

School-Based Mental Health Literacy Educational Interventions in Adolescents: A Systematic Review

ABSTRACT

Background and Objective: Poor mental health literacy is a major obstacle to seeking help for mental health problems in adolescents. The purpose of this study was to investigate the effect of school-based educational interventions on improving mental health literacy (MHL) in adolescents.

Materials and Methods: In this study, a search was conducted in Scopus, PubMed, Web of Science, Google Scholar, Irandoc, Magiran, and SID databases in both Persian and English language for studies published from 2011 to 2021. The keywords “adolescent”, “mental health literacy”, “depression literacy”, “intervention”, “education”, and “high school” were searched in both languages. Out of 191 articles extracted and finally, 6 articles were included in this study.

Results: The results of the study conducted in Norway showed that the individual’s health literacy who participated in the all “Mental Health” program was significantly increased compared to those in the control group; findings of a study conducted in Australia reported that MHL in the intervention group was significantly higher than the control group after intervention ($P < 0.05$). But, attitudes toward seeking help did not change. A Canadian study indicated that the mental health curriculum significantly increased mental health knowledge and reduced mental tagging ($P < 0.001$); furthermore, an Iranian study demonstrated that the mean score of MHL in the intervention group was significantly increased compared to the control group after the educational intervention ($P < 0.001$). In the study, which was conducted in the US, depressive literacy in the intervention group was significantly increased 4 months after the intervention. However, results of one study showed that education intervention is more effective than contact based intervention with an ill person ($P < 0.001$).

Conclusion: Evidence highlights that although studies have used a variety of methods for adolescent mental health literacy interventions in schools, all studies have had a positive effect on mental health literacy. Given that studies used self-report assessment to measure MHL outcomes. Thus, confirmation of these findings with objective tools is still needed.

Paper Type: Research Article

Keywords: Mental Health Literacy, Adolescent, Education

► **Citation:** Olyani S, Gholian Aval M, Tehrani H, Mahdizadeh-Taraghdari M. School-Based Mental Health Literacy Educational Interventions in Adolescents: A Systematic Review. *Journal of Health Literacy*. Summer 2021; 2(6): 69-77.

Samira Olyani

Student Research Committee, Mashhad University of Medical Sciences, Mashhad, Iran.

Mahdi Gholian Aval

Social Determinants of Health Research Center, Mashhad University of Medical Sciences, Mashhad, Iran

Hadi Tehrani

Social Determinants of Health Research Center, Mashhad University of Medical Sciences, Mashhad, Iran

Mehrossadat Mahdizadeh-Taraghdari

* Social Determinants of Health Research Center, Mashhad University of Medical Sciences, Mashhad, Iran. (Corresponding author).
MahdizadehTM@mums.ac.ir

Received: 24 May 2021

Accepted: 13 July 2021

Doi: 10.22038/jhl.2021.58551.1166

Introduction

More than half of mental health disorders begin from 14 years old (1). Mental problems directly cause disability and premature death and are indirectly associated with long-term disabilities, including the progression and prognosis of other diseases (2). Untreated mental health disorders can lead to educational, interpersonal, family, and social problems and reduced life expectancy due to related disabilities. Therefore, adolescence is an important time period for strengthening mental health and well-being behaviors in adolescents. Some teens have good opportunities, such as family support to enjoy good mental health. Unfortunately, some adolescents may be at risk of inadequate mental health due to the environmental problems such as discrimination, exposure to poverty, substance abuse, violence, and lack of access to the high quality support (3).

Worldwide, about 10-20% of adolescents have experienced mental health problems (4). Findings of a study showed, more than 22% of Iranian children and adolescents between 6 and 18 years old had at least one mental problem (5). In addition, findings of another study released that more than 20% of Iranian adolescents aged 15 to 19 years suffer from at least one mental disorder (6). Other studies have also reported a high prevalence of mental disorders among adolescents (7, 8).

The untreated mental health problems in adolescence can continue into adulthood and lead to physical and mental health disorders in adulthood. Therefore, it is necessary for health care providers to design and implement useful interventions based on strengthening protective factors and to discover alternative ways to prevent high-risk psychological behaviors, which enhance resilience and improve mental health in adolescents. Such interventions help adolescents to adapt to difficult situations (2).

However, mental health problems are very common in adolescents, there is a large gap between the proportion of people who need mental health care and those who receive it. One of the main and important factors in this gap is health literacy (9). Today, health literacy is an important issue in public health issues (10).

MHL is a subset of health literacy that refers to knowledge and beliefs related to mental disorders that can help identify, manage, and prevent mental disorders (9). The rate of diagnosis and treatment of mental health problems is lower in people with an insufficient levels of MHL (11). MHL consists of seven components: (1) the ability to diagnose mental disorders (2) knowing how and where to find mental health information; (3) knowing the risk factors for mental disorders; (4) awareness of the causes of mental disorders; (5) Awareness of self-care methods; (6) Awareness of available professional assistance, and (7) a positive attitude to asking for help (12, 13). In general, these seven components can be categorized into three categories: cognition, awareness of factors related to mental health, and attitudes and beliefs about mental health disorders (12).

Studies have shown that people with adequate MHL have better disease care behaviors, have more knowledge about how to seek health-oriented information, and have a better quality of life (7, 14, 15). In addition, people with limited MHL do not seek mental health services, which in turn leads to worsening mental health conditions (16).

Therefore, the preparation and implementation of appropriate interventions and services to improve students' mental health has become one of the main concerns among the Iranian policymakers in the last decade (6).

Recently, improving MHL has been one of the most important concerns of the government. In the Iranian Mental Health Program, MHL is

introduced as one of the 10 main issues and its promotion in all Iranian communities is considered as one of the three basic strategies to improve mental health (3). School-based educational interventions are an effective way to improve health literacy (17). Therefore, in order to successfully improve MHL, interventions must be context-based and integrated into existing social and organizational structures (such as schools and society). In addition, MHL interventions should be designed to improve all components of MHL.

The purpose of this review study was to investigate school-based educational interventions to improve MHL in adolescents. The research question of this study was: Can school-based educational interventions increase MHL in adolescents?

Materials and Methods

Researchers planned and conducted the systematic review according to the preferred reporting items for systematic reviews (18).

Search strategy and selection of articles:

Eligible studies, which were published from 2011 to 2021, were searched from recognized using electronic data-bases such as Pub Med/MEDLINE, Scopus, Web of Science, Google Scholar, Magiran, and SID. Search using the keywords “adolescent”, “mental health literacy”, “depression literacy”, “intervention”, “Education” and “High School” “Teen”, Adolescence “, was done to retrieve articles in both Persian and English languages. Keywords were combined with and without search quotation marks using the Boolean “AND” and “OR” operators, and the “*” star wildcard was used to expand the search if needed. Thematic search was also performed using medical subject headings (MeSH) and the PubMed database (Medline). In this study, the search, screening, and data selection strategies were performed

according to PRISMA guidelines. Thesis and abstracts of conference papers were excluded from the study. In first stage, the search and retrieval of articles was done. In the next stage, after removing duplicate articles, the titles and abstracts of the remaining studies were examined if included studies met the inclusion criteria.

The PRISMA flowchart (Fig. 1) summarized the results of the search process and study selection. Initially, 191 papers were imported into Endnote. After identifying duplicates, 94 articles were deleted. In the next step, the titles and abstracts of the remaining 97 articles were reviewed and evaluated, and 84 articles were excluded from the study due to the irrelevance of the title or abstract. In the next stage, the remaining 7 articles were deleted due to the lack of reporting the outcome of the MHL intervention (number = 3) and a sample other than adolescents (number = 4). Finally, 6 articles were systematically reviewed. The time of publication in all these articles was between 2013 and 2021 and the research method of all of them was interventional. Figure 1 shows the flow of selected articles for inclusion in the review study based on the PRISMA chart.

Inclusion and exclusion criteria:

In this systematic review, experimental and quasi-experimental studies were included in which adolescents aged 10 to 19 years participated in school-based MHL educational interventions. Descriptive articles and article with non-adolescents samples were excluded.

Quality assessment:

After confirmation of eligibility, full text of all selected articles was evaluated in terms of quality using jadad scale (Table1)(19). Then, the desired information was extracted from qualified articles.

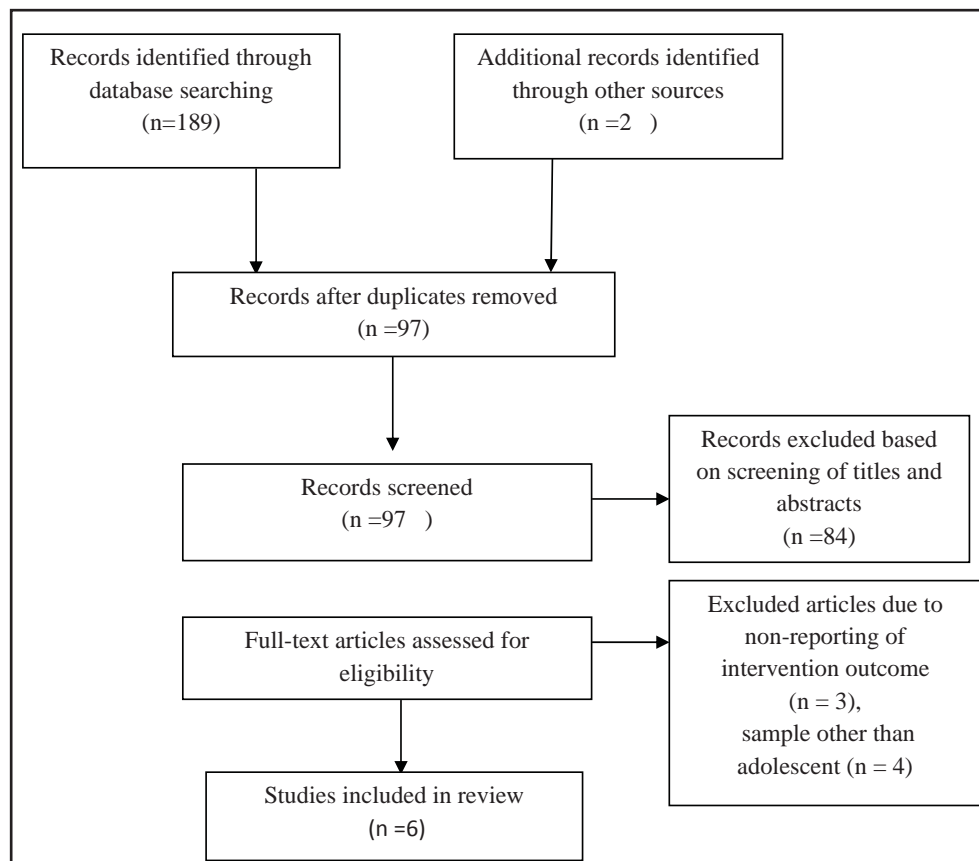
Table1. Qualitative evaluation of articles based on Jadad scale

Item	Score(0/1)					
	Skre 2013(20)	Perry 2014(21)	Milin 2016(22)	Chisholm 2016(23)	Swartz 2017(25)	Tehrani 2021(24)
Was the study described as randomized?	1	1	1	1	1	1
Was the method used to generate sequence of randomization described and appropriate?	1	1	1	0	1	1
Was the study described as double blind?	0	1	1	1	0	0
Was the method of double blinding described and appropriate?	0	1	1	1	0	0
Was there a description of withdrawals and dropouts?	0	1	1	0	1	0

Data extraction:

For all selected studies, the following details were extracted: name of the first author, year of study, sample size, country of publication, type of intervention, outcomes, and quality

assessment score. This article is taken from a research project registered with ethics code IR.MUMS.REC.1399.437.

**Fig.1. PRISMA flowchart for study selection**

Results

Studies have been conducted in the United States, Norway, Australia, Canada, the United Kingdom, and Iran. Studies have used a variety of tools to measure results.

The main method in all studies focused on the transfer of information about mental illness and mental health to adolescents. Teaching methods in the studies were different, but all methods were interactive and guided by trained teachers. All studies reported positive training results.

In one study, a school-based intervention entitled "Mental Health for All" was conducted among 8th to 10th grade students in Norway (1,070 people). The mean age of the samples in the intervention group was 14.06 years (SD = 0.85) and in the control group was 14.29 years (SD = 0.82). Activities included individual and group training and the use of video materials. The program was led by school teachers for 3 days. The results of this study showed that the health literacy of people who participated in the "Mental Health for All" program was significantly increased compared to those in the control group. The strengths of this study were the large sample size and high participants commitment (20).

Another study was a school-based intervention called "HeadStrong" to promote the MHL of Australian adolescents. Participants were 380 high school students in grades 9 and 10. The mean age was 14.75 years (SD = 0.50). Mental health training was conducted by school teachers for 10 hours using a training booklet, slide show and various attachments. Findings of this study reported that MHL in the intervention group was significantly higher than the control group ($P < 0.05$). Unfortunately, attitudes toward seeking help did not change, which the authors claimed a limitation to this study (21).

In another study which was conducted in

Canada, 534 high school students participated. The mean age was 16.5 years. The mental health curriculum significantly increased mental health knowledge and reduced mental tagging ($P < 0.001$). This training program was implemented for 10 hours (22).

In one study, in addition to group intervention based, contacting with a person with a mental illness was used to improve MHL in adolescents. Contact-based intervention is an intervention that adolescents can learn about mental illness from personal experiences of a person who has experienced living with a mental illness but is currently recovering. A one-day training program was conducted by mental health staff in the two areas of mental labeling and knowledge and attitudes about mental illness in UK adolescents. The mean age of the samples was 12.21 years (SD = 0.58). To this end, the young man with mental illness worked with the class. After the knowledge and attitude based intervention, labeling was significantly improved in the group that received only educational intervention compared to the group that in addition to educational intervention also used personal experiences with a previous history of mental illness. However, no significant change in seeking help was observed in both groups (23).

In a study conducted in Iran to investigate the effect of education on female adolescents' MHL, 140 female high school students aged 13 to 15 years were included in the study, of whom 70 were trained in the intervention group and 70 participants were included in the control group and did not receive any training. After the educational intervention, the mean score of MHL in the intervention group was significantly increased compared to the control group (24).

Table 2. Summary of interventions to improve MHL

Author	Country	Sample	Intervention	Outcome
Skre et al., 2013(20)	Norway	1070 students from three schools (intervention group = 520 and control group = 550)	Intervention group: a 3-day school-based educational intervention called Mental Health for All by researchers or trained teachers. Control group: usual classes	The results of the study reported a positive outcome of MHL in terms of symptom profile identification ($P < 0.0001$; 95%CI = 0.24–0.30), prejudiced beliefs ($P < 0.001$; 95% CI = 0.37 to _0.22) and knowledge about help-seeking ($P < 0.001$; 95%CI = 0.07–0.13), after attending the ‘Mental Health for Everyone Program’, compared to those in the control group.
Perry et al., 2014(21)	Australia	380 students from 10 non-governmental schools (intervention group = 207 and control group = 173)	Intervention group: a school-based educational program called ‘HeadStrong’ including a booklet, PowerPoint, and instruction booklet was delivered by the school teacher and took up 10 hours of class time for 5 to 8 weeks. Control group: usual classes	Analysis of planned contrasts revealed that MHL of those in the HeadStrong group improved more than control participants from pre- to post-intervention, $t(492) = 5.33$, $p < .05$
Milin et al., 2016(22)	Canada	534 students from 24 high schools (intervention group = 362 and control group = 172)	Intervention group: a school-based educational program which was performed by a school teacher and lasted 6 hours Control group: usual classes	The mental health curriculum increased mental health knowledge ($P < 0.001$; 95% CI = 0.41–0.93) and reduced stigma significantly ($P < 0.001$; 95% CI = 0.21–0.81).
Chisholm et al., 2016(23)	United Kingdom	657 students from 6 high schools (intervention group = 354 and control group = 303)	Intervention group: a one-day training program by mental health professionals plus Students interact with a young person with experience mental life control group: routine classes	In the contact and education condition, improvement in mental health literacy scores was not significant, $z = -1.03$, $p = 0.3$, $r = 0.05$. Conversely, participants in the education-alone condition demonstrated a significant improvement in MHL at follow-up, $z = -2.49$, $p = 0.01$, $r = 0.13$.
Swartz et al., 2017(25)	United States	6679 students from 66 high schools (intervention group = 3681 and control group = 2998)	A school-based educational program to increase the awareness of depression in adolescents by a teacher trained in 3 hours Control group: usual classes	Depressive literacy in the intervention group was significantly increased 4 months after the intervention and students approached 46% of teachers with concerns about themselves or others. Of students who reported the need for depression treatment, 44% received treatment within 4 months of intervention implementation ($P < 0.001$).
Tehrani et al., 2021(24)	Iran	140 students from 2 high schools (intervention group = 70 and control group = 70)	Intervention group: a school-based educational program which was performed by the school teacher in four 90-minutes training sessions. Control group: usual classes	After the intervention, the scores of all components of MHL, including: knowledge of the symptoms of mental illness, attitude to mental health problems and seeking help in the intervention group increased significantly. but no significant change was observed in the control group ($P < 0.001$)

Discussion

The purpose of this review study was to evaluate the effect of school-based MHL educational interventions in adolescents. Based on the results of this study, several studies have examined the effects of school-based interventions on adolescent MHL worldwide. Based on the results of this study, it can be concluded that the use of educational interventions alone can be effective in promoting MHL of high school students, so participating in educational programs to promote MHL, adolescents' attitudes, and beliefs is significantly important.

The results of all studies showed that school-based interventions had a significant positive effect on MHL among high school students. This is probably because teens spend more time in school than in other places; so school-based interventions can be very effective. Therefore, to promote MHL, it is better to implement supportive interventions in schools (26).

The results of all studies showed that knowledge and attitudes about mental illness, willingness to interact with a mental patient, and seeking help significantly improved after educational intervention and social communication. However, the results of a study showed that educational intervention alone had a greater impact on promoting adolescent MHL than educational intervention combined with interaction with a person with previous mental illness (23). This can be due to different perceptions of adolescents from the term mental illness, so by interacting with a person with previous experience, adolescents become confused about the concept of mental illness. Since limited studies compare the effect of educational intervention alone and educational intervention with social interaction, there is a need for further research and studies in this field.

It is very difficult to determine which

components of the intervention are effective in promoting MHL in adolescents. Therefore, in order to get the most effective interventions, it is better to pay attention to some cases when designing interventions. Messages should be appropriately designed for different groups. For example, the needs of adolescents at risk for mental illness may be different from those in the general population. In addition, the choice of media is preferable for any group of teenagers. For example, film use will be more effective than newspaper use in adolescents, (27). In addition, when applying any type of intervention for adolescents, the context in which the intervention is performed should also be considered (28).

On the other hand, efforts to increase MHL in adolescents will be most effective when health care providers are aware of the current level of MHL in adolescents (29).

Five studies measured all components of MHL in adolescents (knowledge of mental illness, labeling, and seeking help)(20, 21, 23-25) while one study measured only some components of MHL (22).

Ideally, all components of MHL should be measured using existing MHL tools in the future research (30).

Moreover, the impact of interventions is highly dependent on the proper implementation of the interventions. The results of well-quality interventions in schools are much better than those of poorly implemented interventions. Some factors affect the quality of implementation of interventions, such as: organizational capacity, ease of implementation of interventions, policies, characteristics of the intervention, and the provider of interventions (31). These factors must be observed to achieve maximum results.

Limitations: Some of the limitations of this study

are: first of all, most of the studies used from researcher-made tools to assess MHL, so the comparability of the studies was limited. Secondly, in this study, other types of interventions on adolescents have not been studied, therefore, it is important to study other types of MHL interventions in adolescents.

Conclusion: The results of this study showed that school-based educational interventions can be considered as a powerful tool to improve MHL in adolescents. On the other hand, the cheapness and ease of implementation of school-based educational interventions compared to other types of interventions is considered as strength of school-based interventions. The strength of this systematic review is that most of the included studies used a rigorous randomized control trial design with a large amount of sample size. However, all studies used self-report assessment to measure MHL outcomes. Thus, confirmation of these findings with objective tools is still needed.

Conflict of interest: There is no conflict of interest.

Funding: No financial support was received for this study.

References

1. Tsai AC, Tomlinson M. Inequitable and ineffective: exclusion of mental health from the post-2015 development agenda. *PLoS Med*. 2015;12(6):e1001846.
2. shiani m, Jalili z, shojaeizadeh d. The Effect of Education Based on the Precede-Proceed Model on the Mental Health of Middle-aged Women referred to Municipal Health Houses of Tehran. *Iranian Journal of Health Education and Health Promotion*. 2020;8(4):309-23.
3. Wei Y, McGrath PJ, Hayden J, Kutcher S. Mental health literacy measures evaluating knowledge, attitudes and help-seeking: a scoping review. *BMC psychiatry*. 2015;15(1):291. <https://doi.org/10.1186/s12888-015-0681-9>
4. Kessler RC, Berglund P, Demler O, Jin R, Merikangas KR, Walters EE. Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of general psychiatry*. 2005;62(6):593-602. <https://doi.org/10.1001/archpsyc.62.6.617> <https://doi.org/10.1001/archpsyc.62.6.593>
5. Sharifi V, Mojtabei R, Shahrivar Z, Alaghand-Rad J, Zarafshan H, Wissow L. Child and adolescent mental health care in Iran: current status and future directions. *Archives of Iranian medicine*. 2016;19(11):0-.
6. Mansouri N, Gharaee B, Shariat SV, Bolhari J, Nooraie RY, Rahimi-Movaghar A, et al. The change in attitude and knowledge of health care personnel and general population following trainings provided during integration of mental health in Primary Health Care in Iran: a systematic review. *International Journal of Mental Health Systems*. 2009;3(1):1-7. <https://doi.org/10.1186/1752-4458-3-15>
7. Noroozi A, Khademolhosseini F, Lari H, Tahmasebi R. The mediator role of mental health literacy in the relationship between demographic variables and health-promoting behaviours. *Iran J Psychiatry Behav Sci*. 2018;12(2):e12603.
8. Mousavi Bazaz S, Madani A, Zaree F. Prevalence of psychological disorders and its social determinants among high school students in Bashagard, Iran, 2014. *Journal of preventive medicine*. 2015;2(3):40-6.
9. Dias P, Campos L, Almeida H, Palha F. Mental health literacy in young adults: Adaptation and psychometric properties of the mental health literacy questionnaire. *International Journal of Environmental Research and Public Health*. 2018;15(7):1318. <https://doi.org/10.3390/ijerph15071318>
10. Tehrani H. Mental Health Stigma Related to novel coronavirus disease (COVID-19) in elderly. *Geriatrics & Gerontology International*. 2020.
11. Coles ME, Ravid A, Gibb B, George-Denn D, Bronstein LR, McLeod S. Adolescent mental health literacy: young people's knowledge of depression and social anxiety disorder. *Journal of Adolescent Health*. 2016;58(1):57-62. <https://doi.org/10.1016/j.jadohealth.2015.09.017>
12. Yu Y, Liu Z-w, Hu M, Liu X-g, Liu H-m, Yang JP, et al. Assessment of mental health literacy using a multifaceted measure among a Chinese rural population. *BMJ open*. 2015;5(10):e009054.
13. Deen T, Bridges AJ. Depression literacy: rates and relation to perceived need and mental health service utilization in a rural American sample. 2011.
14. RobatSarpoooshi D, Mahdizadeh M, Siuki HA, Haddadi M, Robatsarpoooshi H, Peyman N. The relationship between health literacy level and self-care behaviors in patients with diabetes. *Patient related outcome measures*. 2020;11:129. <https://doi.org/10.2147/PROM.S243678>
15. Mahdizadeh M, Solhi M. Relationship between self-care behaviors and health literacy among elderly women in Iran, 2015. *Electronic physician*. 2018;10(3):6462. <https://doi.org/10.19082/6462>
16. Habibzadeh A. Investigating the mental health of female high school students in The city of Qom. *knowledge and research in applied psychology*. 2014;15(3):108-17.
17. Vahedian Shahroodi M, Tehrani H, Esmaily H, Olyani S. Effect of Education Intervention on Nutrition Behaviors of High School Female Students along with Promoting Health Literacy. *Health Education and Health Promotion*. 2019;7(4):169-76.
18. Moher D, Altman DG, Liberati A, Tetzlaff J. PRISMA

- statement. *Epidemiology*. 2011;22(1):128. <https://doi.org/10.1097/EDE.0b013e3181fe7825> <https://doi.org/10.1097/EDE.0b013e3181fe7999>
19. Jadad AR, Moore RA, Carroll D, Jenkinson C, Reynolds DJM, Gavaghan DJ, et al. Assessing the quality of reports of randomized clinical trials: is blinding necessary? *Controlled clinical trials*. 1996;17(1):1-12. [https://doi.org/10.1016/0197-2456\(95\)00134-4](https://doi.org/10.1016/0197-2456(95)00134-4)
 20. Skre I, Friborg O, Breivik C, Johnsen LI, Arnesen Y, Wang CEA. A school intervention for mental health literacy in adolescents: effects of a non-randomized cluster controlled trial. *BMC Public Health*. 2013;13(1):1-15. <https://doi.org/10.1186/1471-2458-13-873>
 21. Perry Y, Petrie K, Buckley H, Cavanagh L, Clarke D, Winslade M, et al. Effects of a classroom-based educational resource on adolescent mental health literacy: A cluster randomised controlled trial. *Journal of adolescence*. 2014;37(7):1143-51. <https://doi.org/10.1016/j.adolescence.2014.08.001>
 22. Milin R, Kutcher S, Lewis SP, Walker S, Wei Y, Ferrill N, et al. Impact of a mental health curriculum on knowledge and stigma among high school students: a randomized controlled trial. *Journal of the American Academy of Child & Adolescent Psychiatry*. 2016;55(5):383-91. e1.
 23. Chisholm K, Patterson P, Torgerson C, Turner E, Jenkinson D, Birchwood M. Impact of contact on adolescents' mental health literacy and stigma: the SchoolSpace cluster randomised controlled trial. *BMJ open*. 2016;6(2):e009435.
 24. Tehrani H, Olyani S. The Effect of an Education Intervention on Mental Health Literacy among Middle School Female Students. *Journal of health literacy*. 2021;5(4):-.
 25. Swartz K, Musci RJ, Beaudry MB, Heley K, Miller L, Alfes C, et al. School-based curriculum to improve depression literacy among US secondary school students: A randomized effectiveness trial. *American Journal of Public Health*. 2017;107(12):1970-6. <https://doi.org/10.2105/AJPH.2017.304088>
 26. Atkins MS, Hoagwood KE, Kutash K, Seidman E. Toward the integration of education and mental health in schools. *Administration and Policy in Mental Health and Mental Health Services Research*. 2010;37(1):40-7. <https://doi.org/10.1007/s10488-010-0299-7>
 27. Kelly CM, Jorm AF, Wright A. Improving mental health literacy as a strategy to facilitate early intervention for mental disorders. *Medical Journal of Australia*. 2007;187(S7):S26-S30.
 28. Kutcher S, Wei Y, Costa S, Gusmão R, Skokauskas N, Sourander A. Enhancing mental health literacy in young people. Springer; 2016.
 29. Mendenhall AN, Fraunholtz S, Conrad-Hiebner A. Provider perceptions of mental health literacy among youth. *Child and Adolescent Social Work Journal*. 2014;31(3):281-93. <https://doi.org/10.1007/s10560-013-0321-5>
 30. Singh S, Zaki RA, Farid NDN. A systematic review of depression literacy: knowledge, help-seeking and stigmatising attitudes among adolescents. *Journal of adolescence*. 2019;74:154-72. <https://doi.org/10.1016/j.adolescence.2019.06.004>
 31. Durlak JA, DuPre EP. Implementation matters: A review of research on the influence of implementation on program outcomes and the factors affecting implementation. *American journal of community psychology*. 2008;41(3-4):327.