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Effectiveness of school-based lessons in influencing children and young people's knowledge and attitudes towards mental health and emotional wellbeing: an Evidence Synthesis Report

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Public Health England
Wellington House
133-155 Waterloo Road
London SE1 8UG
Tel: 020 7654 8000
www.gov.uk/phe
Twitter: @PHE_uk
Facebook: www.facebook.com/PublicHealthEngland

Prepared by: Mary Gatineau, Nicola Pearce-Smith, Claire Robson, Jenny Mason, Caryl Beynon.

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Contents

Key findings

There is mixed evidence to suggest that universal school based mental health lessons have the potential to increase knowledge and change attitudes of young people. Some studies reported strong positive effects, whilst others reported no or negative effects. The range of different interventions and outcomes reported in the papers makes synthesis difficult.

For secondary school aged children, there was strong evidence that school-based mental health lessons designed to reduce stigma towards mental illness and improve mental health literacy (see the appendix for definitions) in secondary school children were effective. Evidence for the effectiveness of interventions to improve emotional literacy (see the appendix for definitions) for this age group was mixed.

For primary school age children, this evidence synthesis report found mixed evidence that school-based mental health lessons improve emotional literacy. The number of studies identified was small. No articles were identified which evaluated the effectiveness of mental health literacy or anti-stigma interventions in primary school aged children.

For most studies follow-up was short term (2 months or less for over half of the studies) and, therefore, longer term effects of the interventions are unclear. Only a very small number of studies explored outcomes by gender, age or socioeconomic status. In order to gain further insight into how school-based lessons can help address inequalities, more studies with larger sample sizes are needed. Less than a third of the studies were based in the UK and Ireland. As such it is difficult to generalise the findings.

The majority of the studies did not include process outcomes (for example feasibility or acceptability to schools). More understanding is needed regarding facilitators and barriers to implementation and maintenance of programmes, including the associated time and monetary costs.

There is an absence of mental health data routinely available to indicate children and young people's attitudes and knowledge spanning key ages/stages of development from primary to secondary. The importance of measuring mental wellbeing in children and young people and the range of scales available has been well documented.[1]

The evidence presented relates to children and young people's knowledge and attitudes only. From this evidence synthesis report it is not possible to say whether school based mental health lessons lead to behavioural changes.

1. Introduction

In 2017/18, the Risk Factors Intelligence Team at Public Health England (PHE) initiated a programme of evidence syntheses, based upon a previous 'proof of concept' synthesis that was well received by stakeholders. Each synthesis is based on a clearly defined research question and brings together the most relevant data and literature. In the first year of operation, topics were proposed and selected via the Health Improvement Strategic Planning Group in PHE. This report is therefore part of a series of syntheses intended to support public health professionals, local authorities and clinical commissioning groups in local health needs assessment and commissioning of public health services.

The aim of this evidence synthesis report is to determine whether universal school-based lessons[a] influence children's and young people's knowledge and attitudes towards mental health and emotional wellbeing.

One in 10 young people have some form of diagnosable mental health condition. This equates to 850,000 children and young people with a diagnosable mental health disorder in the UK.[2,b] Half of all mental health problems emerge before the age of 14[3] and children with persistent mental health problems face unequal chances in life.[2] Schools are increasingly becoming involved in promoting the wellbeing and mental health of their students.[3]

In December 2017, the Department of Health and Department for Education (DfE) published the Green Paper *Transforming children and young people's mental health provision* in which the role of schools in addressing children and young people's mental health is a key theme.[2] The UK government also made a policy commitment to ensure that all children are taught about mental health and wellbeing. In July 2018 the Department for Education issued a consultation on draft regulations, statutory guidance, and regulatory impact assessment relating to Relationships Education, Relationships and Sex Education (RSE) and Health Education see: https://consult.education.gov.uk/pshe/relationships-education-rse-health-education/ The draft guidance includes an expectation that pupils will learn about mental wellbeing at primary and secondary school.

In addition, the government has announced the introduction of mandatory Relationship and Sex Education in secondary schools and Relationship Education in primary schools from September 2019. This will include a specific focus on how mental health and wellbeing can support healthy relationships and how best to secure good quality teaching for all pupils through PSHE.

[a] Applied to all students as opposed to being targeted (only for pupils at high risk).
[b] 2004 figure currently most recent available. New figures expected late 2018.

The National Institute for Health and Care Excellence (NICE) recommend that a curriculum which integrates the development of social and emotional skills within all subject areas should be provided throughout primary education by appropriately trained teachers and practitioners.[4] They advise that secondary education establishments can provide an environment that fosters social and emotional wellbeing and that they can also equip young people with the knowledge and skills to enable them to learn effectively.[5]

A number of reviews have been published on school-based mental health programmes. A recent review found that programmes designed to support social and emotional wellbeing have some positive effect on young people,[6] another concluded that large-scale, school-based programmes have significant, measurable positive effects on students' emotional, behavioural, and academic outcomes.[7] Other reviews have focussed on resilience-focused interventions[3] and interventions to reduce stigma towards mental illness in young people.[8]

However, as far as we are aware, there are no recent reviews[c] which have looked specifically at the impact of school based lessons on mental health and emotional wellbeing/literacy on children's and young people's knowledge and attitudes. It is hoped that this evidence synthesis report will help address this gap. Thereby, making a useful contribution to the Government's commitment for all children to be taught about mental health and wellbeing within the national curriculum.

[c] Previous review by Wei et al, 2013. The effectiveness of school mental health literacy programs to address knowledge, attitudes and help seeking among youth. Early intervention in psychiatry.7(2):109-21.

2. Prevalence of mental health issues in children and young people

The most recent survey of the mental health of children and young people in Great Britain was conducted by Office for National Statistics (ONS) in 2004.[d] The results showed that 10% of children and young people aged 5 to 16 had a clinically diagnosed mental health condition. Prevalence was higher among boys and increased with age. Among 5 to 10 year-olds, 10% of boys and 5% of girls had a mental disorder; whilst among 11 to 16 year-olds, the proportions were 13% for boys and 10% for girls.

In certain sub groups mental health problems were more common, for example in Lesbian, Gay, Bisexual and Transgendered (LGBT) and looked after children and young people. Prevalence also varied according to ethnic group, and socioeconomic status, among other factors. The 2017 National Study of Health and Wellbeing: children and young people will report later in 2018.

In 2014, the What About YOUth? Survey of 15 year olds in England used the Warwick-Edinburgh Mental Well-being Scale (WEMWBS), a scale of 14 positively worded items to assess mental wellbeing. The mean overall score for young people was 48 (out of a highest possible score of 70 and a lowest possible score of 14). Boys had a higher overall mean WEMWBS score than girls (50 compared to 45). Participants were also asked how satisfied they were with their life nowadays; 22% said they had very high life satisfaction, 44% high life satisfaction, 21% medium life satisfaction (21%) and 14% low life satisfaction.[e]

The Department for Education (DfE) Special educational needs statistics for January 2017 show that 2.1% of primary school pupils and 2.3% of secondary pupils In England have been classified as having social, emotional and mental health needs.[f,g]

An online survey conducted by Time to Change in 2012 with over 1000 young people in touch with their networks found that 9 out of 10 young people reported having experienced negative treatment from others because of their mental health problems. 90% felt that their peers viewed them in a negative way. Participants reported that fear of being bullied or discriminated against stopped them telling others about their mental health problems, and that this makes their problems worse.[9]

[d] Data from the survey is included in the estimated prevalence of mental health in children on the Fingertips Children and Young People's Mental Health and Wellbeing Profiling Tool.
[e] Ratings of life satisfaction are taken from the ONS measure for young people: 0-4 out of ten ('low' life satisfaction rating), 5-6 ('medium' life satisfaction rating), 7-8 ('high' life satisfaction rating), and 9-10 ('very high' life satisfaction rating).
[f] Data from the survey is included in the estimated prevalence of mental health in children on the Fingertips Children and Young People's Mental Health and Wellbeing Profiling Tool.
[g] The National Clinical Practice Guidelines published by the British Psychological Society state that children with learning or physical disabilities have a higher risk of developing a mental health problem compared to the national population.

Authors were unable to find data specifically relating to children and young people's mental health literacy. However, research by the University of Hertfordshire and the PSHE Association using data from the Health Behaviour in School Aged Children Survey 2014 suggest a strong correlation between well-received PSHE programmes on personal and social skills and wider outcomes for pupils in terms of relationships in school and sense of belonging.[10] Those who reported that the personal and social skills topic had been covered well were less likely to have been bullied or involved in the bullying of others (Table 1); data to show a persistent effect over time were not available.[h] They were also more likely to have a positive view of peer relationships within their classes and wider sense of school belonging (Table 2).

Table 1: Comparison of bullying by perception of personal and social skills coverage

	Percentage of respondents	
	Well covered	Poorly/not covered
Been bullied in past 2 months	31.9%*	36.2%
Bullied others in past 2 months	14.8%*	21.0%
Been cyberbullied in past 2 months	16.7%*	22.9%

Source: Health Behaviour in School Aged Children Survey 2014: England National report

*p ≤ 0.01

Table 2: Comparison of student relationships by perception of personal and social skills coverage

	Percentage of respondents	
	Well covered	Poorly/not covered
Agree other students accept them for who they are	77.4%*	64.7%
Agree they belong in their school	80.3%*	65.9%
Agree most students in class are kind and helpful	72.7%*	58.2%
Agree students enjoy being together	74.5%*	61.7%

Source: Health Behaviour in School Aged Children Survey 2014: England National report

*p <0.001

Note: Caution is needed in interpreting these data as the survey is cross sectional. So it could just be that schools that are generally supportive of emotional health and wellbeing, for example, through effective anti-bullying policies are also the ones providing the best PSHE lessons.

[h] Due to the cross-sectional nature of the study, cause and effect cannot be directly traced.

3. Methodology

Literature search methods

The study design used was a rapid review, which uses one or more recognised techniques to shorten the timescale compared to a traditional systematic review.[11]

A literature search was undertaken to identify studies addressing the following question: *How effective are school-based lessons in influencing children and young people's knowledge and attitudes towards mental health and emotional wellbeing?* The population, intervention and outcomes for the review question were:

Population: Children and young people aged 5 to 18 years in school (to include sixth form colleges, not pre-school).
Intervention: School-based mental health and emotional wellbeing lessons.
Outcomes: Changes in mental health and emotional wellbeing knowledge and stigma/attitudes towards mental and emotional wellbeing problems.
Study design: Primary research including randomised control trials (RCTs); quasi-experimental studies including pre-post studies; and qualitative studies.

Knowledge was defined as:

- how to keep mentally well
- risk and protective factors
- where/how to get information about mental health and emotional wellbeing problems
- where to get additional/professional help and/or what professional help is available
- how to respond to a friend in difficulty

Attitudes were defined as:

- attitudes about mental health and emotional wellbeing problems
- attitudes about seeking professional help or treatment
- attitudes towards those with mental health problems

Definitions of mental health literacy, emotional literacy and stigma are in the appendix.

Sources searched

The following databases were searched: Ovid Medline, Ovid Embase, Ovid PsycInfo, Wiley Cochrane Library, ERIC, Social Care Online, NHS Evidence, Google Scholar and Google.

Dates of search

The search covered 1 January 2012 to 14 December 2017.

Search strategies

Example search strategies used for different databases are included in the appendix. 6 additional papers were identified from a search of Google scholar and Google.

Inclusion/exclusion

The following inclusion and exclusion criteria were used:

Inclusion criteria

- language: English
- year of publication: 2012-2017
- population: Children and young people aged 5 to 18 years in school
- Organisation for Economic Co-operation and Development OECD countries
- universal approaches
- focus on whole class
- mental health as part of the core curriculum rather than through extra-curricular activities

Exclusion criteria

- studies that do not include lesson-based interventions
- after-school clubs
- interventions which target specific groups, for example children with learning difficulties or high risk adolescents
- interventions primarily focused on the prevention of violence or bullying and those relating specifically to suicide prevention
- mindfulness[i]/yoga, sport and organised physical activity[i]/dance/theatre related interventions

[i] Mindfulness interventions were excluded due to concurrent Wellcome Trust research programme The MYRIAD Project investigating the underlying cognitive mechanisms, teacher training routes, school-based implementation and effectiveness of mindfulness training in UK secondary schools over a 7 year period.

Screening

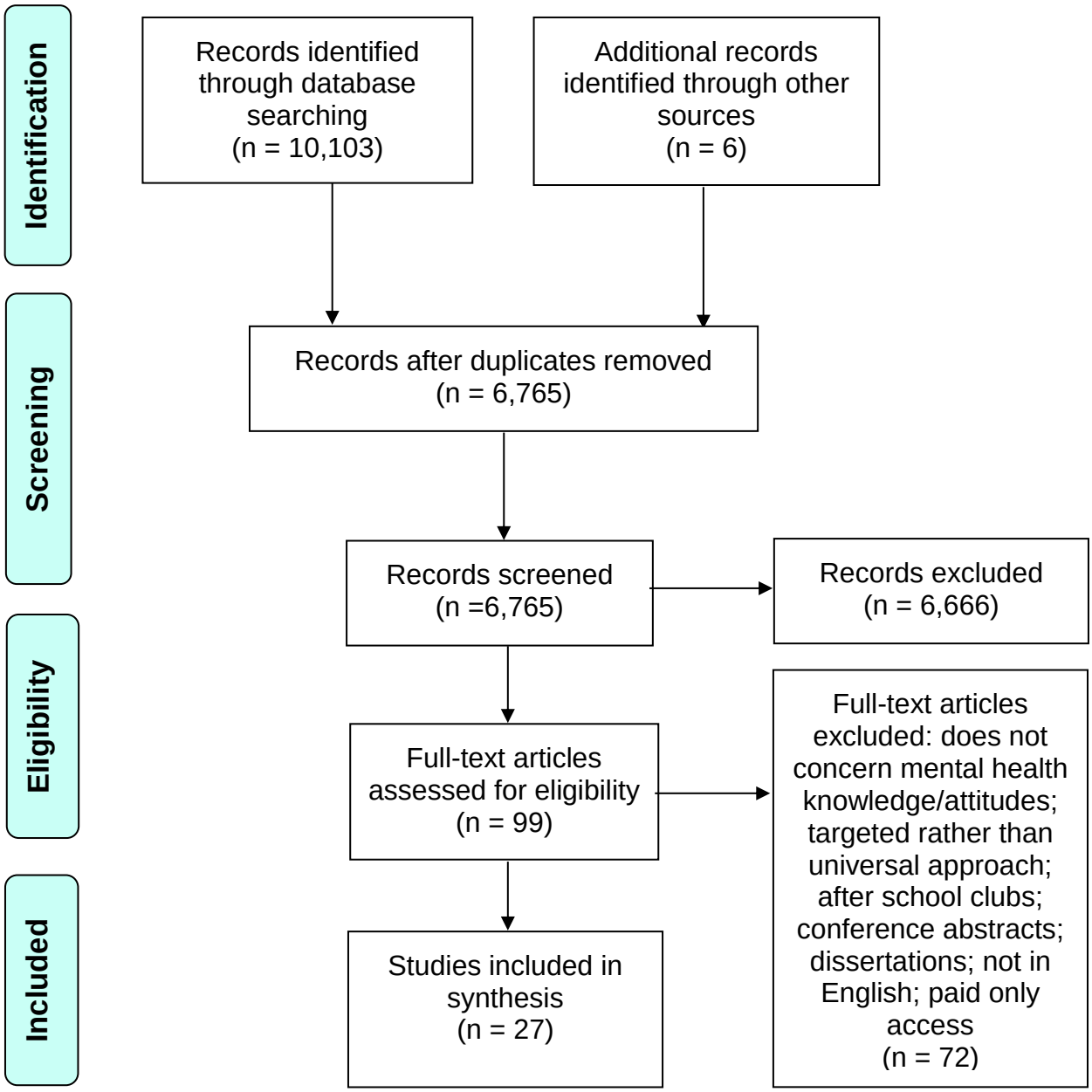
The search identified 6,765 papers which were screened by title and/or abstract, with full text retrieved for 99 papers. Following screening, 27 papers remained (Figure 1). Data extraction tables were set up and agreed by the project team. 2 reviewers independently extracted the data and made spot checks to test the consistency of the data extracted; any differences were discussed and amended.

Papers were categorised by primary or secondary school[k] aged children and whether they included anti-stigma, emotional literacy or mental health literacy outcomes. The reviewers differentiated between anti-stigma interventions (that work to breakdown the stigma and discrimination); emotional literacy interventions (that promote the understanding of ourselves and other people); as well as broader mental health literacy (MHL) interventions (about good mental health and mental wellbeing and what to do to improve, maintain and protect our mental health and that of others). See appendix for definitions.

The studies were categorised as RCTs, quasi-experimental studies[l] (including pre-post studies) or qualitative studies and quality of the evidence was assessed according to the Joanna Briggs standardised appraisal tools (see appendix). 2 reviewers each reviewed half the papers after which random spot checks were conducted across each of the categories and any differences were discussed and agreed. Please see accompanying spreadsheet to see how the studies were assessed.

[j] Excluded due to recent scoping review conducted by the Association of Young People's Health that had explored this (albeit that this focussed on the 14 to 25 year age group).
[k] 'Middle school' aged children categorised as within Secondary school aged children to allow comparability according to age.
[l] In an RCT, participants are randomly assigned to either the treatment or the control group, whereas they are not assigned randomly in a quasi-experiment.

Figure 1. PRISMA 2009 Flow Diagram[m]



[m] From Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 6(7).

4. Results

Study characteristics

A total of 27 papers were identified. Out of these, 25 measured the effectiveness of interventions to influence children and young people's knowledge and attitudes. They included 13 RCTs (cluster), 4 quasi-experimental studies and 8 pre-post studies. Most of the papers related to secondary school aged children (22 studies); whilst 3 related to primary school aged children. 2 qualitative studies relating to primary school aged children from the UK were also identified. The studies covered 10 different countries with a quarter based in the UK and Ireland (Table 3).

Table 3: Papers by country

Country	Number
UK	5
Ireland	3
Greece	2
Italy	4
Norway	2
Spain	2
Australia	3
Canada	3
US	2
Japan	1

The studies covered a range of interventions, with varying research methods and outcome measures. There was large variation in sample sizes across the included studies.[n]

Three quarters of the studies were categorised as high or medium quality. The number of participants with complete data at follow-up ranged from 44 to 3,505 and the duration of the interventions ranged from 90 minutes to twice weekly sessions over the year. The majority of the interventions were carried out by school teachers, but a few were led by specialist mental healthcare professionals, peer educators and people with lived experience of mental illness.

A wide range of self-report instruments were used to measure impact from validated surveys such as the Community Attitudes towards Mental illness (CAMI) questionnaire,

[n] Small samples have lower external validity and make it difficult to generalise their results to the wider population.

to modified or bespoke survey questions and scales. Follow-up extended from immediately post-intervention to 2 years. The comparison groups had normal lessons (no intervention) in all the studies apart from 2 which compared the standard programme with an enhanced programme.[12, 13] One study compared children from different age groups.[14]

The interventions were categorised as anti-stigma (14 studies), emotional literacy (11 studies), and mental health literacy (15 studies). Some of the interventions were classified under more than one of these outcomes due to overlap (see the appendix for definitions).

Children and young people's knowledge was classified under a variety of different themes across the studies. These included general mental health literacy, knowledge about mental health/illnesses (eg symptom recognition, treatment of mental disorders), knowledge about support services, knowledge of skills (eg defining goals, effectively communication, using problem solving), and social-emotional competence (eg self-efficacy in regulating negative emotions, self-awareness, resilience).

Similarly attitudes were defined using multiple terms including attitudes towards people with mental illness, stigma attributed to mental disorders, attitudes towards help-seeking, prejudiced beliefs, attitudes towards mental disorders/illness, social discrimination, helping attitudes, non-stigmatising attitudes and empathy.

For full details of all included studies, including outcome measures and instruments used to measure impact, see the associated data extraction table.

Primary school aged children

Out of the total 27 papers identified, only 6 related to primary school age children. 3 of these were RCTs[15-17] one was a quasi-experimental study[18] and 2 were qualitative studies.[19, 20]

Anti-stigma

There were no studies for primary school aged children categorised under anti-stigma.

Emotional literacy

All of the interventions for primary school aged children were categorised as relating to emotional literacy. 3 of the papers reported on Zippy's Friends, one on FRIENDS, another on PATHS and one on an emotional intelligence programme '*Would you like to travel around the planet of Emotions?'* Improvements in elements of children's

emotional literacy were reported in all of the studies. The studies ranged in size from 115 to 3505 children at follow-up.

A high quality RCT from the UK (Zippy's Friends) reported statistically significant improvements post-test as well as 12 month follow-up.[15] A further high quality quasi-experimental study reported statistically significant improvements at 6 month follow-up, which was maintained following a second intervention year.[18] One low quality RCT provided some evidence of small but positive effect on children's coping skills.[16] In contrast, one large UK based RCT demonstrated mixed results regarding the PATHS intervention with relatively small treatment effects and some findings in favour of significantly greater improvements the control group.[17]

2 high quality qualitative studies[o] (FRIENDS and Zippy's Friends)[19, 20] provided evidence of a positive impact of the interventions on children's emotional literacy skills. They also provided further insight into how the programmes had benefited the children, factors that had supported the children's engagement and teacher and parental views.[19, 20]

Mental health literacy

We found no studies categorised under mental health literacy for primary school aged children.

Secondary school aged children

Out of the 27 papers identified, 21 related to secondary school age children. 10 of these were RCTs,[12, 13, 21-28] 3 quasi-experimental studies[29-31] and 8 pre-post studies.[14, 32-38]

Anti-stigma

14 of the studies (ranging in size from 44 to 3563 children at follow-up) were categorised as having anti-stigma outcomes. All the studies were also classified as having mental health literacy outcomes because decreasing stigma is one of its key components (see the appendix for definition).

The interventions included The Guide, HeadStrong, OpenMinds, SchoolSpace, Eliminating the Stigma of Differences, The Adolescent Depression Awareness Progam (ADAP), Mental Health for everyone, plus other interventions using general curriculum

[o] Qualitative studies, whilst not strong at assessing effectiveness, can help expand our understanding of user experiences as well as intervention implementation and outcomes

educational activities, workshops and a documentary film. They were all short-term, lasting between two 45 minute lessons and 3 days.

Most of the studies were designed to be led by teachers without the need for input from mental health specialist staff and were delivered as a curriculum resource. For example, 'The Guide' in Canada[21, 34, 37] and HeadStrong in Australia.[24] However one UK study (OpenMinds) involved the training of university medical students who delivered workshops[36] whilst another programme (SchoolSpace) was led by a mental health professional.[13] 2 studies, one from the UK[13] and the other from the US[11] found that contact with a young person with a history of mental illness did not add value in reducing stigma.

8 of the studies were RCTS, one was quasi-experimental and 5 pre-post studies. The majority were high or medium quality, with 3 rated as low quality. All but one of the studies[22] demonstrated significant outcomes relating to increases in non-stigmatising attitudes, positive attitudes towards mental illness or a decline in prejudiced beliefs. However, follow-up for most of the studies was short, with post-tests ranging from between 2 weeks to 2 months. One low quality study from Greece pointed to the inability of short educational interventions to be effective in altering deeply held stereotypes.[27]

Emotional literacy

7 of the studies (ranging in size from 44 to 3,306 children at follow-up) were categorised as having emotional literacy outcomes, 2 of which were also categorised as having mental health literacy outcomes. The interventions included the Secondary social and emotional aspects of learning (SSEAL) programme, a Social, Personal and Health Education Programme (SPHE) programme, iCARE-R, general social and emotional literacy curriculums and structured handbooks. Intervention length was variable, ranging from two 45 minutes lessons to 20 hours classroom time over 6 months.

One of the studies was an RCT, 3 were quasi-experimental and 3 pre-post studies. Outcomes were mixed across the studies. Some studies reported significant improvements in elements of emotional literacy such as self-efficacy,[30, 35] environmental mastery and self-acceptance,[25] and knowledge of skills (such as defining goals, effectively communicating, and using problem-solving).[14] However, other studies reported no significant improvements in social, emotional, and behavioural competencies or use of positive and negative coping strategies,[12] skills across any of the emotional literacy groups,[29] nor resilience factors, school protective factors or social and emotional skills.[38] A large high quality RCT investigating an enhanced compared to a standard SPHE programme in Ireland reported significant

differences only in terms of help-seeking.[12] Follow-up ranged from between 2 weeks to 2 years.

Mental health literacy

15 of the studies related to mental health literacy interventions (see the appendix for definitions). 13 of the studies were also included under the anti-stigma category and 2 under emotional literacy. 8 of the studies were RCTs, 2 were quasi-experimental and 4 pre-post studies.

Aside from anti-stigma outcomes which have already been reported, 10 studies reported significant improvements in aspects of mental health literacy. 2 high quality RCTs, including a study from the UK (SchoolSpace) and a study from Australia (HeadStrong), reported significant improvements in mental health literacy[13] at 2 weeks and 6 month follow-up respectively.[24] 3 high and moderate quality pre-post studies from Canada (The Guide) reported significant improved mental health knowledge at 2 month follow-up.[21, 37, 39]

A high quality pre-post study from Japan also reported improved knowledge of mental health/illnesses and desirable behaviour for help seeking at 3 month follow-up.[32] A large moderate quality US study (The Adolescent Depression Awareness Programme) reported significantly higher levels of depression literacy at 4 months follow-up[22] and a high quality quasi-experimental study from Norway (Mental health for Everyone) reported significantly higher mental health literacy in terms of symptom profile identification and knowledge where to seek help in the intervention group[31]

A moderate quality UK pre-post study (OpenMinds) reported significant improvements in mental health literacy apart from social distance, but effect sizes were small.[36] A low quality RCT from Greece reported a positive impact on perceptions of mental illness.[26] A moderate quality RCT from Canada reported significant improvements in mental health knowledge with knowledge significantly predicting increases in positive attitudes toward mental health.[21]

The study with longest follow-up period (6 months), reported a weakening of impact on mental health literacy suggesting a need for supplementary teaching throughout the year.[24]

5. Conclusions

This evidence synthesis report examined evidence on the effectiveness of universal school-based lessons in influencing children and young people's knowledge and attitudes towards mental health and emotional wellbeing.

There was strong evidence that mental health lessons designed to reduce stigma towards mental illness and improve mental health literacy in secondary school children were effective. There was mixed evidence on the effectiveness of interventions to improve emotional literacy in primary and secondary school children. No articles were identified which evaluated the effectiveness of mental health literacy or anti-stigma interventions in primary school aged children.

There is an absence of mental health data routinely available to indicate children and young people's attitudes and knowledge.

Key findings can be found at the beginning of the evidence synthesis report.

6. Limitations

In line with the methodology employed for rapid reviews, this review included publications in the English language from OECD countries published in the last 5 years. Grey literature and emerging evidence was excluded. It is, therefore, possible that key papers which did not fulfil these criteria were not included in the review.

Whilst spot checks were performed by the researchers, there is a risk of error in study selection and data extraction as one author performed these processes.

The categorisation of studies under mental health literacy, anti-stigma and emotional literacy by the reviews was somewhat subjective, given the lack of standard, clearly articulated definitions for these parameters. This is an evolving field with much overlap in the way people use these terms.

This evidence synthesis report only included published studies. The findings may be subject to publication bias whereby studies with significant or positive results are more likely to be published than those with non-significant or negative results.[40]

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8. Appendix

Definitions

Mental health refers to a positive state, of being in good mental health: *"Good or positive mental health is more than the absence or management of mental health problems; it is the foundation for wellbeing and effective functioning both for individuals and for their communities". "It is a state in which 'every individual realises his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community".* The Public mental health leadership and workforce development plan: Appendices. Public Health England. March 2015

Stigma: is defined as the experience of shame or disgrace that sets people apart and identifies them as being different or undesirable.[9] Anti-stigma interventions aim to reduce the development of stigmatising attitudes, to minimise discrimination in the future, and encourage those who are struggling with mental health issues to seek help.[41]

Emotional literacy: is the ability to understand ourselves and other people and, in particular, to be aware of, understand and use information about the emotional states of ourselves and others with competence. It includes the ability to understand, express and manage our own emotions, and respond to the emotions of others, in ways that are helpful to ourselves and others.[42]

Mental health literacy: is a broad term, including anti-stigma, help-seeking efficacy, mental health competencies and general mental health knowledge. It is defined as understanding how to obtain and maintain positive mental health; understanding mental disorders and their treatments; decreasing stigma related to mental disorders; enhancing help-seeking efficacy (knowing when and where to seek help) and developing competencies designed to improve one's mental health care and self-management capabilities.[43]

Personal, social, health and economic (PSHE) education: a school subject through which pupils develop the knowledge, skills and attributes they need to keep themselves healthy and safe, and prepare for life and work: www.pshe-association.org.uk/curriculum-and-resources/curriculum

PSHE education: is defined by the schools inspectorate Ofsted as a planned programme to help children and young people develop fully as individuals and as members of families and social and economic communities. Its goal is to equip young people with the knowledge, understanding, attitudes and practical skills to live healthily,

safely, productively and responsibly:
publications.parliament.uk/pa/ld201617/ldselect/ldcomuni/130/13008.htm

Social and emotional skills: play a crucial role in children and young people's development, enabling them to achieve positive outcomes in school, work and life in general. Definitions vary, but the term generally encompasses 5 interrelated sets of cognitive, emotional and behavioural competencies:

- self-awareness: recognising your own thoughts and emotions and understanding how they influence your behaviour, self-confidence, and accurately assessing your own personal strengths and limitations
- self-regulation: regulating your own emotions, thoughts and behaviours, managing stress, controlling impulses, and setting and working towards personal goals
- social awareness: empathy and understanding of others, respecting diversity, understanding social and cultural norms of behaviour
- responsible decision-making: making ethical and constructive choices about your own behaviour, based on an ability to empathise and see the perspective of others
- relationship skills: establishing and maintaining healthy and rewarding relationships, communicating clearly, listening well, cooperating with others and negotiating conflict constructively[44]

Surveys

Health Behaviour in School-aged Children (HBSC) is a unique cross-national research study conducted in collaboration with the WHO Regional Office for Europe. The study is carried out every 4 years in over 40 countries across Europe and North America. It aims to gain new insight into, and increase our understanding of, young people's health and wellbeing, health behaviours and their social context. 5335 young people aged 11, 13, and 15 years participated in the 2014 survey in England, with the results published in October 2015. The Health Behaviour in School Aged Children Survey is undertaken every 4 years and is in the field at the moment and surveys 11, 13 and 15 year-olds.

Mental health of children and young people in Great Britain, 2004
A study of the prevalence of mental health disorders among 5 to16 year olds in Great Britain was undertaken in 2004 and noted changes since a previous survey in 1999. It profiles children in each of the main disorder categories (emotional, conduct, hyperkinetic and autistic spectrum disorders) and, where the sample size permits, profiles subgroups within these categories.

National Study of Health and Wellbeing: Children and Young People
A follow up to the mental health of children and young people in Great Britain study, known as the National Study of Health and Wellbeing: Children and Young People due

to report in 2018. This survey aims to find out about the health, development and wellbeing of children and young people aged between 2 and 19 years old in England. It will cover around 9,500 children and young people living in private households in England.

What about YOUth (WAY)? The Health and Social Care Information Centre (HSCIC), now NHS Digital, was commissioned by the Department of Health to develop the WAY survey. The survey collected local authority (LA) data from over 100,000 15 year-olds in England during 2014. The questions covered a number of topics, including diet and physical activity, smoking, alcohol, use of drugs, bullying and emotional wellbeing.

Quality appraisal tools

The Joanna Briggs Institute's critical appraisal tools contain a set of appraisal criteria that address both the validity and reliability of a study. The tools include detailed guidelines to ensure they can be applied and interpreted in a standardised manner. The Joanna Briggs tools were chosen for this rapid review because they reflected the type of studies identified for quality appraisal. These included quasi-experimental studies/pre-post studies, RCTs, systematic reviews and qualitative research. The studies were classified according to study type and then rated against the appropriate tool.[p] The researchers provided an overview of the papers, assigning them low, moderate or high quality category based on how well each study met the appraisal criteria. The full quality assurance results are provided in the associated spreadsheet.

Search strategies

Database	No. of hits	Exclusive (non-duplicates)
Ovid Medline (December 13 2017)	1830	1591
Ovid Embase (2017 week 50)	2621	1280
Ovid PsycInfo (November week 2 2017)	2844	2014
Cochrane Library (Issue 12/12, December 2017)	456	177
ERIC (December 2017)	1949	1353
Social Care Online (December 14 2017)	223	175
NHS Evidence (December 14 2017)	180	169
		TOTAL = 6759

6 additional unique relevant papers were identified from a search of Google scholar and Google. FINAL TOTAL = 6765.

[p] Pragmatic judgement was used on whether statistics were reported reliably. Sample sizes of 40 or less were considered low power.

Example searches

Ovid Medline

1. school*.tw,kw.
2. School Health Services/
3. Schools/
4. further education.tw,kw.
5. 1 or 2 or 3 or 4
6. (curricular or curriculum).tw,kw.
7. (program or programs or programme* or lesson*).tw,kw.
8. (teach or teaching).tw,kw.
9. (learn or learning).tw,kw.
10. (educat* or instruct*).tw,kw.
11. (class or classes or classroom).tw,kw.
12. training.tw,kw.
13. PHSE.tw,kw.
14. Curriculum/
15. Program Evaluation/
16. 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15
17. mental health.tw,kw.
18. (wellbeing or well-being).tw,kw.
19. mental illness*.tw,kw.
20. emotional literacy.tw,kw.
21. emotional intelligence.tw,kw.
22. Mental Health/
23. 17 or 18 or 19 or 20 or 21 or 22
24. knowledge.tw,kw.
25. stigma*.tw,kw.
26. (attitude* or attitudinal).tw,kw.
27. (behaviour* or behavior*).tw,kw.
28. (promoting or promotion).tw,kw.
29. acceptance.tw,kw.
30. perception*.tw,kw.
31. awareness.tw,kw.
32. help-seeking.tw,kw.
33. opinion*.tw,kw.
34. literacy.tw,kw.

35. resilience.tw,kw.
36. (acceptable or acceptability).tw,kw.
37. efficacy.tw,kw.
38. empathy.tw,kw.
39. self-esteem.tw,kw.
40. (anxiety or anxieties).tw,kw.
41. feelings.tw,kw.
42. coping strateg*.tw,kw.
43. emotion*.tw,kw.
44. vocabulary.tw,kw.
45. (comfortable or uncomfortable).tw,kw.
46. sensitivities.tw,kw.
47. mindful*.tw,kw.
48. self-confidence*.tw,kw.
49. Attitude to Health/
50. Patient Acceptance of Healthcare/
51. Awareness/
52. Health Knowledge, Attitudes, Practice/
53. Social Stigma/
54. Prejudice/
55. Help-Seeking Behavior/
56. 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 35 or 36 or 37 or 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46 or 47 or 48 or 49 or 50 or 51 or 52 or 53 or 54 or 55
57. child*.tw,kw.
58. adolescen*.tw,kw.
59. (girls or boys).tw,kw.
60. teenage*.tw,kw.
61. young.tw,kw.
62. youth.tw,kw.
63. (pupil or pupils).tw,kw.
64. (student* not (nurs* or medical or universit*)).tw,kw.
65. Adolescent/
66. Child/
67. Students/
68. 57 or 58 or 59 or 60 or 61 or 62 or 63 or 64 or 65 or 66 or 67
69. 5 and 16 and 23 and 56 and 68

70. limit 69 to yr="2012 - 2017"

71. limit 70 to english language

Wiley Cochrane Library

#1 school*:ti,ab,kw (Word variations have been searched)
#2 MeSH descriptor: [Schools] this term only
#3 #1 or #2
#4 (curricular or curriculum or program or programs or programme* or lesson* or teach or teaching or learn or learning or educat* or instruct* or class or classes or classroom):ti,ab,kw
#5 MeSH descriptor: [Curriculum] this term only
#6 MeSH descriptor: [Program Evaluation] this term only
#7 #4 or #5 or #6
#8 (mental health or wellbeing or well-being or mental illness* or emotional literacy or emotional intelligence):ti,ab,kw
#9 MeSH descriptor: [Mental Health] explode all trees
#10 #8 or #9
#11 (knowledge or stigma* or attitude* or attitudinal or behaviour* or behavior* or promoting or promotion or acceptance or perception or awareness or help-seeking or opinion* or literacy or resilience or acceptable or acceptability or efficacy or empathy or self-esteem or anxiety or anxieties or feelings or "coping strateg*" or emotion* or vocabulary or comfortable or uncomfortable or sensitivities or mindful* or self-confidence*):ti,ab,kw
#12 MeSH descriptor: [Attitude to Health] explode all trees
#13 MeSH descriptor: [Patient Acceptance of Health Care] explode all trees
#14 MeSH descriptor: [Awareness] explode all trees
#15 MeSH descriptor: [Social Stigma] explode all trees
#16 MeSH descriptor: [Prejudice] explode all trees
#17 MeSH descriptor: [Help-Seeking Behavior] explode all trees
#18 #11 or #12 or #13 or #14 or #15 or #16 or #17
#19 (child* or adolescen* or girls or boys or teenage* or young or youth or pupil or pupils or (student* not (nurs* or medical or universit*))):ti,ab,kw
#20 MeSH descriptor: [Child] this term only
#21 MeSH descriptor: [Adolescent] explode all trees
#22 MeSH descriptor: [Students] this term only
#23 #19 or #20 or #21 or #22
#24 #3 and #7 and #10 and #18 and #23

NICE Evidence search and TRIP
school ("mental health" OR wellbeing) (lessons OR teaching OR curriculum)

Google and Google scholar
Used the 2 searches below, limited to publication years 2007-2017, and the first 200 hits for each search were examined for relevance to inclusion criteria:

school "mental health" lessons OR teaching OR curriculum
school wellbeing lessons OR teaching OR curriculum

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