HASTINGS PRINCE EDWARD
Public Health

Increasing Resilience in Children Ages 0-12 Years

An Evidence Summary

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Background

Issue

Throughout the early years, healthy social and emotional development paves the path for positive mental health and resilience later in life. However, in Canada, an estimated 1.2 million children and youth are affected by poor mental health (Mental Health Commission of Canada, 2017). People who are resilient are able to adapt more effectively to difficult situations because the past adversity they have experienced has prepared them to cope with challenges that may lie ahead (Barankin & Khanlou, 2007). Specifically, children who are resilient tend to be able to empathize with others, and they tend to be better problem solvers, who are more interested in school, dedicated to learning, and hopeful about the future. Furthermore, when resilience is promoted, it leads to better mental health down the road (Barankin & Khanlou, 2007). Children and youth deserve the best start in life; providing them with the skills to cope with stress and build self-esteem is essential in promoting positive mental health and resilience as they grow and develop.

Local Context

Public health aims to prevent illness and improve the health of the population. Programs that are designed to promote resilience in youth who are exposed to stress are expected to result in a reduction in negative health outcomes (Sandler, Wolchik, Cruden, Mahrer, Ahn, Brincks & Brown, 2014). Across Canada, it is estimated that 15 to 21 percent of children and youth have mental health conditions that impact their capacity to function. While the Ontario Government's mental health strategy for children and youth currently focuses on providing mental health services for those affected by mental illness, another goal of the strategy is to also dedicate resources towards preventative measures (Ministry of Children and Youth Services [MOCYS], 2016).

Until recently, there has been little direction for public health in relation to fostering resilience in children and youth. However, the Ministry of Health and Long-Term Care (MOHLTC) has released a consultation document with modernized

standards for public health programs and services; a review of these new standards indicates an emphasis on mental health promotion across several program standards: Chronic Diseases and Injury Prevention, Wellness and Substance Misuse, Healthy Growth and Development, and School Health (MOHLTC, 2017). Furthermore, requirements state that through partnership and collaboration, public health will offer support to school boards and schools to assist with the implementation of health-related curricula and health needs in schools, including mental health promotion, with a goal of achieving optimal health of children and youth (MOHLTC, 2017).

Therefore, this literature review will explore the existing research on strategies to build resilience and promote mental health in children ages 0-12 years, and aims to identify actionable recommendations for building resilience in children and youth through public health practice.

Key Concept Definitions

Resilience

Resilience, as defined by Barankin & Khanlou (2007), is the capacity to positively respond or adapt to, learn, and grow when confronted with change, challenging life circumstances, and setbacks, while minimizing or avoiding the damaging effects of those events. Sancassiani (2015) defines *resilience* as the universal capacity that allows a person to respond proactively to new situations and to prevent, minimize or overcome the damaging effects of adversities.

> Resilient children tend to be empathic; that is, they can understand and sympathize with the feelings of others. They tend to be good communicators who are able to solve problems. They have a strong interest in school, and are dedicated to learning. They're driven to achieve goals. They're involved in meaningful activities. They're hopeful about the future. They have a solid relationship with one or more adults. And they live in safe and well-functioning families and communities (Barankin & Khanlou, 2007, p. 9-10).

Literature Review Research Question

To guide public health practice in promoting resilience in children, the following research question was formed: *What interventions build or increase resilience in children, ages 0-12?* The National Collaborating Centre for Methods and Tools (2015) describes using the Population, Intervention, Comparison, Outcome (PICO) format for defining a research question as a critical step in the search for research evidence. Using PICO, the research question was further defined as: Population - children ages 0-12 years; Interventions - outreach, methods to reach populations and campaigns; Comparison - no intervention; Outcome - self-perceived or objective measures of resilience, emotional resilience, psychological resilience, positive mental health and positive coping skills. See Table 1.

A search of the literature was conducted to determine effective interventions that build resilience in children and inform future program planning and development within public health practice.

Table 1

Research Question and Search Terms

	Population	Intervention	Comparison	Outcome
Research Question	Children ages 0-12 years	Outreach, methods to reach populations and campaigns	No intervention	Self-perceived or objective measures of resilience, emotional resilience, psychological resilience, positive mental health, positive coping skills

Literature Search

To answer the research question, using the National Collaborating Centre for Methods and Tools (NCCMT) 6S Pyramid approach, a search of online databases, select grey literature repositories, and websites from the health, psychological and social science disciplines was conducted in April 2016. Databases and repositories

included Medline, PsychINFO, Database of Abstracts and Reviews of Effects, Health Evidence, Cochrane Database of Systematic Reviews, National Guideline Clearinghouse, Turning Research into Practice (TRIP) Medical Database, and Cumulative Index to Nursing and Allied Health Literature (CINAHL). To narrow the scope and exclude articles related to child trauma and illness, subject headings and keyword terms describing resilient behaviour were combined with mental health language. A total of 170 synthesized articles were retrieved in conjunction with 20 grey literature resources and 32 summaries. For an example of the search strategy, see Appendix A.

Relevance Assessment

To ensure consistency with the inclusion or exclusion of research articles for final review, analysis of the titles and abstracts of the search results was completed individually, by multiple assessors, and then as a group.

Following the title and abstract analysis (primary relevance assessment) and the removal of all duplicates, 61 articles remained for full document assessment and review. Each article was then independently reviewed by two reviewers to assess relevance to the research question. Articles were excluded if they did not meet the inclusion criteria. See Appendix B for Inclusion / Exclusion Criteria. This step resulted in the exclusion of 36 articles and retention of 25 relevant articles for further assessment and appraisal. Appendix C illustrates a diagrammatic overview of the search process.

Critical Appraisal

The Health Evidence Quality Assessment Tool for Review Articles was used to critically appraise the relevant systematic reviews selected from the literature search. Appraisal of Guidelines for Research and Evaluation II (AGREE II) was a second tool used to critically appraise any of the grey literature selected. The 25 pieces of relevant literature were divided amongst the group, and two reviewers independently completed assessments of each article. Ratings were then compared and any discrepancies were

discussed between the reviewers or brought to the entire group for discussion until a final quality assessment rating was agreed upon.

From the 25 articles, four were rated as *weak*, seven were rated as *moderate*, and fourteen were rated as *strong* quality. The group decided to use only strong-quality-rated literature for this review; the following sections synthesize the evidence from the 14 strong-quality-rated pieces of literature.

Description of Included Studies

Following the critical appraisal process, the resulting research literature used for this review included 14 strong-quality-assessed articles consisting of summaries, systematic reviews and grey literature.

Synthesis of Findings

Based on hierarchies for quality research data, the literature that was used for this review can be recognized as strong in quality. However, analysis of the data within each piece of literature must also be assessed for quality of data and relation to the research question.

Two main themes related to building resilience in children 0-12 years of age were identified in the literature: school-based interventions and family-based interventions.

School-Based Interventions

Children spend a significant amount of time in the school environment focused on academics and developing skills and relationships with others (Mallin et al., 2013, Walker & Levin, 2013). Utilization of this setting to promote positive mental health and build resiliency is logical and appropriate. The World Health Organization (2017) defines *health-promoting schools* as healthy settings that focus on building capacity for living, learning and working. Similarly, the literature supports the idea that schools can be ideal settings for implementing mental health promotion strategies that promote

resilience in children. Seven strong-quality-appraised articles from our literature review described the use of schools as appropriate settings and as integral partners in strategies to promote resilience.

Universal, Whole-School Approach

A universal, comprehensive, or whole-school approach describes strategies that can be applied school-wide for all students to influence the environment and culture of the school (Barlow et al., 2007; Mallin et al., 2013; O'Mara & Lind, 2013; Weare & Nind, 2011). In addition, universal programs for all students that focus on promotion of positive mental health, changes in school climate, and extend beyond the classroom have been shown to be effective, as well as strategies directed at high-risk students that support the development of self-esteem, coping, and stress management skills (O'Mara & Lind, 2013; Weare & Nind, 2011). Barlow et al. (2007) reported that a whole-school approach promoting mental health was more effective than methodology aimed at preventing mental illness, specifically.

Mallin et al. (2013) describes the use of a school-wide, tiered model that incorporates primary prevention strategies (i.e., fostering effective teaching practices and curricula to promote positive mental health for all students); secondary prevention strategies (i.e., targeting students at-risk for academic or behavioural problems); and tertiary prevention strategies directed at students with identified persistent difficulties. Such an approach is comprehensive in influencing the environment of the whole-school. To achieve optimal impact, the work on personal skills need to be embedded within a whole-school, multi-component approach which includes changes to the school ethos, teacher training, liaison with parents, parenting education, and community involvement (Sancassiani et al., 2015; Weare & Nind, 2011).

An overview of meta-analyses by Sandler et al. (2014) assessed the effects of universal school-based social and emotional learning programs aimed at promoting healthy development or resilience across full-classrooms and across all grades. Results showed small but significant positive effects at reducing conduct problems and emotional distress. These effects were evident regardless of whether a program was delivered by teachers, delivered by non-school personnel or implemented solely in the

classroom, or whether a program included a school-wide component or parent component; no increased effects were shown for multi-component programs compared to single-component programs (Sandler et al., 2014).

School Environment

Changes in the overall school climate, including classroom approaches to promoting positive behaviours and social and emotional skills, also support resilience in children (Mallin et al., 2013; O'Mara & Lind, 2013). In addition, research supported the positive effect of mental health and well-being promotion on the school "ethos" and culture, indicating an area for intervention (Weare & Nind, 2011). The acquisition of social and emotional skills and competences was found to be associated with positive youth development, character education, and healthy lifestyle behaviours, along with a reduction in depression and anxiety, conduct disorders, violence, bullying, conflict and anger (Sancassiani et al., 2015; Weare & Nind, 2011). Sancassiani (2015) further explains that school-based interventions, aimed to enhance these skills, go beyond a problem-focused approach to embrace a more positive view of health and could also improve a youth's well-being. When integrated into the general classroom curriculum, and in all interactions with children, the effect of teaching these skills was found to have a greater and more long-lasting impact than when the skills were taught in isolation (Weare & Nind, 2011).

School and Community Collaboration

Approaches to mental health promotion that involve multiple stakeholders and partnerships across sectors (i.e., nurses, teachers, schools, parents, professionals, communities) have been shown to be effective strategies for promoting mental health for all students (O'Mara & Lind 2013; Weare & Nind, 2011). Similarly, programs following a student-focused philosophy involving cooperation, coordination, and collaboration with families and educators in academic, social, emotional, and behavioural domains, have been shown to strengthen resilience for at-risk children (Mallin et al., 2013). For example, an overview of meta-analyses of mentoring programs involving non-parental, non-professional adults (or older youth) showed

small, significant positive effects on psychological/emotional problems and conduct problems (Sandler et al., 2014).

Sancassiani et al. (2015) reported that when interventions in the school setting are combined with efforts to create environmental support and reinforcement from family members, health professionals, other concerned community members, and the media, there is an increased likelihood that students will adopt positive social and health practices. Furthermore, parental involvement is also a key component to interventions as they can reinforce messages at home that children are learning in school (Weare & Nind, 2011). Involving youth, and building capacity for designing mental health promotion interventions that align with their priorities, was also suggested to increase the effectiveness of the initiatives (O'Mara & Lind, 2013).

Policy

Mental health promotion in the school setting also benefits from policy development that supports inter-sectorial linkages and collaboration on decision-making (O'Mara & Lind, 2013).

Other School-Setting Interventions

Some promising interventions to help children better cope with stress and promote mental health were identified, including mindfulness- based interventions and physical activity (Barlow et al., 2007, Zenner et al., 2014, Ahn and Fedewa, 2011). After-school programs teaching social and emotional skills with children and adolescents using effective "SAFE" teaching practices (sequenced, active, focused and explicit) showed small significant positive effects for school bonding, pro-social behaviour, grades, school attendance and achievement test scores (Sandler et al., 2014).

From a public health perspective, utilizing the school setting and partnering with schools to implement mental health promotion interventions supports the public health mandate of promoting health, preventing disease and injury and supporting healthy environments. By supporting resilience in the school setting, children develop competencies that allow them to fare better at home, in school, and in the community (Mallin et al., 2013).

Mallin et al. (2013) identified four main challenges to producing changes in the school setting: the educational challenge (i.e., sustaining change in a large quantity of schools and classrooms); bureaucratic challenge (i.e., improving connections between other organizations affecting social policies); learning challenge (i.e., continuous monitoring of new information and modifying approaches within a complex system); and political challenge (i.e., responding to political culture). It is important to be aware of these challenges when suggesting appropriate and realistic recommendations for public health.

Family-Based Interventions

The work of public health considers both the biological and social determinants of the whole population, with particular emphasis on those at-risk for poor health outcomes. The literature search identified parenting programs and interventions targeting high-risk families as strategies for building resilience and increasing positive mental health among children.

Parenting Programs

Similar to the whole-school approach, Barlow et al. (2012) suggested that population-based parenting programs targeting all parents may be more effective for preventing problem behaviours in children than those directed at specific audiences. However, in addition to a universal approach targeting everyone, evidence also showed strong positive effects for combining universal approaches with a robust, targeted component for at high-risk children (Beyer et al., 2009; Weare & Nind, 2011).

Parenting plays a key role in a child's development and impacts a child's behaviour and emotional well-being. The literature identified the first three years of a child's life as being particularly important in establishing patterns of emotional, cognitive and social functioning throughout the lifespan (Barlow et al., 2012). Hence, parenting programs targeting parents of infants and toddlers were shown to have the potential for preventing the occurrence of emotional and behavioural problems in children (Barlow et al., 2012). Interventions focusing on improving parental sensitivity and attachment to their infant were found to be effective (Barlow et al., 2007).

In addition, an overview of meta-analyses indicated that parent-training programs had a significant positive impact on child externalizing (i.e., disruptive, hyperactive, or aggressive) behaviours internalizing problems, as well as positive effects on educational and cognitive outcomes (Sandler et al., 2014). More specifically, programs that involved positive parent-child interactions, time out, consistent responding, and practice of program skills with the child, showed the greatest reduction on externalizing behaviours (Sandler et al., 2014).

The style of parenting program may vary based on delivery method (i.e., on a one-to-one basis or to groups of parents) as well as by setting, such as hospital/social work clinics or community-based settings, like schools or churches (Barlow et al., 2012). However, Barlow et al. (2007) suggested group-based parenting programs geared to families with children three to ten years of age appear to be more effective than those targeting families with children less than three years of age.

Targeted Programs for At-Risk Families

Intervention programs that specifically target at-risk or high-risk families were also commonly reported in the literature.

In a meta-analysis of home visiting programs, families were identified as being at-risk if they had low income, were receiving social assistance, or if they were a teenage parent or at risk for abuse or neglect. The following targeted intervention strategies showed a small significant effect on child social and emotional outcomes at post-test: parent education, support, and counselling; encouraging parent-child activities; case management; and child health or developmental screening (Sandler et al., 2014).

Further research on programs promoting resilience in children from families impacted by family disruptions such as parental divorce, parental bereavement, or parental mental health issues, identified mixed results (Sandler et al., 2014). Parent and child-focused programs and court-affiliated parent-education programs showed significant positive effects on anxiety and improvement of child well-being, respectively. A variety of programs targeting children of bereaved parents showed inconsistent findings on depression and anxiety; however, family, parent, couple, or adolescent-

focused programs for children at-risk, based on parental mental illness, reported significant effect for reducing onset of a mental illness, and reducing internalizing problems (Sandler et al., 2014).

Furthermore, intensive programs targeting at-risk families of infants were also shown to be effective in preventing child abuse, adolescent delinquency, child internalizing problems, positive and non-punitive parenting, parent-report of severe assault and preschool attendance (Beyer et al., 2009).

Similarly, parent training programs and child social skills training programs delivered by professionals or teachers in a variety of settings, were shown to be effective when targeted towards children at-risk for developing mental health disorders based on presence of symptoms or living in low income families (Waddell, 2007).

Teaching self-care support to children and young people with mood disorders or behaviour problems has also been shown to be moderately effective in improving their mental health symptoms, when followed up at 6 and 12 months (Pryjmachuk, Elvey, Kirk, Kendal, Bower & Catchpole, 2014). Specifically, self-care support interventions that involved longer-term follow up were more sustainable (Pryjmachuk et al., 2014). Pryjmachuk et al. (2014) added that problems can be more successfully addressed when a child's strengths, self-efficacy and resilience are promoted and when that self-care support is administered with effective and consistent leadership.

In addition, Shucksmith et al. (2007) reviewed various targeted interventions for children identified with mental health disease. Such interventions included training in coping skills, stress management, self-monitoring, mentoring, and cognitive behavioural therapy; however, it was not clear if these interventions were also beneficial for building resilience in children not identified with a pre-existing mental health diagnosis (Shucksmith et al., 2007).

Limitations

There were several limitations to the findings that were evident in this systematic literature review. The age range of focus for strategies that build resilience was youth ages 0-12 years. However, some articles included in this review focused on strategies directed at children up to young adulthood. To avoid the possibility of excluding articles

that would be relevant to the age range of focus in this review, it was decided by the reviewers that if an article covered the ages 0-12, it would be included regardless of whether strategies in the review were also directed at people above that age.

One strong-quality-appraised article was deemed to be too impractical for implementation within public health, so it was excluded at the synthesis stage. Lucas et al. (2012) reported on the effectiveness of the direct provision of monies to families identified as socially or economically disadvantaged. For the purposes of this report, it was decided that this type of intervention would not be feasible or appropriate for public health; therefore, data was not reported from this article.

Additionally, because of the immense body of literature that existed on building resilience and its sub-categories, much of the literature explored was high level (i.e., systematic reviews or reviews of reviews) making it difficult to extract the exact programs discussed. Therefore, to determine program level strategies to build resilience, further review is necessary.

Articles that were reviewed demonstrate findings applicable to the Canadian context as reviews that explored strategies to build resilience in developing countries were excluded from the initial search.

Applicability and Transferability

The research presented in this review identifies building resilience as an effective means of promoting mental health and preventing mental health issues in children. Currently, public and political awareness of the social and health care costs of poor mental health across the lifespan is heightened, as is the identified need for interventions that support positive mental health.

Provincially, promoting student well-being, including mental health, is a key component of the government's vision for education, which includes fostering a healthy school environment and use of a whole-school approach (Ontario Ministry of Education, 2014). Promotion of resilience is in alignment with the current curriculum and provincial goals and is recognized as an important aspect of mental health promotion (Ministry of Education, 2015).

Locally, school boards are also seeking to promote healthy school environments and promote mental health. Promotion of student well-being, initiatives to build student resilience, and the adoption of a whole-school approach to promote healthy learning communities have been highlighted in both the local public and separate school board plans (Hastings and Prince Edward District School Board, 2015; Algonquin and Lakeshore Catholic District School Board, 2016).

In addition, as previously mentioned, the consultation document drafted by the MOHLTC (2017) highlights mental health promotion across several program standards, specifically in the new School Health Standard. Guidance documents and associated supports for implementing the standards will be published, and it is reasonable to assume that resources to build the capacity of the public health workforce to meet them will be addressed.

There has been significant movement at HPEPH towards application of evidence-informed decision making (EIDM) for program planning and delivery. The support of the Foundational Standards Manager, along with ongoing training opportunities for staff to learn about EIDM, have enriched the organizational expertise and capacity for conducting literature reviews, such as this one, and for acting on the recommendations that evolve from this type of report. Although HPEPH is mandated to provide services as directed by the MOHLTC, the draft modernized standards indicate programming should be reflective of local needs. More work is needed to identify the magnitude of the local need for mental health promotion; however, as previously stated, across Canada, it is estimated that 15 to 21 percent of children and youth have mental health conditions that impact their capacity to function (MOCYS, 2016); it appears safe to assume that the need for mental health promotion for children ages 0 – 12 exists at a local level.

Evidently, such work in the area of promoting resilience in children is reasonable within HPEPH and findings from this literature review are transferable to the local context.

Recommendations for Public Health

1) Determine the local need for mental health promotion programs and services.
2) Leverage the school setting and use partnerships with schools to implement mental health promotion interventions.
3) Review and consider application of the whole-school approach with school boards within Hastings and Prince Edward Counties. Refer to existing *Foundations for a Healthy School*.
4) In partnership with school boards, foster collaboration with relevant community organizations (across sectors) to enrich access to mental health promotion supports and services to schools.
5) Utilize pre-existing evidence-based resources and toolkits on building resilience and promoting mental health within schools to guide local-level strategies when working with schools to build resilience (i.e., *YouThrive Resilience Map*).
6) Identify local needs of the community and the existing parenting programs and services available to meet those needs.
7) Continue to identify and connect children and families at-risk of poor mental health outcomes to local mental health and parenting programs/services.

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Appendix A: Search Strategy

Research Question:

What interventions build or increase resilience in children (0-12)?

Databases | Journals Searched	Results
EBSCOhost CINHAL Plus with Full Text	5
EBSCOhost Cochrane Database of Systematic Reviews	8
EBSCOhost Database of Abstracts and Reviews of Effects	35
Health Evidence	46
National Guideline Clearinghouse	32
OVID Medline 1946 to April Week 2 2016	16
OVID MEDLINE In-Process & Other Non-Indexed Citations	38
OVID PsycINFO 2002 to April Week 3 2016	4
TRIP Database	17
Duplicates Removed	*31*
Total	**170**

Ovid MEDLINE(R) <1946 to April Week 2 2016>			
Search history sorted by search number ascending			
#	**Searches**	**Results**	**Type**
1	Infant, Newborn/	576,157	Advanced
2	Infant/	753,530	Advanced
3	Child/	1,597,485	Advanced
4	Child, Preschool/	870,996	Advanced
5	(newborn* or baby or babies or toddler* or preschooler* or kindergartner* or "school age" or preteen*).mp.	762,050	Advanced
6	or/1-5	2,502,401	Advanced
7	Health Promotion/	66,886	Advanced
8	Health Education/	59,154	Advanced
9	Information Dissemination/	14,377	Advanced
10	Health Knowledge, Attitudes, Practice/	96,535	Advanced
11	Persuasive Communication/	3,448	Advanced
12	Health Communication/	1,404	Advanced
13	Health Literacy/	3,683	Advanced

14	Behavior Therapy/	27,315	Advanced
15	Social Support/	64,348	Advanced
16	Preventive Health Services/ed, mt	1,079	Advanced
17	Patient Education as Topic/	81,618	Advanced
18	Social Media/	4,067	Advanced
19	Mass Media/	10,330	Advanced
20	exp Marketing/	33,422	Advanced
21	Communication/	76,382	Advanced
22	Communication Barriers/	5,937	Advanced
23	Information Seeking Behavior/	1,582	Advanced
24	Social Networking/	1,953	Advanced
25	Social Marketing/	2,351	Advanced
26	Radio/	2,204	Advanced
27	Television/	1,3130	Advanced
28	Pamphlets/	3,706	Advanced
29	Paper/	7,395	Advanced
30	Internet/	64,187	Advanced
31	Computer/	52,723	Advanced
32	Cell Phones/	7,244	Advanced
33	Smartphone/	1,410	Advanced
34	Checklists/	4,753	Advanced
35	Text Messaging/	1,760	Advanced
36	Web Browser/	590	Advanced
37	((health* adj2 promot*) or (knowledge adj2 (disseminat* or exchang*)) or "health literacy" or counsel* or therap* or (modif* adj2 behavio?r*) or "social support*" or (health* adj2 (communicat* or correspond* or promot* or advoca* or messag* or educat* or program* or intervent* or prevent* or plan* or respons* or initiative* or strateg* or incentive* or reminder* or outreach* or service*)) or campaign* or "community outreach" or "message framing" or ((communicat* or correspond* or messag* or promot* or intervention* or initativ* or educat* or incentive* or remind*) adj2 (print* or in-print or paper or pamphlet* or booklet or book* or flyer* or sheet* or written or offline or online or document* or list* or checklist* or newspaper* or magazine* or digital or web or web-based or app or cell	3,607,177	Advanced

	phone* or smart phone*or iphone or "handheld device" or video* or internet or webpage* or computer* or virtual* or (social adj2 network*) or website* or (instant adj1 messag*) or IM or e-messag* or email or chat* or text* or "social media" or pinterest or facebook or twitter or instagram* or snapchat* or youtube))).mp.		
38	Electronic Mail/	2,454	Advanced
39	or/7-38	3,898,039	Advanced
40	Resilience, Psychological/	3,488	Advanced
41	Adaptation, Psychological/	88,989	Advanced
42	Social Adjustment/	23,692	Advanced
43	Self Control/	961	Advanced
44	Executive Function/	10,127	Advanced
45	Problem Solving/	24,079	Advanced
46	Self Concept/	53,588	Advanced
47	Stress, Psychological/pc [Prevention & Control]	7,960	Advanced
48	Life Change Events/	22,316	Advanced
49	Emotional Adjustment/	315	Advanced
50	Feedback, Psychological/	3,108	Advanced
51	Orientation/	28,000	Advanced
52	Sense of Coherence/	574	Advanced
53	Mental Health/	30,502	Advanced
54	(((comprehensive or systematic or integrative or scoping) adj1 review*) or meta-analysis or "meta analysis").mp. or "meta synthesis".mp. or (guideline or meta analysis or systematic reviews).pt. or guidelines as topic/ or practice guidelines as topic/ or meta-analysis/ or meta-analysis as topic/	333,897	Advanced
55	(or/40-52) and 53	4,539	Advanced
56	6 and 39 and 54 and 55	18	Advanced
57	limit 56 to (English language and yr="2006 -Current")	16	Advanced

Appendix B: Inclusion / Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
English	Non-English
2006-current year *(searches finalized April 25, 2016)*	Pre-2006
Healthcare (not specific to public health)	Non-healthcare
Developed countries	Developing countries
Interventions include campaigns, outreach and methods to reach population (print, online, media, etc.)	
Study type: Summaries, systematic reviews, meta-analysis	Study type: Primary studies, editorials, news, commentary, poster abstracts, books
Definition of Mental Health based on: CAMH Growing up resilient: ways to build resilience in Children and Youth Mental health (not mental illness) referring to children's social and emotional development, including: ○ Adaptive Skills ○ Resiliency ○ Coping Mechanisms ○ Executive functioning ○ Self-Regulation ○ Developmental Transitions ○ Self-Concept	Excludes diagnosis, diseases, and trauma

Appendix C: Overview of Search Process

Health Evidence™
Helping public health use best evidence in practice

Health departments are welcome to adapt this tool. Requirements for adapting this tool include: Health Evidence and Peel Health are acknowledged for tool development; and adapted tool cannot be used for profit (not to be sold).