Exploring Mental Health Literacy Interventions: A Scoping Review and Future Directions

Alim Panggih Raharjo, Mudrika Munawaroh
Faculty of Psychology, Diponegoro University
Semarang, Indonesia
alimpanggih62@gmail.com

Abstract

Mental health issues are increasingly considered necessary by society. However, if it is not balanced with mental health literacy, individuals with mental disorders will find it difficult to heal and the stigma will be challenging to reduce. An intervention must be used to improve mental health literacy in the community. This study aims to discover mental health literacy interventions in various settings and recommendations for further research. This study was conducted using the scooping review method using the PRISMA-ScR guide. Ten studies were found from the SCOPUS, ScienceDirect, and SpringerLink databases. The results of the analysis found that various mental health literacy interventions were proven effective and could be implemented in school, community, worker, and family settings. Recommendations for further research are discussed in this study.

Keywords: Interventions, mental health literacy, programs, literature review.

Received 14 August 2024/Revised 21 October 2024/Accepted 28 February 2025

Introduction

Mental health issues are becoming an issue that is increasingly gaining global attention along with increasing awareness of the impact caused by low mental health. In 2019, the World Health Organization (WHO) mentioned that 970 million people in the world have coexisted with mental disorders, where depression and anxiety are the most common (WHO, n.d.). Data shows that mental health problems are the most worrying health problems and even ranked first after cancer, stress, and obesity (Muhamad, 2023)

Based on the data, one in eight people live with mental health conditions, and 71% of people with mental health conditions do not receive mental health services (WHO, 2022). Furthermore, 970 million people live with mental disorders (52.4% females; 47.6% males), and the most common mental disorders are anxiety disorders (31%), followed by depressive disorders (28.9%) and idiopathic (11.1%; WHO, 2022). Mental well-being trends on 2019-2023, showed little change (increased) in distressed or struggling (GlobalMindProject, 2023). In both high and low-income countries, mental disorders are common (WHO, 2022), but in high-income countries such as England and Australia had low levels of average Mental Health Quotient (MHQ) compared to the Dominican Republic, Sri Lanka, and Tanzania (GlobalMindProject, 2023).

Individuals with mental disorders are often reluctant to seek help due to the negative stigma attached to society, leading to fear of judgment and discrimination (Carrotte et al., 2023). In addition, low mental health literacy is also a crucial barrier factor (Venkataraman et al., 2019). Low mental health literacy results in a lack of knowledge and understanding of the symptoms, causes, and treatment options available, making things worse and preventing individuals from

taking the first step in seeking help (Henderson et al., 2013). Studies have shown that low awareness of the importance of mental health, combined with intense social stigma, is a significant barrier for individuals with mental disorders to get the care they need. These barriers significantly reduce the individual's chances of recovering and achieving optimal mental well-being (Venkataraman et al., 2019).

Mental health literacy is defined as knowledge of mental disorders or illnesses that can increase awareness, preventive actions, and self-management of mental disorders (Jorm et al., 1997). Through mental health literacy, individuals can recognize the signs of mental disorders, reduce inherent stigma, and encourage behavior to seek mental health help (Jorm, 2000).

Various interventions to improve mental health literacy have been developed in many regions and settings, given that the topic of mental health literacy is becoming a "hot topic" (Sampaio et al., 2022). Literature studies on mental health literacy interventions have been conducted, some focusing only on Latino Adults in the United States (Pérez-Flores & Cabassa, 2021), adolescents (Mansfield et al., 2020; Yulianti & Surjaningrum, 2021), teacher (Johnson et al., 2023; Yulianti et al., 2021) and students (Reis et al., 2022), child (Bale et al., 2018), or mental health literacy in general (Kutcher et al., 2016; Zabaleta González et al., 2022).

This study was conducted to fill research gaps regarding various types of interventions to improve mental health literacy across diverse settings and demographics (prior studies focused on specific populations i.e., Latino adults, adolescents, teachers, and children). The aims of this study are to explain which interventions have been effective in increasing mental health literacy and to provide a comparative analysis of the effectiveness of various interventions in different contexts. Thus, this study has research questions, a) What are the various effective interventions to improve mental health literacy in various settings? Moreover, b) What are the recommendations for further research?

Method

Search and Data Sources

This study used sources from journal articles. The databases used in this study include SCOPUS, ScienceDirect, and SpringerLink. The data search used the Boolean Formula, namely ["mental health literacy" AND ("intervention" OR "program")].

Inclusion Criteria

The criteria for this research are: 1) Written in English, 2) Open-access, 3) Research that used experimental methods, 4) Published in the last five years (2019-2024), 5) Document type limited to the article, and 6) Subject are limited to Psychology.

Quality Assessment of Articles

The stages in selecting the source of the article in this study consist of various stages by the PRISMA-ScR guidelines (Page et al., 2021). The first stage (identification) is for the researcher to search for topics, determine Boolean formulas, and select the database used. Then, the screening stage of the researcher enters inclusion criteria and removes duplicate articles. Then, the researcher chose articles that were not full-text, such as only abstract collections, brief reports, and editorials (n = 3). Next, the researcher weeded out articles that still did not meet the inclusion criteria and found 10 articles to be analyzed.

Data Extraction

All researchers (two raters) extracted data from the databases used. The screening data uses inclusion criteria and looks at the title and abstract of the article, which follows the research objectives. Disagreements or opinions on raters are resolved by discussion so that they can produce articles that will then be analyzed. The chart of PRISMA-ScR stages is provided in Figure 1.

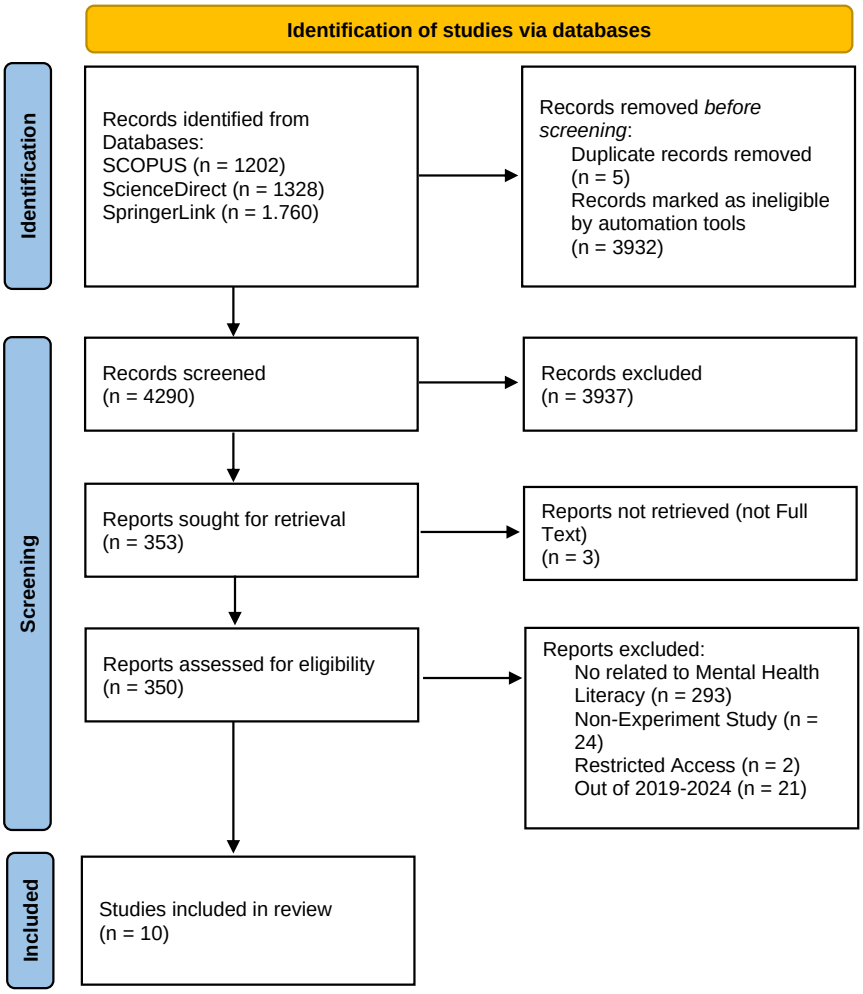

Figure 1. Flowchart of PRISMA-ScR

Result

The results of the database extraction found ten articles that were based on the inclusion criteria and research aims. From the results, it was found that studies on mental health literacy interventions have been conducted in various regions, such as the United States (Ivanova et al., 2024; Montañez et al., 2023), United Kingdom (Martinez et al., 2024), Portugal (Meilsmeidth et al., 2024), Asia such as Vietnam and Cambodia (Nguyen et al., 2020), and most frequently performed in Australia (Bowyer et al., 2023; Hurley et al., 2021; O'Connor et al., 2023, 2024; Patafio et al., 2021). It was found that four settings that researchers have utilized to conduct mental health literacy interventions in the past five years are school settings (Bowyer et al., 2023; Meilsmeidth et al., 2024; Montañez et al., 2023; Nguyen et al., 2020), community setting (sports club; Hurley et al., 2021; O'Connor et al., 2023, 2024; Patafio et al., 2021), work setting/worker (Martinez et al., 2024), and family settings (Ivanova et al., 2024) (**see Table 1**).

Table 1.
Review Results

Identity	Program	Country	Participants	Findings	Limitations
			School Setting		
Meilsmeidth et al. (2024)	Bicho de 7 Cabeças	Portugal	Young Students (n=504)	The program has proven to be effective in increasing MHL and reducing stigma on students and is suitable for application in schools	• The program is short-term and has no follow-up intervention. • The evaluation was performed after the intervention, so it is not known that the results of the program can last for a long time • Not all research instruments showed significant results • Potential bias such as lack of information about mental illness experiences or contact with people with mental illness
Montañez et al. (2023)	Turn 2 Us	United States	School Staff (n=135)	Improving MHL, self-efficacy, and lowering stigma among school staff, to facilitate the ability to identify and support students' mental health needs	• Results cannot be generalized to different schools • Not finding out ethnicity or cultural experience data, number of direct consultations, and student outcomes
Nguyen et al. (2020)	Mental Health & High School Curriculum Guide (The Guide)	Vietnam and Cambodia	Teachers (n = 80) and Students (n = 2539) in Vietnam and Teachers (n = 67) and Students (n = 275) in Cambodia	These results suggest that the MHL program was effective in improving mental health knowledge and reducing stigma attitudes among both teachers and students in Vietnam and Cambodia.	• Baseline assessment timing that can affect participant expectations and outcomes • There is no comprehensive instrument validation • The period between the pretest and the posttest is relatively short (8 weeks) • Interventions in Cambodia are limited to a sample of schools and cannot be generalized • Did not assess behavioral outcomes (e.g. self-care or help-seeking)
Bowyer et al. (2023)	MHLETP: The Mental Health Literacy for Educators	Australia	Teaching Staff (n=81)	The program has proven to be effective in increasing knowledge related to mental health and self-confidence so that teachers can recognize and support students who	• The study is at risk of ceiling effects, which weaken the reliability and validity of the satisfaction • The sample is not enough to be representative or generalizable to the population

Identity	Program	Country	Participants	Findings	Limitations
	Training Program			are experiencing difficulties or reduce mental health risks	• Study only focused on outputs in measuring teacher knowledge and confidence after training • The study lacks a control group, which can limit rigor
			Community (Sports) Setting		
Patafio et al., (2021)	Sport-Based Intervention	Australia	Youth of Football Player (n=330)	The program can improve MHL and *help-seeking intentions* in the intervention group, making it an easy method to improve mental health in young people	• Effects between the intervention and control groups are lacking due to ethical reasons and demographic differences • It did not compare the essential aspects of the intervention, namely the Psychoeducational Session and the Player Wellbeing Officers. • The follow-up period (2-8 weeks) was not enough to see the effectiveness of help-seeking behaviors
O'Connor et al. (2024)	TYF: Tackle Your Feelings	Australia	Adult of Football Player (n = 155)	Programs can improve MHL through *confidence to support, knowledge of resources to support mental health,* and *help-seeking range,* as well as can improve *supportive club environment* and *content knowledge programs*	• The lack of sample size makes this study impossible to generalize • Measurement does not measure knowledge objectively (only perceptions) • There is a bias towards the CRT test of confounding effects, such as other community-based initiatives being run within selected communities.
O'Connor et al. (2023)	TYF: Tackle Your Feelings	Australia	Coach or Sports Leader (n = 265)	TYF can improve MHL in coaches in the sports community through *confidence to support, knowledge of resources to support mental health, general help-seeking,* and *destigmatizing*	• The study was conducted during a pandemic that could affect the implementation of the • Participants could not be randomized; they happened at the club level and have potential implications for type I error • Confounding effects creeping into the design (e.g. local initiative or local media coverage) • Withdrawal of a club that has the potential to influence the design of the intervention
Hurley et al., (2021)	Mental Health Literacy	Australia	Athlete's Parents (n=540)	Parents are more able to seek formal help and increase their knowledge and confidence to help others with mental	• Short follow-up period (one-month post-intervention)

Identity	Program	Country	Participants	Findings	Limitations
	Intervention for Parents			health problems, reduce psychological distress, and receive support from other parents at sports clubs.	• Low retention rate (particularly in the control group) • The sample was not fully representative of parents of athletes
			Worker Setting		
(Martinez et al., 2024)	Tara, Sweep Tayo! (C'mon, Let's Talk!)	United Kingdom	Filipino Female Migrant Domestic Workers (n=21)	The program is acceptable, appropriate, and suitable for use on the sample. Effective programs increase MHL and the tendency to seek help	• Statistical power is limited to establish significant differences due to the small sample size, lack of control group • Self-report questionnaires can affect biases in reports and difficulties in answering an online assessment • COVID-19 lockdown may impact on retention and understanding of information of participants • The study only had three sessions of two-hour duration • Not all participants are adept at using remote learning tools, which can affect their frustration when taking online assessments
			Family Setting		
Ivanova et al. (2024)	FAFI: Family Assessment and Feedback Intervention	United States	Children and Families (n=81)	The program was associated with a significant increase in parental MHL, but an increase in parental attitudinal engagement with health supports and services closely approached statistical significance while controlling for children's age gender, and socioeconomic	• The effects of FAFI were measured after the intervention, so it was not possible to measure the effects over time • Not formally assess intervention fidelity and staff performance during the FAFI • Lack of data about fidelity and performance for staff of different backgrounds

Discussion

Mental Health Literacy Interventions in School Setting

Study Meilsmeidth et al. (2024) about the Bicho de 7 Cabeças program showed that the program was effective in improving students' mental health literacy ($M_{Experimental}$ = 42.16; $M_{Control}$ = 39.24; p <.001; CI [1.39; 4.45]) and reduced negative stigma related to mental health ($M_{Experimental}$ = 16.55; $M_{Control}$ = 15.67; p < .003; CI [0.29; 1.46]) in the experimental group and control group. Although the Meilsmeidth et al. (2024) study was pretty successful, the statistical changes found were relatively small compared to other similar studies (O'Reilly et al., 2018). In the study Montañez et al. (2023), there was an increase in the dimensions of mental health literacy after being given the Turn 2 Us program, such as the knowledge dimension increased from 65.8% to 75.6% (β = 10.88; p <.01; $M_{Pre\text{-}test}$ = 65.8; $M_{post\text{-}test}$ = 75.6). The informed dimension (β = .50; p <.01; $M_{Pre\text{-}test}$ = .91; $M_{post\text{-}test}$ = 1.39) and self-efficacy (β = .26; p <.01; $M_{Pre\text{-}test}$ = 1.1; $M_{post\text{-}test}$ = 1.2) also increased, teachers were more confident in helping students with mental disorders (18% at baseline, to 29% at post-intervention). The dimension of stigma decreased in the intervention group (β = -.16; p <.01; $M_{Pre\text{-}test}$ = .62; $M_{post\text{-}test}$ = .47). However, in the attitude dimension there was no significant change (β = .09; p >.05; $M_{Pre\text{-}test}$ = .45; $M_{post\text{-}test}$ = 4.5).

School-based mental health literacy programs such as the "Mental Health & High School Curriculum Guide" or “The Guide” which has been implemented in Vietnam and Cambodia by Nguyen et al. (2020), prove that in teachers in Vietnam, the program is proven to reduce stigma in the intervention group even though it is not so significant (M_{pre} = 1.08; M_{post} = 1.05; p >.05). However, it had a significant effect on the increase in recognition (M_{pre} = 2.51; M_{post} = 2.89; p <.001), help-seeking self-efficacy (M_{pre} = 2.78; M_{post} = 3.19; p <.01), knowledge (M_{pre} = .46; M_{post} = .52; p < .0001), willingness to interact (M_{pre} = 1.79; M_{post} = 2.71; p <.0001), and was proven to reduce dangerousness (M_{pre} = 2.85; M_{post} = 1.82; p < .0001), poor skills (M_{pre} = 2.04; M_{post} = 1.43; p <.01), and incurable (M_{pre} = 2.60; Mpost = 2.25; p <.05). The program can also reduce the stigma that exists in students (M_{pre} = 1.74; Mpost = 1.65; p <.0001). In a study conducted in Cambodia, the program was proven only to increase willingness to interact (M_{pre} = 2.00; M_{post} = 2.45; p < .0001) and knowledge (M_{pre} = .57; M_{post} = .61; p <.01) to teachers. Decreased dangerousness (M_{pre} = 2.81; M_{post} = 2.08; p < .001), poor skills (M_{pre} = 1.89; M_{post} = 1.54; p <.05) on teachers and stigma (M_{pre} = 4.05; M_{post} = 3.39; p <.001) on students.

In school settings, mental health literacy programs have been proven to increase teachers' and students' awareness of mental health, reduce stigma, and teachers' confidence in helping to overcome mental health problems in schools (Bowyer et al., 2023; Meilsmeidth et al., 2024; Montañez et al., 2023; A. J. Nguyen et al., 2020). Students and teachers could become wealthy, improve achievements, prevent mental disorders, and provide a healthier school environment. The study also suggests the importance of implementing mental health literacy programs in schools to realize a healthy lifestyle in children and adolescents (Campos-Moreira et al., 2020; Haliburn, 2020).

Mental Health Literacy Interventions in Community Setting

Mental health literacy programs given to the community (sports) can increase mental health literacy, reduce stigma, and increase help-seeking intentions both in members (players) and leaders (or coaches) and even athletes' parents. Sport-based mental health literacy intervention programs that have been researched by Patafio et al. (2021) gave results that this program can improve mental health literacy (F = 19.17; p <.001; d =.061), help-seeking intentions (F = 13.22; p = .001; d =.045), and informal help-seeking intentions (F = 19.12; p <.001; d = .050) on youth

football players. In addition, the program has been proven to give rise to sport-related help-seeking intentions (F = 8.26; p = .01; d = .032). Thus, players or young people can be more courageous in seeking help and understanding their mental health and that of others.

Two studies using the "Tackle Your Feelings" (TYF) program to improve mental health literacy in the Australian sports community were conducted by O'Connor et al. (2023, 2024) has also been proven to be effective. The first study was conducted on sports leaders or coaches from 25 football communities (n = 265). The TYF program has been proven to increase self-efficacy (M_{pre} = 37.39; M_{post} = 42.80; F = 22.62; p <.001; η2 = .081), support resources or knowledge (M_{pre} = 15.79; M_{post} = 17.74; F = 27.38; p <.001; η2 =.096), help-seeking intentions (M_{pre} = 31.70; M_{post} = 42.80; F = 34.14; p <.001; η2 = .104), and stigmatizing attitudes tied to social distance (M_{pre} = 17.08; M_{post} = 17.82; F = 16.80; p <.001; η2 = .061). Furthermore, at the follow-up stage, only in the aspect of support resources or knowledge from sports leaders or coaches experienced a significant increase (p = .05).

The second study by O'Connor et al. (2024) was conducted on youth football players from four different communities (n = 155). The TYF program has been proven to improve almost all aspects tested, such as confidence to support (F = 71.71; p <.001; d = .55; $\Delta M_{post-pre}$ = 1.11), knowledge of resources (F = 12.03; p < .001; d = .27; $\Delta M_{post-pre}$ = .36), help-seeking range (F = 1129.81; p <.001; d = .23; $\Delta M_{post-pre}$ = .41), supportive club environment (F = 1123.24; p <.001; d = .17; $\Delta M_{post-pre}$ = .38), and content knowledge programs (F = 212.58; p <.001; d = 1.02; $\Delta M_{post-pre}$ = 7.32). Further analysis of participants involved in the intervention showed that improvements persisted for up to four months after the intervention. Participating club members are delighted with the way the program is delivered, structured, and content. As a result, the program seems to assist club members in acquiring knowledge, confidence, and resources that support mental health and enable them to handle mental health issues well.

A study by Hurley et al. (2021) involved athletes' parents in the sports community as many as 540 (males = 219; females = 321). These findings suggest that although the intervention did not result in improvements in all aspects of mental health literacy, it had a positive effect on specific components and outcomes for parents in community sports clubs. The study stated that there was a significant change in the aspects of confidence and knowledge (M_{pre} = 8.06; M_{post} = 8.63; p < .001; η2 = .034), personal formal help-seeking (M_{pre} = 4.46; M_{post} = 4.99; p <.05; η2 = .016), parent support (M_{pre} = 6.93; M_{post} = 7.06; p <.05; η2 = .013), and reduced psychological distress (M_{pre} = 11.65; M_{post} = 11.17; p <.05; η2 = .015).

Mental health literacy will help to improve the integration of psychological support between athletes, coaches/leaders, and parents (Hurley et al., 2021; O'Connor et al., 2023, 2024; Patafio et al., 2021). The clubs may prosper and improve performance because athletes and coaches can prevent mental health issues. In addition, a more positive club environment can also be created without negative stigma.

Mental Health Literacy Interventions in Worker Setting

Mental health literacy programs in setting workers are still limited. In the database, only one article was found that conducted research on this subject. The program "Tara, Usap Tayo" (in the Philippines) or "C'mon, Let's Talk!" is a program implemented by Martinez et al. (2024) for Filipino female migrant domestic workers in the United Kingdom. The program is designed by combining content materials from the WHO Mental Health Gap Action Program (mhGAP),

WHO Problem Management Plus (PM+), and Adult Improving Access to Psychological Therapies (IAPT) that have been modified and translated into Filipino. This program is carried out in three stages, pretest (T1), posttest (T2), and follow-up (T3), and is supplemented by a focus group discussion (FGD) to get feedback from participants.

This program was proven to be able to improve participants' mental health literacy (F = 14,524; p = .000), even when follow-up was carried out, mental health literacy was still higher than during the pretest (M_{T1} = 81.19; M_{T2} = 87.62; M_{T3} = 85.10). From the results of the FGD, participants said that their understanding of the difference between mental health and mental illness, the signs and symptoms, and risk factors associated with mental disorders increased. However, this program has not been proven effective in increasing help-seeking attitudes (F = .006; p = .994; M_{T1} = 68.62; M_{T2} = 68.71; M_{T3} = 68.43). However, when viewed from a subscale, there was a significant increase in help-seeking propensity (willingness and ability to seek professional services) (F = 4,239; p = .021).

Maintaining a psychologically healthy and safe workforce is not only a moral obligation but also a proven competitive advantage for the company (Gunther et al., 2019). Healthy workforces tend to have lower healthcare cost (Fabius et al., 2018) and improve the productivity (de Oliveira et al., 2023) that contribute to company performance. Health (including mental health) is an investment and asset for the company, making it a corporate social responsibility (Sørensen & Brand, 2011). A company that is proactive in fostering the workforce's well-being through comprehensive health and safety programs tends to have better reputation, employee loyalty, and consumer trust and be able to compete effectively in business (Sørensen & Brand, 2011). Thus, this makes mental health literacy not only a social aspect but also a potential business asset.

Mental Health Literacy Interventions in Family Setting

Family Assessment and Feedback Intervention (FAFI) has several differences compared to other interventions, expanding the focus of assessment to include not only the targeted child but also parents and the family environment. Directly and thoroughly address the emotional and behavioral problems of parents and their competence. It covers a wide range of strengths and challenges for both parents and children and emphasizes mental health literacy. These aspects make FAFI effective in increasing family emotional engagement and help-seeking behavior (Ivanova et al., 2024).

FAFI was conducted by Ivanova et al. (2024) in the United States on 81 children and families from various racial/ethnic backgrounds (African, Arab/Middle Eastern, Asian, Hispanic, White, and Mixed) and different socioeconomics statuses. Based on the results of the study, it was found that parental mental health literacy increased from baseline and at 4 weeks after baseline ($M_{baseline}$ = 92.50; M_{post} = 97.22;). Parental health engagement also increased ($M_{baseline}$ = 156.85; M_{post} = 160.14). FAFI has been shown to significantly improve parental mental health literacy and also increase parental engagement with health support and services. However, this increase almost reached statistical significance (p = 0.052), with the control of children's age and gender as well as family socioeconomic status. FAFI is a short intervention that various types of practitioners can carry out in various settings.

Parents need to improve their mental health literacy to understand their essential role in providing appropriate support and information to children. Adequate knowledge of the causes, symptoms and treatments of mental health problems allows parents to be more sensitive in

recognizing signs of distress in children earlier (Kusaka et al., 2022). Parents need to have good health literacy to help their children improve their mental health literacy. However, studies show that many parents still lack an adequate awareness of mental health, which may constrain their ability to identify and treat mental health problems in children (Kusaka et al., 2022). This is consistent with the lack of mental health literacy levels in adolescents (Sampaio et al., 2022).

Future Directions

Based on the results, two types of intervention are used in mental health intervention programs: psychoeducation (Hurley et al., 2021; Martinez et al., 2024; Patafio et al., 2021) and training programs (Bowyer et al., 2023; Ivanova et al., 2024; Meilsmeidth et al., 2024; Montañez et al., 2023; A. J. Nguyen et al., 2020; O'Connor et al., 2023, 2024). The training programs are more extensively used in mental health literacy because they affect targeted behaviour or construct. This statement is supported by the study that declared training programs (i.e. social skills training) are more effective in reducing and maintaining negative attitude (Kim & Mueser, 2011). Meanwhile, the psychoeducation program is less effective in providing long-term effects to intervening in the behaviour or construct (Tirla et al., 2024). However, it would be better to combine both forms of intervention to increase mental health literacy.

According to Table 2, in school settings, mental health literacy interventions such as Bicho de 7 Cabeças (Meilsmeidth et al., 2024) It is necessary to extend the frequency of the program by adding follow-up sessions. It is even recommended that this program be carried out until the students who are given the intervention can graduate from school. In addition, information about the mental health history of participants can be obtained for further research. Different in the Turn 2 Us program (Montañez et al., 2023), further research, should also find out about ethnicity or cultural experience, number of direct consultations, and student outcomes in the program implemented. Unfortunately, the program cannot be generalized to different schools, so researchers can then provide interventions according to the existing school setting. It is also recommended that the program be repeated over a more extended period to see its effectiveness.

Similar to the limitations of the Turn 2 Us program, in the "The Guide" program (Mental Health & High School Curriculum Guide), the period needs to be extended between the pretest and the post-test, and the results cannot be generalized to other schools. Nguyen et al. (2020) It is recommended to conduct assessments on behavioral outcomes (e.g., self-care or help-seeking), validate instruments, and pay attention to baseline assessment timing. In the MHLETP program, it is recommended that future research use a larger sample to be representative of the population and increase the number of control groups. In addition, it does not only focus on measuring teacher knowledge and confidence (Bowyer et al., 2023).

In a community setting (sports), mental health literacy programs such as TYF are given to coaches or team leaders (O'Connor et al., 2023) During the pandemic and the withdrawal of the club, it can affect the results obtained. Further studies can be carried out as at present (post-pandemic COVID-19) and randomized at the participant level to avoid type I errors as well as paying attention to confounding effects (e.g. local initiatives or local media coverage) that can affect the program. Next, O'Connor et al. (2024) TYF on a football player. Although it has succeeded in improving mental health literacy, it needs to be improved in the future, such as by increasing the sample size and implementing it in other communities so that the results are more representative.

It is measuring knowledge objectively by assessing the knowledge of participants, not just perceptions.

This is in contrast to the sport-based mental health literacy intervention by Patafio et al. (2021), which suggested an increase in the period of follow-up sessions (> 2-8 weeks) to see the effectiveness of the program in the long term. In this program, although it is said to be successful, the effect between the intervention group and the control group is still lacking, which can be due to ethical reasons for research and demographic differences. So in the following research, it is essential to pay attention to these two things. In addition, it is necessary to compare the aspects of psychoeducational sessions and player wellbeing officers. In line with this study, the research of Hurley et al. (2021) that conducts a program for adolescent parents (athletes) needs to increase the duration of the follow-up stage (> one month) and increase the sample size.

In the worker setting, the "Tara, Usap Tayo!" program requires a larger sample size due to the lack of statistical power from the results obtained, as well as increasing the control group (Martinez et al., 2024). In addition, it can also increase the number of sessions (4-5 sessions) by reducing the duration (less than two hours). This research was conducted during the pandemic so that it could affect the results, and not all participants could adapt to technological changes during the session. In the future, research can be carried out outside the pandemic period and directly in the field. Face-to-face interventions on mental health literacy are more effective (Yeo et al., 2024).

In a family setting, the FAFI program (Ivanova et al., 2024) should add a follow-up session to see the effectiveness of the program over a more extended period and not give the post-test immediately after the intervention. FAFI engages staff to help implement programs tailored to different demographic backgrounds. In the following study, an assessment of intervention fidelity and staff performance can be carried out on the effect of FAFI.

The limitation of this study is that it is not location (country) or culture-specific. This will make the results of the review not generalizable or comparable due to differences in results as a consequence of culture and external factors that can threaten the findings of the studies. Secondly, the type of intervention in the study used two different approaches (psychoeducation and training); it is not possible to generalize the results between them. Hopefully, in the future, the study can use one of the approaches in order to provide relevant results.

Conclusion

Based on the results of the study, it can be concluded that programs related to mental health literacy in various settings were found to be effective in increasing understanding, knowledge, and awareness of mental health. Although they have proven effective, each study has limitations that can be corrected in subsequent studies. This study has recommendations for the future, conducting a study with a meta-analysis method to see the magnitude of the effect of the existing mental health literacy program. In addition, it can add various databases that have not been used in this study, such as PubMed, ProQuest, Taylor & Francis Online, Wiley, Google Scholar, and Garuda (to look for Indonesian studies). Implication recommendations for future research is to combine the types of intervention (psychoeducation and training) and use a face-to-face approach for better results.

Acknowledgment
The authors would like to thank the parents and lecturers.

Conflict of Interest
The researchers declare that this paper has no conflicts of interest.

Author Contribution
All authors have contributed equally to the study's conceptualization, interpreting data, reviewing, and editing the manuscript.

Data Availability
Data can be provided upon request to the author.

Declarations Ethical Statement
The study followed the guidelines of the Declaration of Helsinki.

Informed Consent Statement
Informed consent was obtained from all persons involved in the study.

References

Bale, J., Grové, C., & Costello, S. (2018). A narrative literature review of child-focused mental health literacy attributes and scales. *Mental Health & Prevention, 12*, 26-35. https://doi.org/10.1016/j.mhp.2018.09.003

Bowyer, M., Fein, E. C., & Krishnamoorthy, G. (2023). Teacher Mental Health Literacy and Child Development in Australian Primary Schools: A Program Evaluation. *Education Sciences, 13*(4), 329. https://doi.org/10.3390/educsci13040329

Campos-Moreira, L. D., Cummings, M. I., Grumbach, G., Williams, H. E., & Hooks, K. (2020). Making a Case for Culturally Humble Leadership Practices through a Culturally Responsive Leadership Framework. *Human Service Organizations Management, Leadership and Governance, 44*(5), 407-414. https://doi.org/10.1080/23303131.2020.1822974

Carrotte, E. R., Blanchard, M., Groot, C., Hopgood, F., & Phillips, L. (2023). Podcasts, mental health, and stigma: Exploring motivations, behaviors, and attitudes among listeners. *Communication Studies, 74*(3), 200-216. https://doi.org/10.1080/10510974.2023.2196433

de Oliveira, C., Saka, M., Bone, L., & Jacobs, R. (2023). The role of mental health on workplace productivity: A critical review of the literature. *Applied Health Economics and Health Policy, 21*(2), 167-193. https://doi.org/10.1007/s40258-022-00761-w

Fabius, R., Frazee, S. G., Thayer, D., Kirshenbaum, D., & Reynolds, J. (2018). The correlation of a corporate culture of health assessment score and health care cost trend. *Journal of Occupational & Environmental Medicine, 60*(6), 507-514. https://doi.org/10.1097/JOM.0000000000001305

Global Mind Project. (2023). *The mental state of the world in 2023: A perspective on internet-enabled populations.* https://mentalstateoftheworld.report/

Gunther, C. E., Peddicord, V., Kozlowski, J., Li, Y., Menture, D., Fabius, R., Frazee, S. G., & Nigro, P. J. (2019). Building a culture of health and well-being at Merck. *Population Health Management, 22*(5), 449-456. https://doi.org/10.1089/pop.2018.0116

Haliburn, J. (2020). Mental health literacy must improve. *Australian & New Zealand Journal of Psychiatry, 54*(8), 844-845. https://doi.org/10.1177/0004867420931153

Henderson, C., Evans-Lacko, S., & Thornicroft, G. (2013). Mental illness stigma, help seeking, and public health programs. *American Journal of Public Health, 103*(5), 777-780. https://doi.org/10.2105/AJPH.2012.301056

Hurley, D., Allen, M. S., Swann, C., & Vella, S. A. (2021). a Matched control trial of a mental health literacy intervention for parents in community sports clubs. *Child Psychiatry & Human Development, 52*(1), 141-153. https://doi.org/10.1007/s10578-020-00998-3

Ivanova, M. Y., Hall, A., Weinberger, S., Buckingham, S. L., Copeland, W. E., Crockett, P., Dainer-Best, J., D'Alberto, C., Dewey, L., Foret, D., Galano, M., Goodrich, L., Holly, L., Lane, N. E., Leahy, M., Lerner, M., Marsh, J., McGinnis, E. W., Paiva-Salisbury, M., … Hudziak, J. J. (2024). A Pilot randomized controlled trial of the family assessment and feedback intervention (FAFI): Effects on mental health literacy and attitudinal engagement with health supports and services. *Child Psychiatry & Human Development*. https://doi.org/10.1007/s10578-024-01707-0

Johnson, C. L., Gross, M. A., Jorm, A. F., & Hart, L. M. (2023). Mental health literacy for supporting children: a systematic review of teacher and parent/carer knowledge and recognition of mental health problems in childhood. *Clinical Child and Family Psychology Review, 26*(2), 569-591. https://doi.org/10.1007/s10567-023-00426-7

Jorm, A. F. (2000). Mental health literacy. *British Journal of Psychiatry, 177*(5), 396-401. https://doi.org/10.1192/bjp.177.5.396

Jorm, A. F., Korten, A. E., Jacomb, P. A., Christensen, H., Rodgers, B., & Pollitt, P. (1997). "Mental health literacy": a survey of the public's ability to recognise mental disorders and their beliefs about the effectiveness of treatment. *Medical Journal of Australia, 166*(4), 182-186. https://doi.org/10.5694/j.1326-5377.1997.tb140071.x

Kim, C., & Mueser, K. T. (2011). The Effects of social skills training vs. psychoeducation on negative attitudes of mothers of persons with schizophrenia: A pilot study. *Psychiatry Investigation, 8*(2), 107. https://doi.org/10.4306/pi.2011.8.2.107

Kusaka, S., Yamaguchi, S., Foo, J. C., Togo, F., & Sasaki, T. (2022). Mental health literacy programs for parents of adolescents: A systematic review. *Frontiers in Psychiatry, 13*. https://doi.org/10.3389/fpsyt.2022.816508

Kutcher, S., Wei, Y., & Coniglio, C. (2016). Mental health literacy. *The Canadian Journal of Psychiatry, 61*(3), 154-158. https://doi.org/10.1177/0706743715616609

Mansfield, R., Patalay, P., & Humphrey, N. (2020). A systematic literature review of existing conceptualisation and measurement of mental health literacy in adolescent research: current challenges and inconsistencies. *BMC Public Health, 20*(1), 607. https://doi.org/10.1186/s12889-020-08734-1

Martinez, A. B., Lau, J. Y. F., Morillo, H. M., & Brown, J. S. L. (2024). 'C'mon, let's talk: a pilot study of mental health literacy program for Filipino migrant domestic workers in the United Kingdom. *Social Psychiatry and Psychiatric Epidemiology, 59*(2), 385-401. https://doi.org/10.1007/s00127-022-02405-9

Meilsmeidth, G., Trigueiro, M. J., Simões-Silva, V., Simões de Almeida, R., Portugal, P., Gomes, P. V., de Sousa, S., Campos, F., Monteiro, P., Soutelo, A. P., & Marques, A. (2024). Assessing the efficacy of the 'Bicho De 7 Cabeças' B-learning school-based program in enhancing mental health literacy and reducing stigma. *BMC Psychology, 12*(1), 93. https://doi.org/10.1186/s40359-024-01591-2

Montañez, E., Finkel, M. A., Flanagan, J., Haley, C., Verzani, Z., & Berger-Jenkins, E. (2023). Turn 2 Us: Supporting mental health literacy of school personnel in majority latinx, urban

elementary schools. *School Mental Health, 15*(4), 1102-1112. https://doi.org/10.1007/s12310-023-09605-x

Muhamad, N. (2023). Kesehatan mental, masalah kesehatan yang paling dikhawatirkan warga dunia 2023. Databoks. https://databoks.katadata.co.id/datapublish/2023/10/05/kesehatan-mental-masalah-kesehatan-yang-paling-dikhawatirkan-warga-dunia-2023

Nguyen, A. J., Dang, H.-M., Bui, D., Phoeun, B., & Weiss, B. (2020). Experimental evaluation of a school-based mental health literacy program in two southeast asian nations. *School Mental Health, 12(*4), 716-731. https://doi.org/10.1007/s12310-020-09379-6

Nguyen, D. T. N., Teo, S. T. T., Halvorsen, B., & Staples, W. (2020). Leader humility and knowledge sharing intention: a Serial mediation model. *Frontiers in Psychology, 11*. https://doi.org/10.3389/fpsyg.2020.560704

O'Connor, J., Grove, C., Jeanes, R., Lambert, K., & Bevan, N. (2023). An evaluation of a mental health literacy program for community sport leaders. *Mental Health & Prevention, 29*, 200259. https://doi.org/10.1016/j.mhp.2023.200259

O'Connor, J., Jeanes, R., Lambert, K., Bevan, N., Young, L., Powers, T., & Grove, C. (2024). The impact of a mental health literacy program on sporting club environment, member confidence and knowledge to support. *Mental Health & Prevention, 33*, 200326. https://doi.org/10.1016/j.mhp.2024.200326

O'Reilly, M., Svirydzenka, N., Adams, S., & Dogra, N. (2018). Review of mental health promotion interventions in schools. *Social Psychiatry and Psychiatric Epidemiology, 53*(7), 647-662. https://doi.org/10.1007/s00127-018-1530-1

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., … Moher, D. (2021). The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ, n71*. https://doi.org/10.1136/bmj.n71

Patafio, B., Skvarc, D., Miller, P., & Hyder, S. (2021). Evaluating a sport-based mental health literacy intervention in australian amateur sporting adolescents. *Journal of Youth and Adolescence, 50(*12), 2501-2518. https://doi.org/10.1007/s10964-021-01513-0

Pérez-Flores, N. J., & Cabassa, L. J. (2021). Effectiveness of mental health literacy and stigma interventions for Latino/a adults in the United States: a Systematic review. *Stigma and Health, 6*(4), 430-439. https://doi.org/10.1037/sah0000343

Reis, A. C., Saheb, R., Moyo, T., Smith, C., & Sperandei, S. (2022). The impact of mental health literacy training programs on the mental health literacy of university students: a Systematic review. *Prevention Science, 23*(4), 648-662. https://doi.org/10.1007/s11121-021-01283-y

Sampaio, F., Gonçalves, P., & Sequeira, C. (2022). Mental health literacy: It is now time to put knowledge into practice. *International Journal of Environmental Research and Public Health, 19*(12), 7030. https://doi.org/10.3390/ijerph19127030

Sørensen, K., & Brand, H. (2011). Health literacy-A strategic ssset for corporate social responsibility in Europe. *Journal of Health Communication, 16*(sup3), 322-327. https://doi.org/10.1080/10810730.2011.606072

Tirla, L., Sârbescu, P., & Rusu, A. (2024). Assessing the effectiveness of psychoeducational interventions on driving behavior: A systematic review and meta-analysis. *Accident Analysis & Prevention, 199*, 107496. https://doi.org/10.1016/j.aap.2024.107496

Venkataraman, S., Patil, R., & Balasundaram, S. (2019). Stigma toward mental illness among higher secondary school teachers in Puducherry, South India. *Journal of Family Medicine and Primary Care, 8*(4), 1401. https://doi.org/10.4103/jfmpc.jfmpc_203_19

WHO. (n.d.). *Mental health*. World Health Organization. Retrieved June 15, 2024, from https://www.who.int/health-topics/mental-health#tab=tab_2

WHO. (2022). *World mental health report: Transforming mental health for all*. https://www.who.int/teams/mental-health-and-substance-use/world-mental-health-report

Yeo, G., Reich, S. M., Liaw, N. A., & Chia, E. Y. M. (2024). The effect of digital mental health literacy interventions on mental health: Systematic review and meta-analysis. *Journal of Medical Internet Research, 26*, e51268. https://doi.org/10.2196/51268

Yulianti, P. D., & Surjaningrum, E. R. (2021). A review of mental health literacy strategy for adolescence. *International Journal of Public Health Science (IJPHS), 10*(4), 764. https://doi.org/10.11591/ijphs.v10i4.20364

Yulianti, P. D., Surjaningrum, E. R., Sugiharto, D. Y. P., & Hartini, N. (2021). Mental healthy literacy of teachers: a Systematic literature review. *Journal of Educational, Health and Community Psychology, 10*(2), 339. https://doi.org/10.12928/jehcp.v10i2.20512

Zabaleta González, R., Lezcano Barbero, F., & Perea Bartolomé, M. V. (2022). Alfabetización en Salud Mental: Revisión Sistemática de la Literatura. *Psykhe (Santiago)*, Online First. https://doi.org/10.7764/psykhe.2020.21787