HEALTH EDUCATION RESEARCH Vol.23 no.5 2008
Pages 770–790
Advance Access publication 5 November 2007

Young people and mental health: novel methods for systematic review of research on barriers and facilitators

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Abstract

This paper describes how barriers to, and facilitators of, good mental health amongst young people (11–21 years) were elucidated from a systematic review of studies of young people's views and how these barriers and facilitators were compared with effectiveness studies to identify effective and appropriate interventions, promising interventions needing further evaluation and the need for further intervention. All studies were published before 2000. No clear pattern for effectiveness emerged in terms of mental health promotion focus, the type of intervention, intervention provider or young people. Well-evaluated interventions neither always target what we know young people themselves see as important barriers to their mental health (for instance, loss of friends and family, violence and bullying) nor always build on what they see as key facilitators, particularly their preferred coping strategies. In particular, while young people see material and physical resources as major influences on their mental health, few evaluated interventions targeted these. Rigorously evaluated interventions more often addressed priorities not raised by young people themselves and populations at low risk for mental health problems. These innovative review methods can inform intervention development and evaluation in a new way based on the strengths and needs identified by the target population.

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Introduction

Mental health problems cause considerable morbidity and mortality amongst young people [1–6]. More positively, mental health can be a resource for reaching one's full potential [1]. Indeed, promoting mental health may deliver many health and social benefits for the whole community [7]. Importantly, socially excluded groups or groups at risk of social exclusion may be at elevated risk for poor mental health [4, 8, 9].

Research on the determinants of mental health and models of health promotion suggests that young people's mental health be promoted at four levels [3, 10]: the individual, as through promotion of self-esteem [11, 12]; family relationships [13]; the local community, perhaps through social support [3, 14, 15] and wider society, for instance, through tackling social and material inequalities [16, 17]. UK policy favours this multilevel socioeconomic model of health inequalities [18]. Popay [19] has stressed the importance of informing policy and practice with explanatory models that capture such complexities by considering people, and their experience, as active agents rather than passive victims. In response, the government recommended more research involving the views of children in initiatives aimed at improving their health [20].

Relevant UK policy requires services to promote mental health for all [21–24] and to work within the

doi:10.1093/her/cym038

broader government agenda of tackling social exclusion [18, 25].

With mental health having such broad meanings and influences, there is a need to review an extensive research literature on priority topics to answer the question: what are the barriers to, and facilitators of, young people's mental health? Systematic reviews employ standardised and explicit methods for identifying, selecting and critically appraising research addressing a clearly formulated question and analysing the findings in order to prepare convenient and reliable summaries of the evidence. Earlier systematic reviews have addressed the effects of interventions [26–29] but not how young people's mental health or health-promoting behaviour might be influenced more broadly (barriers and facilitators). This paper reports a systematic review on such barriers and facilitators. It describes the broad literature and reviews in-depth: topics prioritised by commissioners and potential users of the review (interventions for preventing suicide and depression; promoting self-esteem and coping) and young people's own views of what helps or hinders their mental health. It also details an innovative approach to systematically reviewing diverse study designs, used first in this review and then in other topic areas of physical activity and healthy eating [30–33], compared with the conventional approach of restricting systematic reviews to a single study design, usually trials. This study represents one of the first few attempts to integrate different study designs, including qualitative research, within systematic reviews alongside trials [34–37].

Methods

General approach

This study embraced standard procedures for systematic reviewing [38, 39] and sought to develop this methodology further in three key areas. Full details have been published elsewhere [30].

First, it adopted a conceptual framework of 'barriers' and 'facilitators' to health as factors identified by observational studies, and potentially modifiable, removable or capable of being built upon to develop effective interventions.

Second, the review was conducted in two parts: a descriptive mapping of all relevant studies followed by in-depth review of the quality and findings of a subset of these studies. Discussion of key characteristics of the extant literature with review users identified the most relevant research areas for in-depth analysis [40].

Third, data from effectiveness studies (systematic reviews and outcome evaluations with primarily quantitative data) were combined with data from studies that described young people's views of factors influencing their mental health ('views' studies, primarily qualitative). The purpose was to ascertain not just whether interventions are effective but whether they address issues known to be important to young people using their views as a marker of appropriateness.

The review was conducted in five stages in the year from September 1999.

Identifying relevant studies

A highly sensitive strategy applied to several bibliographic databases (see Fig. 1) sought studies of (i) mental health (e.g. well-being, psychological adaptation), associated factors or 'mediators' of mental health (e.g. self-esteem, self-concept, coping skills) or mental ill-health (e.g. anxiety, self-harm, anorexia); (ii) generic and specific determinants of mental health or illness (e.g. resilience, risk factors, life change events, unemployment) or the promotion of positive health or prevention of ill-health (i.e. health promotion, primary prevention) and (iii) young people (e.g. adolescent, juvenile, teenagers).

Preparing a descriptive map of research activity

To be included in the map, studies had to

(i) address mental health promotion or mental illness prevention and/or mental health barriers and facilitators,
(ii) include participants with a mean age between 11 and 21 years,

- Commercially available electronic databases
  - Medline,
  - EMBASE,
  - PsycLIT,
  - ERIC,
  - Social Science Citation Index
- Specialised bibliographic registers
  - BiblioMap, at the EPPI-Centre;
  - HealthPromis, at the Health Development Agency (England); and the
  - Health Promotion Library Scotland, at the Health Education Board for Scotland); and
- Databases of reviews of effectiveness
  - the Cochrane Database of Systematic Reviews
  - Database of Abstracts of Reviews of Effectiveness, at the Centre for Reviews and Dissemination at the University of York).
- Ongoing or recently completed research was sought via
  - the Health Development Agency's project databases;
  - the Our Healthier Nation projects website;
  - REGARD, at the Economic and Social Research Council; and the
  - The National Research Register.

Fig. 1. Sources searched systematically, 1995 to September 1999.

(iii) describe an outcome evaluation or a systematic review conducted anywhere in the world or a UK-based process evaluation or non-intervention study and
(iv) be reported in English.

Studies were excluded if they reported prevalence surveys, non-systematic reviews, non-evaluated interventions, surveys examining a range of health-related behaviours only some of which are about mental health, theoretical or methodological studies only or single-case studies. Intervention studies were excluded if they were aimed at populations that had already experienced serious mental ill-health.

A standardised coding strategy was developed from our prior understanding of mental health services and research (see Fig. 2). It was piloted by two reviewers coding independently, who discussed discrepancies and amended codes and definitions appropriately before applying the strategy independently to all the studies.

Type of study: Outcome evaluation (RCT, trial, not stated, other design) process evaluation, systematic review, views study

Methods employed: qualitative, quantitative etc.

*Population:*Country,general population, children, young people adults, older people, age, Gender, Sexual orientation

Young people generally, or *elevated risk group* (unemployed, homeless, ethnic minority, learning disabilities, diagnosed with mental illness, diagnosed with physical disease, delinquent youth, young offenders, violent youth, drop outs, divorced parents, bereaved, drug using parents, mentally ill parents, urban youth, rural youth, low income, pregnant adolescents, other at risk population (specify)

*Intervention:*Site, provider, type

Mental illness: suicide, eating disorders, stress, anxiety, depression, psychotic disorder (e.g. schizophrenia, personality disorder), behaviour problems (violence, crime, bullying, delinquency, other)

Positive mental health: self esteem, self concept (e.g. identity), coping (including life skills), social support,

Mental health services, general mental health

For outcome evaluations or process evaluations: addressing effectiveness, implementation, acceptability.

For non-intervention research: association, explanatory, predictive, contextual, young people's views.

Addressing barriers or facilitators of mental health: unspecified, developmental factors, family, psychosocial factors, interpersonal factors, environmental factors.

Other significant features

Methodological quality

Fig. 2. Abbreviated coding scheme.

Prioritising focus for in-depth review

The findings of the descriptive map (including Table I) were presented to the Steering Group, which included a research commissioner, potential policy and practice users and researchers. The focus of interest emerging from their discussion was the evidence underpinning interventions addressing policy priorities and the degree of overlap with young people's views (see Fig. 3).

Only systematic reviews, outcome evaluations and UK-based studies of young people's views were reviewed in-depth. Systematic reviews and outcome evaluations had to meet three further sets of criteria:

(i) Scope: Systematic reviews and outcome evaluations were reviewed in-depth if they focused specifically on policy priorities of suicide or depression, their antecedents (self-harm and lack of self-esteem or coping skills) or on these topics within a general mental health scope.

(ii) Methodology: Systematic reviews were reviewed in-depth if they reported their inclusion criteria and search strategy and based recommendations wholly or partly on primary studies that had employed control or comparison groups. Outcome evaluations were reviewed in-depth if they employed a control or comparison group, reported both pre- and post-test data and, if non-randomised, appeared to show equivalence at baseline.

(iii) Coverage: Outcome evaluations were reviewed in-depth only if they had not already been reviewed in an included systematic review.

Young people's views studies had to:

(i) examine young people's attitudes, opinions, beliefs, feelings, understanding or experiences rather than their health status, behaviour or factual knowledge;
(ii) access views about young people's definitions of and/or ideas about mental health, their ideas about factors influencing their own or other young people's mental health and ways of promoting this and
(iii) privilege young people's views by presenting their views directly as data that are valuable and interesting in themselves rather than as a route to generating variables to be tested in a predictive or causal model (e.g. measuring a range of attitudes or experiences to see whether/how these predict mental health status).

Table I. *Number and proportion of studies according to mental health focus (N = 345)*

	N	*%*
Prevention of specific disorders/problems	148	43
Anxiety	10	3
Behaviour problems	31	9
Depression	19	6
Eating disorders	22	6
Post-traumatic stress disorder	2	1
Self-harm/suicide	46	13
Stress	18	5
Promotion of positive mental health	197	57
Coping	20	6
General mental health	115	33
Mental health services	6	2
Self-concept	22	6
Self-esteem	29	8
Supportive relationships	5	2

To keep the review current, studies published before 1990 were excluded.

Data extraction and quality assessment

Data for each study were entered independently by two researchers into a specialised computer database [41].

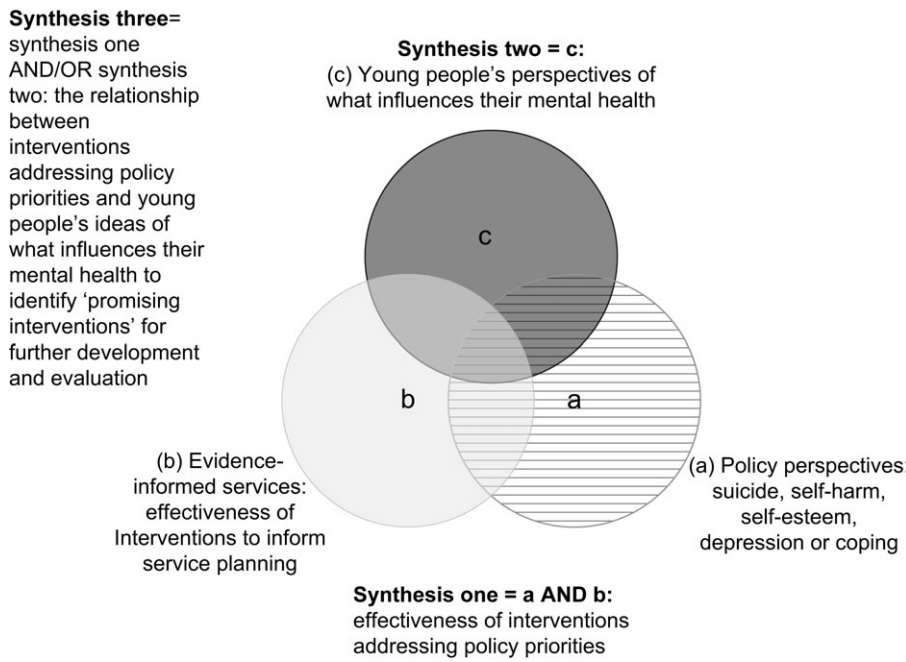

Fig. 3. In-depth review of three syntheses combining perspectives from policy and young people with principals of evidence-informed health services.

(i) Systematic reviews: Data extracted included intervention descriptions, study populations, outcome measures and review findings. Methodological quality was assessed according to the comprehensiveness of the sources searched for literature, quality criteria for assessing primary studies, the application of quality assessment and inclusion criteria and the methods used to analyse study data (all based on criteria employed by the Centre for Reviews and Dissemination, University of York) [42].
(ii) Outcome evaluations: Data were extracted on the development and content of interventions and effectiveness using the Evidence for Policy and Practice Information and Co-ordinating Centre's Review Guidelines [43]. Outcome evaluations were considered sufficiently 'sound' for generating potentially reliable results about effectiveness if they employed a control or comparison group equivalent in terms of sociodemograpraphic characteristics and baseline outcome variables, reported pre- and post-intervention data for all individuals or groups recruited into the evaluation and reported on all outcomes targeted by the intervention [44–46]. The results of other studies were judged unclear.
(iii) Studies of young people's views: Data were extracted on study aims, context, methods, sample and findings. Seven criteria were used to assess the quality of views studies [47]:

(a) an explicit account of theoretical framework and/or the inclusion of a literature review outlining a rationale for the intervention;
(b) clearly stated aims and objectives;
(c) a clear description of context that includes detail on factors important for interpreting the results;
(d) a clear description of the sample;
(e) a clear description of methodology, including systematic data collection methods;
(f) evidence of attempts made to establish the reliability and validity of data analysis and
(g) the inclusion of sufficient original data to mediate between data and interpretation.

Synthesis of findings

Structured summaries and evidence tables were prepared to describe the methodological quality and findings of each study. Three syntheses were then conducted:

(i) Effectiveness synthesis: A narrative synthesis drew together the characteristics and findings of the systematic reviews and individual outcome evaluations reviewed in-depth.
(ii) Young people's views synthesis: Studies were synthesised by grouping emerging themes according to what they might contribute to the development of mental health promotion interventions (e.g. the meaning of mental health for young people, what makes young people feel good or bad). A final step identified young people's views on what helps and hinders their mental health (as reported in detail elsewhere [47]).
(iii) Cross-study synthesis: A matrix juxtaposed the barriers and facilitators identified by young people alongside descriptions of the interventions of outcome evaluations reviewed in-depth. The matrix was stratified by the levels at which the barriers and facilitators appeared to be operating: the school, family and friends, the self and practical and material resources [31].

From the matrix, one can see

(i) where barriers have been modified and/or facilitators built upon by soundly evaluated interventions, and 'promising' interventions, which need more rigorous evaluation (matches) and
(ii) where barriers have not been modified and facilitators not built upon by any evaluated intervention, necessitating the development and rigorous evaluation of new interventions (gaps).

Results

Identification and classification of relevant reports

Figure 4 shows how screening 11 638 citations initially identified reports of outcome evaluations

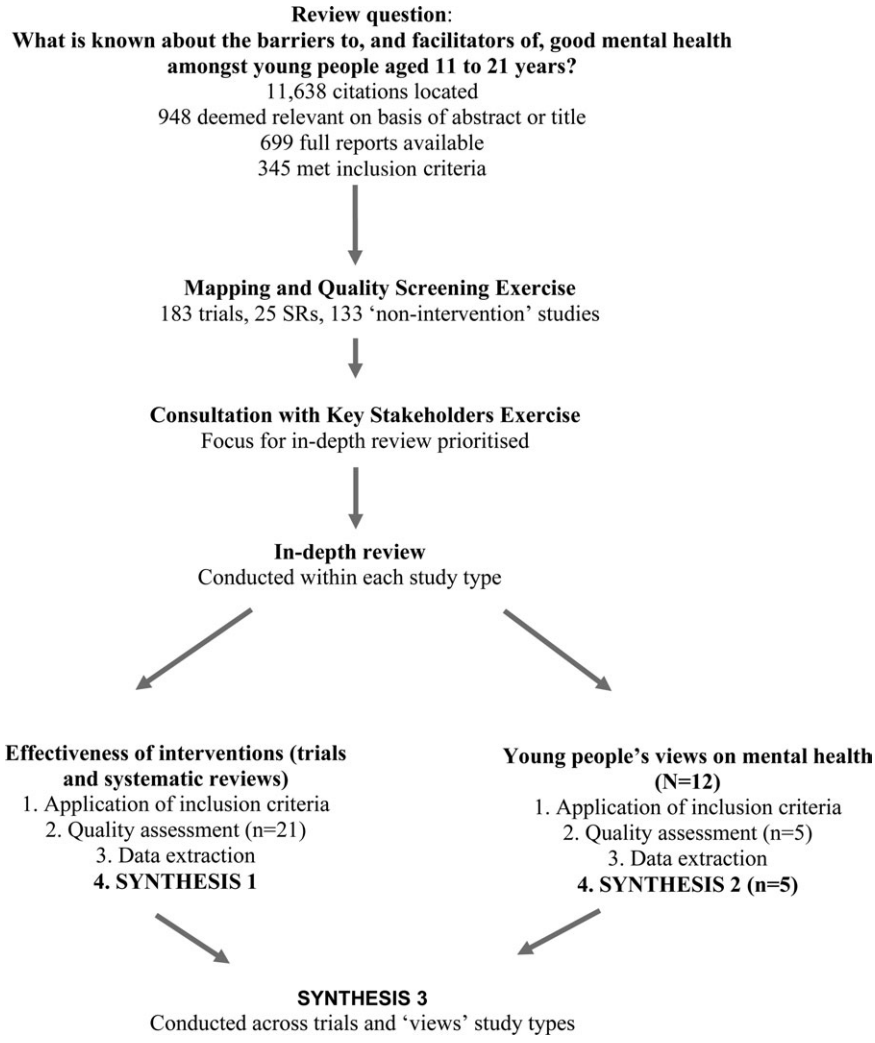

Fig. 4. Flow of literature through the review.

(183), systematic reviews (25) and 'non-intervention' studies (133) in the map; and, after discussion with the Steering Group, seven reviews, 14 trials and 12 studies of young people's views for in-depth review.

Map of research activity

Many studies have examined mental health barriers and facilitators among young people. More focused on the promotion of positive mental health rather than the prevention of mental health problems (Table I). The most common focus of the latter was suicide or self-harm or behaviour problems. Fewer studies focused on depression, anxiety problems or eating disorders.

More studies focused on the promotion of positive mental health generally by promoting awareness of mental health issues, 'well-being' or adjustment in the face of adverse or developmental life events, coping skills and community support

and a development programme to foster self-concept and employment skills.

Around half of the studies focused on young people in general (185, 54%). A third (111, 32%) studied young people from disadvantaged or socially excluded groups (e.g. unemployed young people, ethnic minority groups, homeless young people). Fewer (49, 14%) focused on young people considered to be 'at risk' for developing mental ill-health including those at risk by virtue of a personal, family or societal characteristics such as school failure, having divorced parents or making a life transition.

Studies examined a range of barriers and facilitators at three different levels. Non-intervention studies were much more likely than intervention research to examine structural factors such as unemployment, access to services or environmental modification (20 versus 11%) and much less likely to examine individual level 'psychological' factors (19 versus 36%). The types of interventions designed for different levels of influence are listed in Fig. 5.

Most intervention studies were conducted in the United States (150, 80%), and only 20% (37) elsewhere. Most were outcome evaluations with or without integral process evaluations. Three-quarters of these were controlled trials with random or non-random allocation.

Thirteen studies were potentially systematic reviews of the effectiveness of interventions to prevent mental ill-health or promote positive mental health. Most reviews made policy and practice recommendations, although the methods used to conduct them were of variable quality.

In-depth review: findings of earlier systematic reviews

Seven systematic reviews were reviewed in-depth, each varying in scope, methods and number of

Intervening at the level of the individual

- *Life events:* Helping young people cope with possible negative life events, for example, parental divorce, accidents or disasters.
- *Physical factors:* Physical activity or training in relaxation skills to promote positive mental health.
- *Psychological factors:* Decision-making and problem-solving skills to enable young people to make more realistic appraisals of their lives; increasing awareness and knowledge of mental illness and changing attitudes towards mental ill-health; teaching coping skills to deal with stressful situations or negative life events; the exploration of emotion in a group counselling context to facilitate the expression of emotion; and teaching relaxation skills to combat stress.

Intervening at the level of the community

- *Family factors:* Whole family in intervention activities, some which included family support as one component of an intervention, and others which taught young people skills to communicate with their families or helped them to cope with a family member in crisis.
- *Interpersonal factors:* Building social support networks and developing social skills to facilitate better interpersonal relationships.

Intervening at the level of society

- *Socio-cultural factors:* Fostering positive cultural identities and exploring cultural representations of women in the context of the prevention of eating disorders.
- *Structural factors:* Increasing access to resources or services, environmental modification and legislation or regulation.

Fig. 5. Focus of intervention studies.

included studies, although all specifically addressed effectiveness. Four focused on a variety of mental health topics [26, 28, 48, 49], one specifically on self-esteem [50] and two on suicide prevention [51–53].

The reviews' conclusions were mixed and sometimes contradictory. All reviews recommended more high-quality research. Clearest conclusions were: insufficient evidence to recommend universal school-based suicide prevention (some approaches have been shown to be harmful); primary prevention programmes can vary in their impact [51–53]. One review concluded that interventions that focus specifically on promoting self-esteem have a greater impact than less-focused interventions [50]; another review concluded that self-esteem should be promoted through a 'whole school approach' [28].

In-depth review: findings from outcome evaluations

Fourteen potentially high-quality outcome evaluations were reviewed in-depth. Five of these were judged to be methodologically sound; four were randomised controlled trials. Two focused on self-esteem [54, 55], two on depression [56] and one on suicide [57]. Most were implemented in secondary education and all were based in the United States. They employed various types of intervention using multiple delivery methods.

The study populations were described as predominantly white middle class [56], middle to upper class [55] or mainly highly educated, with professional occupations and from the upper income bracket [54]. Silbert and Berry [57] did not mention social class; ethnicity was fairly evenly divided among Caucasian, Black and Hispanic students, with a small percentage of Asian students.

No clear pattern emerges for effectiveness based on mental health promotion focus, the type of intervention or intervention provider. The clearest specific findings follow:

(i) A 6-week programme to teach young women how to recognise and restructure self-defeating thoughts improved knowledge about the technique [55].
(ii) Short knowledge building sessions did not improve long-term depressive symptoms, risk factors, knowledge, attitudes or intentions [56].
(iii) A curriculum teaching about suicide and depression was not effective for knowledge, stress, anxiety and hopelessness [57].
(iv) Development and evaluation of the interventions were weak in that only five outcome evaluations conducted integral process evaluations and young people were rarely consulted for their views on intervention development or impact.

In-depth review: findings from young people's views

Twelve studies were reviewed in-depth. Most were on general mental health issues and young people aged between 11 and 16 years in school settings. Their methodological quality was variable. While all studies clearly described the context of the study and nearly all stated their aims, only two made any attempt to establish the reliability and validity of data analysis.

Most participants were recruited from secondary schools [58–62]. Friedli and Scherzer [63] recruited middle and working class participants. Aggleton *et al.* [64] specifically recruited young people who might be socially excluded from a range of locations (centres for young unemployed or homeless people, resettlement projects, mental health drop-in centres, recreational and sports clubs) throughout England. They included 45 young men who were at high risk from psychosocial disorders, 45 with history of serious drug and alcohol misuse or serious anti-social behaviour and/or self-harm and 45 other young men. Armstrong *et al.* [65] recruited young people from school's minority ethnic communities, mental health services and local user and carer groups in Scotland.

The key findings (see Table II) were as follows:

(i) Young people equate the term 'mental health' with 'mental illness' and do not see it as relevant to their own lives. They may relate better to terms such as feeling 'sad', 'lonely', 'depressed' or 'troubled' [65].

Table II. *Synthesis matrix*

Barriers	Facilitators	Interventions from the in-depth review
Theme of school		
School [58, 59, 61–63, 65, 84–86]	That influence mental health in a positive way	Teacher–student relationships/school infrastructure/coping
Stress of having too heavy a work load that eats into free time [60–62, 85, 86]	Achieving in school [62, 86]	Evidence from systematic reviews
Exams [61–63, 85, 86]	End of the school day [62]	A meta-analysis [88] found that interventions to modify psychosocial aspects of the classroom through promoting supportive relationships between students and teachers, and social skill development and cognitive development were moderately effective
Boredom and monotony of school [86]	Teachers not seen as a good source of self-esteem [63, 86]	Evidence from specific studies cited within systematic reviews
The way teachers behave towards young people [59, 86]	That relate to talking to others about feelings or problems	Teacher training intervention to encourage supportive and reinforcing contacts between teachers and students was effective in reducing aggressive behaviour in boys and self-destructive behaviour in girls [88, 89]
	Teachers only rarely identified as people who can be talked to about feelings or problems [62, 86]	
Doing badly in school [61–63, 86]	Avoiding talking to teachers because of fear of lack of confidentiality [87]	High school intervention to modify classroom curricula, student ability, teacher–student relationships and promote parental involvement in school activities produced benefits in terms of scholastic achievement, absenteeism and school drop-outs [88, 90]
		School-wide intervention at teacher, administrator, mental health professional and parental level was effective at reducing serious behaviour problems, and improving student's sense of personal competence [88, 91]
		School transitions
		Evidence from systematic reviews
		A meta-analysis [88] found that interventions to help young people through a period of transition into a new school were of moderate effectiveness
		Evidence from specific studies cited within systematic reviews
		counsellor-led 6-week intervention where new and existing students met for information and problem sharing enabled new students to become comfortable with their new school [88, 92]

Table II. *Continued*

Barriers	Facilitators	Interventions from the in-depth review
Theme of material and physical circumstances		
Choosing and finding a job [61, 84, 85]	That could/should be done to promote mental health	No interventions identified
Unemployment [61, 64]	More money for services such as ChildLine [65]	
Not having stable home [64]	Better provision of information and advice [65]	
Having nothing to do [60, 65, 77–86]	Provision of mental health information in specific formats: discreet, positive, to the point, designed by young people for young people and not leaflets [86]	
Environmental, social and political issues [63, 65, 85]	Young people's loss should be addressed in a teachers resource pack [60]	
Restrictions on freedom due to police, societal attitudes and structure—e.g. lack of support for those not living in parental home/who have 'dropped out' of society [64]	That influence mental health in a positive way	
Lack of material resources [59, 61, 64, 84–86] so unable to participate in leisure activities but also not get on with tasks of everyday life [64]	Money [62] financial [63]	
	Increased employment opportunities [63]	
	Solitary pastimes [62]	
	Physical activity [62]	
	Having fun [65]	
	Pets [65]	
	Presents [65]	
Theme of relationships		
Friends and peer group	That could/should be done to promote mental health	Family relationships
	Young people's loss should be addressed in resource pack [60]	
	That influence mental health in a positive way	
	Personal achievement to gain recognition from family/ friends [65]	
Friends and peers [58–60, 62, 65, 85–87] include the following: being excluded or not accepted, violation of trust or loyalty and being left out and lonely	Families helping you feel loved and cared for [62, 65]	
	Parents to help your self-esteem [86]	
	Friends to give you respect [86]	
	Having people to talk to [65]	
Violence/bullying by others [60, 85–87]	Receiving compliments, congratulations [86]	Evidence from systematic reviews
	Having a boyfriend/girlfriend [86]	
	Male friends to reinforce identity [64]	
	More intimate friendships for emotional support [64]	
Anxiety caused by experience of violence from others—receiving threats and getting into fights [64]	That young people do to feel better or good about themselves/that relate to talking to others about feelings or problems	
	Talking to friends to counter stress/when you feel bad [63, 65, 87]	

Table II. *Continued*

Barriers	Facilitators	Interventions from the in-depth review
	Talking to an adult for less-familiar/more serious problems [87]	
	Seeking advice from a professional for stress and anxiety [63]	
Family	Seeing counsellor not as good as sport for relieving frustration [64]	A meta-analysis [88] found that studies focusing on helping children and young people through a period of parental divorce (mostly brief group-based interventions) had limited effectiveness
	Talking about problems not seen as helpful [64]	
	Boys less likely to talk to someone as coping strategy [86, 87]	
	Difficult to get support by talking to people if parent has mental health problem—too hard to explain or thought something that should not be discussed outside family [65]	
Family [58–60, 63–65, 85] includes family discord/arguments and conflict between parents or with parents	Friends more likely to be talked to about problems than family [59, 86]	
	Adults do not understand what really matters to young people [85]	
	Feeling unable to talk about feelings [59, 86]	
	Feeling you have nobody suitable to talk to [59, 62]	
Unpredictable behaviour from parents, parents not understanding and parents not coping (e.g. money, illness, death in family)	Fearing lack of confidentiality e.g. with services like ChildLine [65]	A meta-analysis [88] found that interventions to train parents in child development were not effective
	Fearing worries might be undervalued by adults they talk to [65]	
	Fearing that own worries are not important enough to be talked about—adults have worse problems [65]	Evidence from specific studies cited within systematic reviews
	That could/should be done to promote mental health	
Lack of freedom (not being able to go out, getting questioned if they do, having privacy invaded)	Young people to be listened to (would mostly like friends and family to listen but also health professionals)	Family bereavement intervention was effective for reducing children's depression and conduct disorder [48, 93, 94]
	Young people to be heard and understood	
	Someone to come along and help young people rather than young people having to seek help	
	Young people to be comforted, reassured and cheered up (by others)	Intervention to help children of divorced parents (Children of Divorce Intervention Programme) was effective for reducing learning problems, shyness and social competence [48, 93, 95]

Table II. *Continued*

Barriers	Facilitators	Interventions from the in-depth review
	Young people to be left alone (substantial minority)	Evidence from outcome evaluations Classes teaching families to build self-esteem in each other and themselves; authors judged to be effective for knowledge, maternal empathy with and lower dissonance with spouses and fathers' perception of family adaptability and cohesion but ineffective for self-concept [54] Peer relationships Evidence from specific studies cited within systematic reviews Social skills training intervention for young people with low peer acceptance and communication problems was effective for short-term improvements in conversation skills and responses to peers [48, 93, 96] Academic and social skills intervention in which children received tutoring in reading, maths and social skills was effective at increasing cognitive competence and reducing peer rejection [48, 93, 97]
Theme of self		
Not feeling as if achieving (in sport—boys especially) [62]	That influence mental health in a positive way Achieving in sport [62] winning at football [62] Self-esteem [65] *The ability to cope with the ups and downs of life [65]* That young people do to feel better or good about themselves Listening to music to address and prevent stress and anxiety [63, 87] *Creating (e.g. music) to express feelings [64]*	Self-esteem and coping
	Eating chocolate, taking long baths as ways of coping with stress [87]	Evidence from systematic reviews
	Consulting books and magazines to address and prevent stress and anxiety [63]	Review of range of interventions to promote self-esteem [50] found that, overall, they have a modest effect, but those with a major focus on self-esteem are more effective than interventions with a broader focus
Not feeling in control [62]	Keeping busy if feel bad [63]	Evidence from specific studies cited within systematic reviews
	Rest/sleep if feel bad [63, 87]	Aerobic exercise and psychological well-being intervention during pregnancy was effective for self-esteem and depression [28, 98]
	Sport, dance and raves for feeling angry, frustrated or hopeless [64]	Psychoeducational intervention (Personal Empowerment Programme) was effective for improving self-esteem [28, 99]

Table II. *Continued*

Barriers	Facilitators	Interventions from the in-depth review
Powerlessness [61]	Using physical aggression to deal	Cognitive stress reduction intervention was effective for self-esteem, anger and anxiety [28, 100]
	With anger [62–65]	Group sessions using peer counselling and job internship in 14- to 17-year olds with on-going physical health condition improved self-esteem and mental health status but not competence [49, 101]
	Getting angry to deal with being depressed and to avoid hurting yourself [64]	School-based social support group intervention improved social support and adjustment to university life in students aged 17–20 years [102]
Worries about physical appearance—sometimes but not always more of problem for girls [58, 62]	Crying to release feelings [62]	Evidence from outcome evaluations
Fears for the future [63, 64]	*Cutting yourself or stealing cars when you feel angry to give yourself a 'buzz' [65]*	Class series teaching to recognise self-defeating thoughts, replace them with self-improving and self-reinforcing thoughts and counselling; authors judged to be effective for self-referrals for further counselling and for knowledge [55]
	Taking drugs to counter anxiety and stress [63, 64]	Classes teaching families to build self-esteem in each other and themselves; authors judged to be effective for knowledge, maternal empathy with and lower dissonance with spouses and fathers' perception of family adaptability and cohesion but ineffective for self-concept [54]
No views identified specific to depression	No views identified specific to depression	Depression Evidence from specific studies cited within systematic reviews Class series teaching causes, symptoms treatment of depression, sources of help; authors judged ineffective for attitudes, self-referral or symptoms possibly due to low intensity and duration of intervention [51, 56] Class series teaching symptoms, causes and treatments of depression, behaviour training to increase pleasurable activities and link between activities and mood level; authors judged ineffective for attitudes, self-referral or symptoms possibly due to low intensity and duration of intervention [51, 56] School-based intervention did not reduce suicide attempts but was effective in improving depression [51, 56] School-based cognitive behaviour therapy intervention showed significant improvements in children at risk of depression [51, 103, 104]

Table II. *Continued*

Barriers	Facilitators	Interventions from the in-depth review
		School-based cognitive behaviour therapy intervention determined to be significantly more effective than usual care [51, 56] School-based cognitive behaviour therapy and relaxation therapy significantly improved depression [51, 105] Community-wide public health activities to reduce depression, suicidal thoughts, bullying, satisfaction with school and life and drug and alcohol use showed higher overall scores in community that received these activities, in comparison with communities that did not [49, 106]
No views identified specific to suicide	No views identified specific to suicide	Suicide Evidence from specific studies cited within systematic reviews and outcome evaluations School-based interventions to recognise and intervene with a suicidal peer have shown positive effects [52, 53, 57, 107–109] School-based interventions to improve knowledge and attitudes have been shown to be effective [52, 53, 57, 110–115]; but have also shown mixed effects [52–54, 111, 115] school-based interventions to effect stress, depression, anger, suicidal thoughts to be effective [49, 51–53, 57]; [111–115, 116–121] but may have negative effects in subgroups [52, 53, 111] School-based interventions generally improve coping skills [51–54, 60, 110–114, 118, 121, 122] but may have possible harmful or mixed effects in subgroups [52, 53, 111]

In the table, barrier or facilitator items in italics are those expressed solely by a socially excluded group.

(ii) They have a wide range of concerns from unhealthy school practices to environmental pollution and poverty.
(iii) Main worries or sources of stress arise from the school (e.g. teachers, workload), relationships with family and friends (e.g. rejection by peers), the self (e.g. academic achievement) and material and physical resources (e.g. future employment; lack of leisure opportunities).
(iv) Young people use a number of coping strategies, including listening to music, indulging themselves (e.g. eating chocolate), physical activity and using drugs and alcohol.
(v) Talking to someone was not always considered useful or possible and there were anxieties around talking to adults such as teachers or parents.
(vi) Their ideas for how their mental health could be promoted included helping them to deal with experiences of loss, better provision of relevant information and advice (e.g. designed by young people, emphasising what to do rather than the problem itself), more money for services such as ChildLine and the need to be listened to, heard and understood.

Barriers uniquely mentioned by socially excluded young people were as follows:

(i) physical or material circumstances such as not having stable home and being unable to participate in leisure activities or get on with tasks of everyday life [64];
(ii) restrictions on freedom due to police, societal attitudes and structure—e.g. lack of support for those not living in parental home/who have 'dropped out' of society [64] and
(iii) anxiety caused by experience of violence from others—receiving threats and getting into fights [64].

Facilitators uniquely mentioned by socially excluded young people stressed their isolation:

(i) The ability to cope with the ups and downs of life [65] was the only positive facilitator uniquely mentioned by this group.
(ii) Talking about problems was not seen as helpful [64].
(iii) Difficult to get support by talking to people if parent has mental health problem—too hard to explain or thought something that should not be discussed outside family [65].
(iv) Adults do not understand what really matters to young people [85].

These young people adopted a number of coping strategies, some counter-productive:

(i) creating (e.g. music) to express feelings [64];
(ii) sport, dance and raves for feeling angry, frustrated or hopeless [64];
(iii) getting angry to deal with being depressed and to avoid hurting yourself [64];
(iv) cutting yourself or stealing cars when you feel angry to give yourself a 'buzz' [65] and
(v) taking drugs to counter anxiety and stress [63, 64].

In-depth review: synthesis across study designs

Table II illustrates the cross-study synthesis. The matrix covers four levels at which the barriers and facilitators appeared to be operating: the school, physical and material resources, relationships with family and friends, and the self. Within each theme, relevant barriers and facilitators (as expressed by young people) are listed in the first two columns, while effective interventions (as identified by the systematic reviews and outcome evaluations) that address the barriers or build on the facilitators can be found in the third column. The matrix provides a visual representation of matches and gaps between barriers/facilitators and interventions addressing them.

Within schools, effective interventions addressed student concerns about teachers. No evaluated

interventions (effective or otherwise) were identified, which addressed young people's concerns about workload or academic achievement and engagement in school.

Considering material and physical circumstances, no evaluated interventions reviewed in-depth addressed young people's concerns about future employment/unemployment and financial security; having access to basic rights, resources and support or adequate leisure facilities. However, several relevant and potentially high-quality outcome evaluations were included in the descriptive mapping. These included interventions aiming to foster positive cultural identities [66] and exploring cultural representations of women (e.g. in magazines and the media) in the context of the prevention of eating disorders [67]. Interventions targeting 'structural' factors were those providing increased access to resources or services [68, 69], environmental modification [70, 71] and legislation or regulation [72]. These types of interventions may be particularly valuable for socially excluded young people who identified more barriers in this area than other young people.

There were effective interventions considering relationships that addressed young people's concerns about parental divorce and conflict; feeling bad because of bereavement and concerns about peer rejection. These need to be built on, particularly to support socially excluded young people.

There was a lack of effective interventions for fostering talking to friends. However, potentially high-quality outcome evaluations examining the effectiveness of 'peer counselling' were identified in the mapping. Another major gap was addressing concerns about violence (particularly relevant to socially excluded young people) and bullying, although two potentially relevant and high-quality outcome evaluations were included in the descriptive mapping [72, 73].

Effective interventions at the level of the self fostered young people's self-esteem and may help them to address concerns such as fears for the future and ability to take action/be in control and negative feelings around achievement and physical appearance. Potentially relevant and high-quality outcome evaluations that focused on eating disorders, anxiety or stress were identified in the mapping [67, 74–78].

Discussion

This review both updates and extends earlier systematic literature reviews of young people's mental health. Despite a significant amount of research activity, good-quality research evaluating the effectiveness of mental health promotion, particularly in the UK, is scarce. Nevertheless, the review found a few rigorous evaluations that have shown a range of different types of mental health promotion to be effective in changing some outcomes for some groups of young people. Given the social and emotional development and changing circumstance of young people between the ages of 11 and 21 years, more work needs to be done to stratify this evidence relevant to particular age groups and settings.

This review is limited to particular policy and practice priorities, and relies on studies available before 2000. More recent systematic reviews have appraised the evidence for mental health promotion in schools [29, 79], preventing drug abuse [80] or eating disorders [81] and improving self-esteem [82]. However, none of them took a systematic approach to combining evidence of effectiveness with evidence of young people's views.

This review reveals a mismatch between the efforts of researchers addressing policy imperatives for mental health with intervention studies and what is known about young people's views of their own lives. Although many of the studies in other systematic reviews addressed the policy priority of suicide prevention (see Table II), their findings were mixed. At the same time, none of the studies of young people's views raised suicide as an issue, even though some studies included high-risk or marginalised populations [64, 65]. The pattern is similar for the prevention of depression. Indeed, young people described their mental health in functional rather than symptomatic terms [83].

In contrast, while ten of the views studies revealed material and physical circumstances as influencing young people's mental health, there

were no evaluated interventions addressing these, soundly evaluated or otherwise.

Far more research has addressed relationships (ten views studies, two systematic reviews and one additional sound trial) and self-esteem and coping (seven views studies, one systematic review and two additional sound trials). However, these trials included middle to upper class young people rather than those in more challenging circumstances [54, 55].

In summary, rigorously evaluated interventions more often addressed priorities not raised by young people themselves and populations at low risk for mental health problems.

Consequently, there is currently little research to guide mental health promotion for socially excluded groups. This is a significant research gap since current health policy in the UK has a clear commitment to tackling the wider determinants of health and inequalities in health.

Funding

Department of Health, England.

Acknowledgements

The views expressed in the report are those of the authors and not necessarily those of the Department of Health.

Conflict of interest statement

None declared.

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Received on July 14, 2005