48–59), fewer employed a control group (31–39, 58, 59), randomized participants to treatment (31–39, 58, 59), were adequately powered (31, 33–35, 37, 49), or accounted for participant-level characteristics that might influence first aid behaviors (31–34, 36–39, 46, 47, 49, 55, 57–59), such as profession or prior mental health experience. Furthermore, the majority of outcomes were reported by trainees. While easier to collect, and an important first step, this form of assessment is based on the subjective impression of the trainee and may be susceptible to social desirability and recall biases. Trainee-reports are particularly undesirable for evaluating the impact of MHFA on recipients because they involve making assumptions about recipients' experiences. Some studies included both trainee- and recipient-reports for the same outcomes, which helps address reliability, but does not address the aforementioned biases. Ideally, studies would use standardized surveys or professional assessments to evaluate mental health outcomes. Finally, while follow-up periods varied, no studies measured recipient mental health immediately following trainee behavior. Because MHFA trainees are trained to provide a first-line response to a crisis situation, initial reductions may be more appropriate to measure than medium- and long-term effects. Overall, the risk of bias of included studies was medium to high.

Prior systematic reviews of MHFA evaluations have addressed behavioral outcomes minimally and alongside training outcomes. Systematic reviews and meta-analyses by Hadlaczky, et al. (21) and Maslowski, et al. (24) found moderate improvements in trainees' use of first aid skills, while Morgan, et al. (22) found small improvements. Morgan, et al. additionally considered the quality of behaviors offered, reporting no significant improvements on this measure. Neither Morgan, et al. nor Maslowski, et al. found significant improvements on recipient mental health. Ng, et al.'s 2020 systematic review focused on teen and Youth MHFA (25) and found that both trainings generally resulted in more trainee helping behavior. However, a 2020 systematic review of Youth MHFA for educators by Sanchez, et al. (26) was inconclusive for this measure. Differences in results for trainee use of first aid skills are likely due to a mixture of study inclusion criteria and search date. Hadlaczky, et al., Ng, et al., and Sanchez, et al. did not restrict by study type, and Morgan, et al. and Maslowski, et al. included all controlled trials. Also of note, Maslowski, et al.'s reporting of trainee use of first aid skills included confidence measures, which increased the number of eligible studies used to assess this outcome. The current systematic review only used RCTs measuring actual helping behaviors and their effects on recipients to assess efficacy. Three of the 9 studies we used to conclude efficacy had not been synthesized in previous reviews. Finally, unlike other reviews, our results are solely focused on post-training behavioral outcomes and identify whether outcomes were reported by trainees or recipients, an essential element in program evaluations.

Given that there are limited evaluations of adequate rigor, and findings from these studies are mixed, we conclude that there is insufficient evidence that MHFA achieves the desired impact on the helping behaviors of trainees and the mental health of recipients. MHFA implementers should take particular care when describing the intervention as evidence-based, and be specific about outcomes where evidence does exist, such as improving trainee knowledge, attitudes, and behavioral intent (21–26), and where evidence is insufficient, such as measurably impacting trainee behavior or recipient mental health. Notably, there is some evidence that MHFA trainees who rated themselves as having high intent to help were more likely to actually provide help at follow-up (60–62). Thus, it is possible that training outcomes such as behavioral intent are mediating the relationship between MHFA training and trainee behavior, but this requires further investigation. Future research could seek to isolate the specific training components and mechanisms that affect trainee behavior and recipient mental health to ultimately inform updates to the curricula.

A lack of quality evidence does not necessarily render MHFA an unhelpful intervention – in fact, it has been shown to positively impact trainees' knowledge of mental health issues, attitudes towards mental illness, and intent to help (21–26). Rather, it highlights the gaps in our understanding of how it affects trainee behavior and recipient mental health. More, rigorous evaluations of these outcomes are necessary. Researchers interested in building the evidence base for MHFA can draw on decades of development and evolution in program evaluation. Rigorous designs including MHFA trainee randomization, control groups, and longitudinal follow-up (beyond training pre- and post- designs) are the minimum required to establish the efficacy of MHFA on trainee behavior and recipient mental health outcomes. To address the primary weaknesses in the existing literature – lack of power to detect statistically significant effects and bias induced by a reliance on trainee reports – preparing for substantial loss to follow-up and measuring recipient responses to MHFA must be central to all future study designs. Moreover, future evaluations should choose more dynamic follow-up times that allow adequate time for trainees to encounter a situation requiring first aid actions (22), but also capture the initial, short-term impact of these actions on recipients. To overcome challenges related to data collection and design, study designs that employ pre-and post MHFA training-assessments of trainee and recipient dyad outcomes (such as parents trained in MHFA and their children) (38, 39), can serve as exemplar designs for future studies. To facilitate data collection among potential recipients, studies can first be restricted to smaller populations where recipients can more easily be monitored (e.g. families and schools (33, 38, 39)); then, as programmatic effect is established, surveillance can be expanded to larger populations of potential recipients. Using a validated rubric to observe and rate simulated role-play may also help to address self-reporting biases of trainee behavior (63). There are certainly several challenges associated with evaluating post-training outcomes, and of note, evaluations of the even more ubiquitous physical first aid have been similarly limited (64). However, innovative research designs (33, 38, 39) and tools (63) have begun to address these challenges and should continue to be supported and improved upon. To enable this essential research, it is crucial that MHFA-supporting institutions and funding mechanisms (20) allocate sufficient funds to evaluations of trainee behavior and recipient mental health that meet at least the aforementioned standards of rigor.

The main strengths of this review are its focused scope on trainee behavior and recipient mental health outcomes and conclusions based only on studies that met a standard of adequate rigor. This allowed us to highlight the current state of the evidence for outcomes that are infrequently studied, yet are crucial to understanding MHFA's practical, "real-world" applications. The review is limited by exclusion of non-English studies and studies that were not available online, though there were relatively few of these. Additionally, several of the included studies were underpowered, raising the possibility of Type II error. Although pooling the studies into a meta-analysis would have addressed this, measurements for each outcome were too few and varied to do so in a meaningful way. Lastly, the majority of evaluations were performed in high-income Western countries, and Australia in particular, limiting the generalizability of our findings.

MHFA has been licensed and adapted in 24 countries (6), and will likely continue to expand. Rigorous evaluations should be conducted in every setting where MHFA is performed, if possible, and particularly in low-and-middle-income countries.

As a psychoeducational intervention, MHFA addresses critical barriers to improving community mental health, such as stigma and public education. Furthermore, the rapid proliferation of (5) and funding allocated to (20) MHFA indicates a growing desire to understand and address mental health issues in the United States, and this momentum should not be lost. However, as MHFA trainees are expected and encouraged to provide first-line support to people experiencing mental distress, it is just as, if not more, important to understand how their actions affect those they intend to help.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Highlights

- Mental Health First Aid (MHFA) is a widely promoted course that trains members of the public to recognize and respond to mental health issues in their communities.
- Most of the evidence base is focused on direct training outcomes, and little is known about how MHFA performs outside of the classroom.
- This systematic review found insufficient evidence that MHFA improved the helping behaviors of MHFA trainees or the mental health of aid recipients.
- While MHFA likely has use as a psychoeducational initiative, much more research is needed to understand how it supports the mental health of recipients.

TABLE 1

Cochrane Risk of Bias Ratings from Studies Measuring Trainee Behavior and Recipient Mental Health Outcomes

Study	a	b	c	d	e	f	g	Overall
Armstrong et al., 2020 (48)	High	High	Low	Low	High	Unclear	High	High
Ashoorian et al., 2019 (40)	High	High	Low	Low	High	Unclear	High	High
Banh et al., 2019 (49)	High	High	Low	Low	High	Unclear	High	High
Bond et al., 2020 (50)	High	High	Low	Low	High	Unclear	High	High
Carpini et al., 2020 (41)	High	High	Low	Low	High	Unclear	High	High
Currie, Davidson, 2015 (42)	High	High	Low	High	Unclear	Unclear	High	High
Fisher et al., 2020 (58)	Unclear	Unclear	High	High	High	Unclear	Low	High
Hart, Jorm, Paxton, 2012 (51)	High	High	Low	High	Low	Unclear	High	High
Hart, Jorm, Paxton, Cvetkovski, 2012 (52)	High	High	Low	Low	High	Unclear	High	High
Hart, Mason, et al., 2016 (10)	High	High	Low	Low	High	Unclear	High	High
Hart, Bond, et al., 2019 (53)	High	High	Low	Low	Low	Unclear	High	Medium
Hung et al., 2021 (31)	**Low**	**High**	**High**	**High**	**Low**	**Unclear**	**Low**	**Medium**
Jensen et al., 2016 (32)	**Low**	**Low**	**High**	**Low**	**High**	**Unclear**	**Low**	**Medium-Low**
Jorm, Kitchener, O'Kearney, et al., 2004 (34)	**Low**	**Low**	**High**	**High**	**Unclear**	**Low**	**Low**	**Medium-Low**
Jorm, Kitchener, Fischer, et al., 2010 (33)	**Low**	**Low**	**High**	**Unclear**	**Low**	**Unclear**	**Low**	**Medium-Low**
Jorm, Kitchener, Sawyer, et al., 2010 (35)	**Low**	**High**	**High**	**Unclear**	**Low**	**Low**	**Low**	**Medium-Low**
Kelly et al., 2011 (54)	High	High	Low	Low	High	Unclear	High	High
Kitchener, Jorm, 2002 (9)	High	High	Low	Low	Low	Unclear	High	Medium
Kitchener, Jorm, 2004 (36)	**Low**	**Low**	**High**	**Low**	**High**	**Low**	**Low**	**Medium-Low**
Mendenhall, et al., 2013 (43)	High	High	Low	Low	High	Unclear	High	High
Morgan et al., 2019 (39)	**Low**	**Low**	**Low**	**Low**	**High**	**Low**	**Low**	**Low**
Morgan et al., 2020 (38)	**Low**	**Low**	**Low**	**Low**	**High**	**Low**	**Low**	**Low**
Rodgers et al., 2019 (44)	High	High	Low	Low	High	Unclear	High	High
Svensson, Hansson, 2014 (37)	**Low**	**Unclear**	**High**	**Low**	**Low**	**Unclear**	**Low**	**Medium-Low**
Svensson et al., 2015 (45)	High	High	Low	Low	Unclear	Unclear	High	Medium-High
Svensson, Hansson, 2017 (55)	High	High	Low	Low	Low	Unclear	Low	Medium-Low
Thombs et al., 2015 (59)	Unclear	Unclear	High	Unclear	Low	Unclear	Low	Medium

Study	a	b	c	d	e	f	g	Overall
Uribe Guajardo et al., 2018 (57)	High	High	Low	Low	High	Unclear	Unclear	Medium-High
Uribe Guajardo et al., 2019 (56)	High	High	Low	Low	Low	Unclear	High	Medium
Witry, Fadare, Pudlo, 2020 (46)	High	High	Low	Low	High	Unclear	Low	Medium
Witry, Karamese, Pudlo, 2020 (47)	High	High	Low	Low	High	Unclear	Low	Medium

a=random sequence generation; b=allocation concealment; c=blinding of participants and personnel; d=blinding of outcome assessment; e=incomplete outcome data; f=selective reporting; g=other sources of bias; bolded studies met minimum rigor criteria (compared pre- and post-training outcomes, had control groups, and evaluated a form of MHFA that explicitly taught the ALGEE or Look Ask Listen Help Your Friend action plan).