
Programmes Evidence and Gap Map of Interventions to Prevent Children Getting Involved in Violence: final report

Second Edition (May 2024)

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Key takeaways

The Programmes Evidence and Gap Map (EGM) is a free online tool that collates and assesses evidence related to preventing youth violence. It organises this knowledge thematically, in intervention and outcome types, and enables users to see the quantity and strength of the evidence, and click through to the individual studies.

The EGM includes more than 2,000 studies making it the largest repository of studies on this topic in the world.

The EGM has identified that there is extensive evidence across several approaches to preventing children from getting involved in violence:

- Interventions to support positive behaviours
- Interventions to address problem behaviour
- Interventions focused on parents/main carers

The EGM has identified that there is less evidence in some other areas:

- Systems based approaches to prevent violence involving children and young people
- Interventions targeted at reducing child exploitation
- Interventions working with over-represented groups in the criminal justice system

There is a general need for more high quality UK-based impact evaluations

The YEF uses this EGM strategically for three main purposes:

As the foundation for the YEF's Toolkit, which translates the evidence into accessible and actionable summaries for practitioners and commissioners

As the foundation for YEF's Effect Size Database

To help focus the YEF's future grant-making on areas of promise, filling important knowledge gaps, funding rigorous evaluations and reviews to improve the quality of UK evidence on youth violence.

Background

The problem

When children become involved in violence, it is devastating to individuals, families, and communities. Levels of serious violence remain worryingly high. In 2022/23 there were 11,637 violent offences committed by children.¹

The response

Children becoming involved in violence isn't inevitable – it is preventable. As a society we have a duty to protect all children and young people from harm, especially those most at risk. Recognising this need, in October 2018 the then UK Home Secretary announced the creation of the Youth Endowment Fund (YEF). The fund has been provided with a ten-year endowment of £200m to keep children safe from involvement in violence *'by finding out what works and building a movement to put this knowledge into practice'*.²

To effectively build this movement and understand what works, we needed to start by assessing the current evidence base. This means being able to understand what kind of research has been done, in what topics, and the quality of the research conducted (i.e. how confident we can be in the findings). We also need to identify gaps in knowledge, so that researchers and commissioners such as the YEF can begin to address them.

¹ Youth Justice Statistics, Supplementary Table 4.1 <https://www.gov.uk/government/statistics/youth-justice-statistics-2022-to-2023>

² <https://youthendowmentfund.org.uk/about-us/our-beginnings/> (Accessed 16/02/20).

The YEF Programmes Evidence and Gap Map

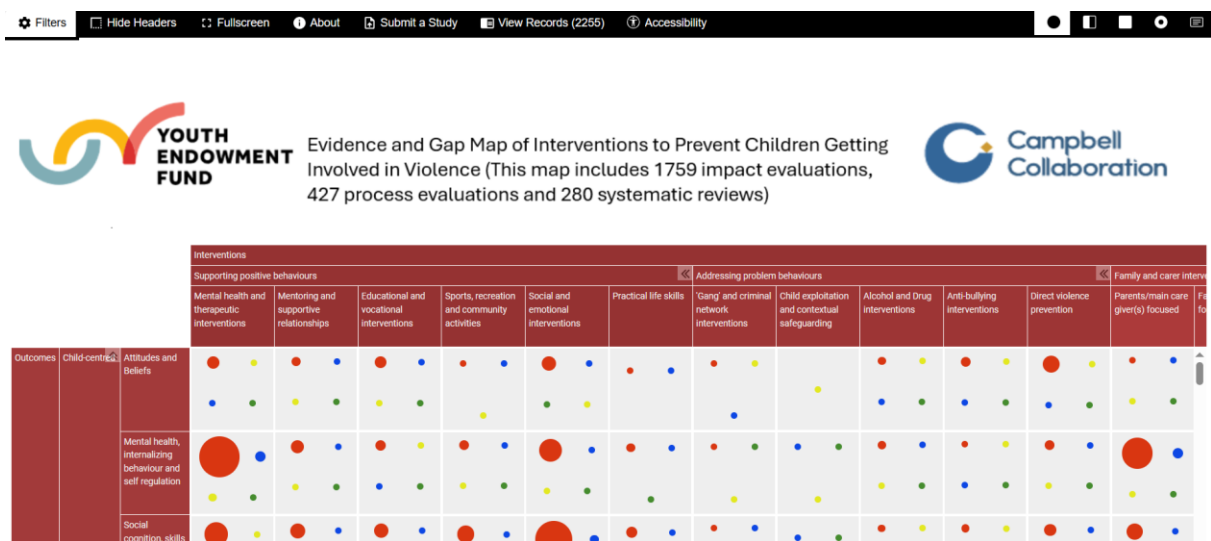
The first edition of the Evidence and Gap Map (EGM) was launched in 2021, as a repository of the global evidence on interventions to reduce offending behaviour by children and young people. This report presents the second edition of the EGM, which has involved adding additional studies, and cleaning the data from the first edition.

The EGM not only helps to bridge the knowledge gap for stakeholders but also identifies promising areas and existing gaps within the evidence base. Developed primarily for a UK audience, its detailed repository of data and findings also promises substantial value to international researchers, policymakers, and commissioners engaged in youth violence prevention.

The role and importance of an evidence and gap map (EGM)

Evidence and gap maps (EGMs) – see Figure 1 – are a way of gathering, organising and assessing research, and presenting it in an interactive and accessible way. This helps us to (i) find existing evidence contained in studies; (ii) understand the strengths and weaknesses of the current evidence base; (iii) see where the gaps and areas of promise lie, and (iv) develop evidence tools based on the underlying studies. Whilst an EGM does not directly tell us what studies contained in the EGM say or mean, by bringing relevant studies together it plays an important role in helping us to find out what works.

Figure 1 Snapshot of the YEF EGM



Finding existing evidence

EGMs make existing evidence more easily accessible; via an interactive map, users can find, sort and explore a wealth of evidence on a given topic. Historically, finding relevant evidence has been a difficult and technical exercise, because there are so many different places to search and sometimes different studies use different language to refer to the same concept. By bringing evidence together, organising it in an accessible way and enabling filtering and searching options, EGMs help users find relevant research more easily. This matters because being able to find relevant research easily can ultimately help decision makers make better decisions, informed by the best available evidence on a topic.

Understanding the current evidence base

Studies contained in an EGM undergo a “critical appraisal” to assess the confidence we can have in the findings of the research. This allows us to see both how much evidence there is in different areas, and where the evidence is strongest and weakest. EGMs do contain a brief abstract-style summary of each mapped study. The full text of each study is linked to but not contained directly in the map, for copyright reasons.

Seeing where gaps and promise lie

Further, EGMs help us to identify where there are gaps in research and what areas of new research might be most useful. EGMs point to outright gaps where there is no relevant evidence, as well as areas where there are lots of individual studies (primary studies) that could benefit from a summary piece of research (e.g. a systematic review). Organisations that commission research can therefore use EGMs to identify gaps in knowledge that they can usefully fill.

Developing evidence tools

EGMs also show us where higher quality evidence already exists. This can support the development of resources like evidence ‘toolkits’, as illustrated in Figure 2. Toolkits provide accessible information to decision-makers on what works (which themselves draw on data contained in primary studies, systematic reviews and databases). The YEF toolkit was initially developed based on studies in the EGM. The toolkit allows YEF’s stakeholders to find out what interventions are the most

likely to prevent children and young people becoming involved in violence, without having to read the full text of the underlying academic studies.

For a detailed commentary on toolkits and the use of evidence in decision making please see Annex 8.

The YEF Evidence and Gap Maps

YEF has commissioned two evidence and gap maps. The first, presented in this report, is the Programmes Evidence and Gap Maps (P-EGM) which contains studies of discrete interventions that aim to reduce the risk of offending by children and young people. The second map, the Systems Evidence and Gap Map (S-EGM) contains studies of the effects of the social welfare, education and justice system, and system interventions in those areas.

Figure 2 Where an evidence map fits with other types of evidence and products³

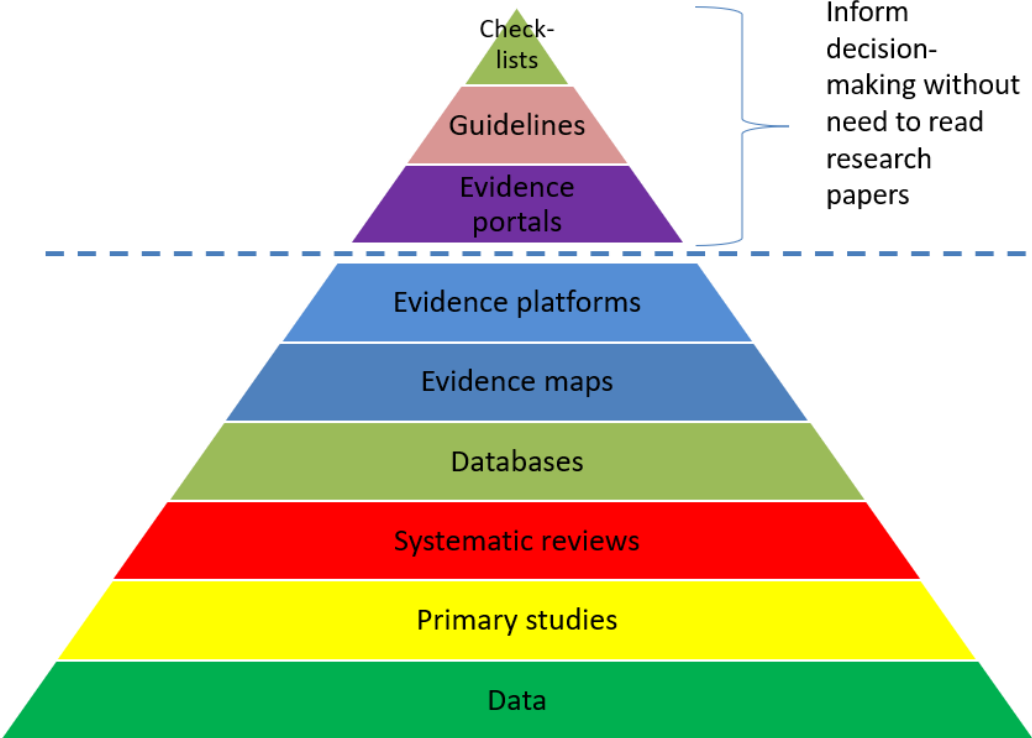


Figure 2: This pyramid illustrates how different types of evidence and ‘evidence products’ build on each other to be more distilled and ultimately inform decision making in an increasingly more succinct way.

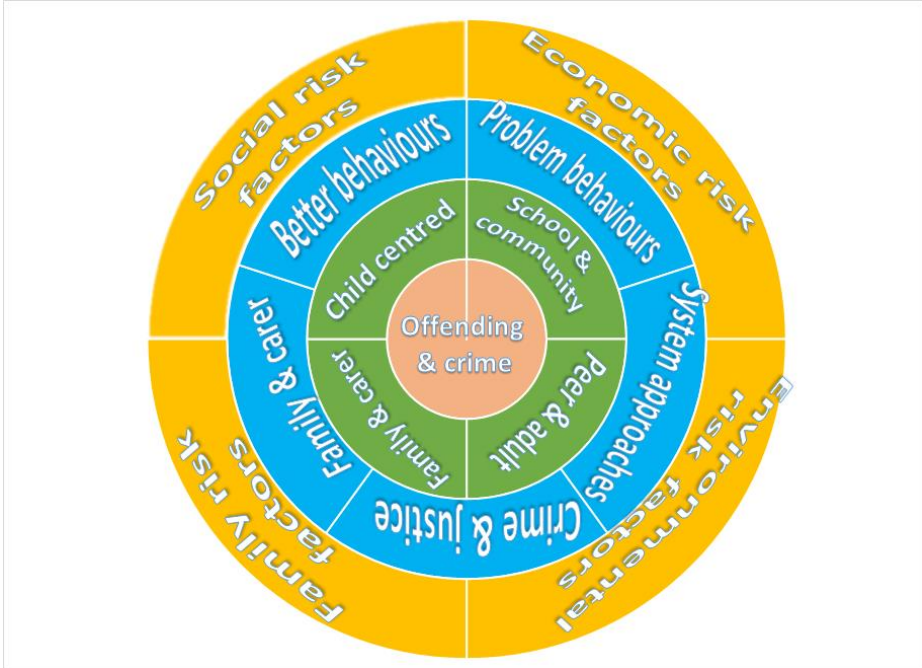
Understanding the YEF Programmes EGM

The YEF P-EGM is segmented into different intervention types and outcomes that are relevant to preventing children from getting involved in violence, including intermediate outcomes (e.g. attitudes to violence) and final outcomes (violent crime). The categories and sub-categories of the map are based on the idea that a number of different risk factors can increase a child’s chances of becoming involved in violence, which are present at a range of different levels (e.g. at the child level, at the peer/family level). Equally, there are a number of different preventative approaches that can also be categorized in different levels. Figure 2 presents this interaction between different types of interventions and outcomes

³ See glossary for a definition of each term

which impact multiple factors that can ultimately reduce a child’s chances of getting involved in violence.

Figure 3 General framework



Who is the map for?

The map is primarily intended to assist the YEF in understanding the current evidence base, identifying gaps and areas of promise, and developing the [toolkit](#). We believe it will also be of wider interest to researchers, policymakers and commissioners focused on preventing youth violence and related topics. It was developed for a UK audience, though as the largest resource of its type available, it is likely to be useful to international audiences.

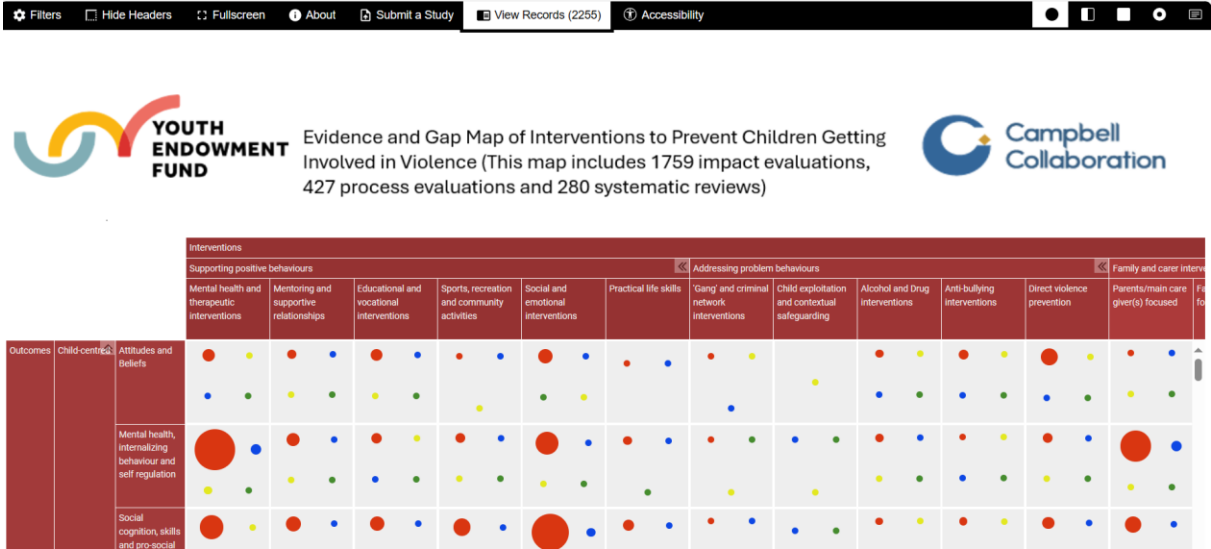
The ‘process insights’ columns may be of particular interest to practitioners as they point to information about how interventions work and key practical considerations (such as implementation and costs).

How to use the EGM

The map is an interactive tool which users can use to search for specific studies in a number of different ways (see Figure 4). In addition, the presentation of the map can also be changed according to the user's preferences.

At first glance the map looks like a table with outcomes on the x-axis and interventions on the y-axis (as seen below). Each study is categorised under at least one outcome *and* intervention 'box' known as a 'cell'.

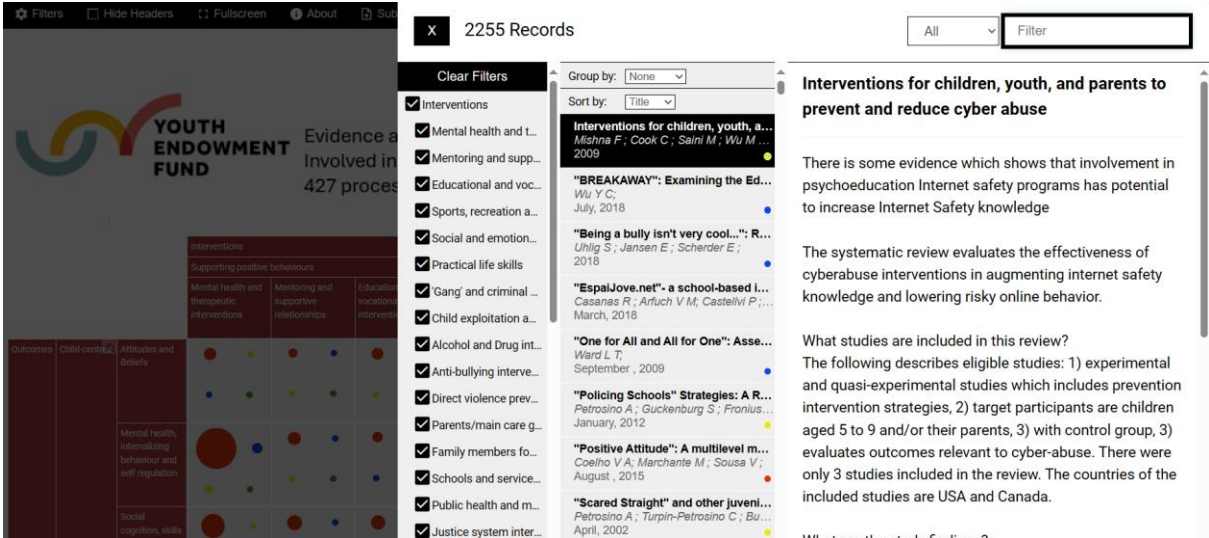
Figure 4 Snapshot of YEF EGM



The default map view is known as the 'bubble map' where the size of the circle in each box/cell represents how many studies have been found. For example, an empty box means there are no studies looking at a particular type of intervention and outcome combination, a small circle means there might be a few studies, whilst large circles mean there are many studies.

When a bubble is clicked on, a text box appears which lists the individual studies included in that bubble. In the text box there is a brief description of each study (similar to, but not identical to the abstract) and a link which takes the user to the website containing the full study. (access to the full texts of some studies may be behind a paywall and so depends on the users institutional access if any)

Figure 5 Clicking on a cell gives the list of studies in that cell



Quality/study design coding presentation

Each study included in the map is also critically assessed to provide an indication of the confidence we can have in the study findings, also referred to as ‘the quality of the study’. Studies were all rated against specified criteria using a quality assessment tool. For more information about this tool and criteria please see the ‘Data extraction and coding’ subsection and Annex 6.

In the map, high and medium quality studies are presented together, whilst low quality studies are presented separately. High and medium quality studies were combined as the maps become cluttered if there are too many bubbles per cell.

Also, different types of studies are presented differently. Impact and process evaluations are grouped together in the default map view, whilst systematic reviews are presented separately (for definitions please see *Glossary* or *Study Design* sections below). Again, impact and process evaluations were combined

due to technical limitations. Systematic reviews were deliberately presented separately so that map users could find them more easily.

The following colour-coding is used in the map and can also be seen in Figure 7:

High and medium quality evaluations (Blue): these are studies about an intervention (e.g. a programme or activity) including both impact and process evaluations. High quality evaluations are those that meet certain criteria (eg, for impact evaluations the use of comparison groups and validated measures); medium quality evaluations partially meet the criteria.

Low quality evaluations (Red): Studies that are rated as low on at least one item. One common reason that an evaluation might score low is because the description of the study is not clear. For impact evaluations more specifically, a low rating is used when a comparison group is absent.

High and medium quality systematic reviews [Green] – High quality reviews met all the criteria to a high standard, whilst medium quality reviews generally met the criteria but less well.

Low quality systematic reviews (Yellow): these reviews typically contain critical flaws. Commons flaws include failing to account for risk of bias in primary studies or not using satisfactory techniques for assessing risk of bias.

Figure 6 Hovering over a cell shows the number of studies in a cell

How the map was created

Overview

The YEF P-EGM was developed in partnership with [The Campbell Collaboration](#) through a number of steps:

1. *Developing the specification of the map*: including naming the row and column headings in the map (map typology) and what types of studies should be featured (e.g. inclusion/exclusion)
2. *Searching for relevant studies*: including outlining *where* we looked for studies
3. *Data extraction, coding and management*: this section describes how studies were added to the map
4. *Quality assurance*: this section describes how we checked and tested the map

Each step is discussed in greater detail below under the relevant subheading.

At each step of development we consulted various stakeholders to gather their views and adapt our plans for the map accordingly. We consulted stakeholders most extensively during the development of the specification of the map, to help shape the map typology and inclusion/exclusion criteria (see Annex 11). We consulted a wide range of stakeholders, including representatives from various local authority departments, violence reduction units, police and crime commissioners, education, central government, the voluntary and community sector, police and the justice system, as well as a wide range of academics and subject specialists. Consultation methods ranged from workshops, to in-depth interviews and requests for comments via email.

Before describing each step, it is important to note that some of the language used in the map reflects dated terminology used in the underlying literature. Terms such as 'delinquent' behaviour are widely used, particularly in older studies, to describe behaviour associated with offending. Although the YEF does not endorse these terms, they are included in the map to reflect the existing literature and to help people to find relevant studies more reliably.

Step 1: Developing the specification of the map

The first step in creating the map was to decide what sorts of evidence it should include, and on what. We did this by deciding what the map will include in five key areas: Population, Intervention type, Comparison, Outcome and Study design (PICOS, defined below)⁴ and outlining inclusion/exclusion criteria. Starting with the PICOS, below is a description of each of these elements, followed by a discussion about what is included in the EGM.

- *Population*: who is receiving the intervention
- *Intervention type*: what kind of programme is being implemented
- *Comparison*: if there is a comparison group who did not receive the intervention
- *Outcome*: what changes in the population are being measured
- *Study design*: the kind of research taking place (as described in the inclusion/exclusion criteria).

Population

While YEF's focus is on children aged 10 – 14, this map is not restricted to interventions aimed at that age range. That's because we recognise earlier interventions are associated with preventing later involvement in crime. The map also includes studies of interventions for children aged up to 17, because there may be suitable interventions for 10-14 year olds where studies have only been conducted with older age groups to date.

The populations featured in studies included in the map are therefore:

- Children aged 0-17
- Their parents, carers and other family members of children aged 10-17
- Professionals involved in delivering support and services to children aged 10-

17

⁴ PICOS is widely framework for ensuring that studies are clear is recommended by guidelines such The Cochrane Handbook for Systematic Reviews of Interventions, Version 5.1.0. The Cochrane Collaboration. 2013.as

Various sub-populations are also identified in the map to help us explore and interpret the map. These are discussed in Section 4 (What the map contains).

Intervention

An intervention is an activity, approach or programme aimed at achieving a desired change in an individual or group. Intervention categories form the y-axis of the map. The intervention categories and sub-categories are given in Table 1. A brief description of each intervention sub-category is given in Annex 3 and the development history of each category and category is outlined in Annex 11.

Table 1 Intervention categories, sub-categories and examples

Intervention category	Intervention sub-category
Supporting positive behaviours	Mental health and therapeutic interventions (e.g. counselling) Mentoring and supportive relationships (e.g. Big Brothers, Big Sisters) Educational and vocational interventions (e.g. tutoring) Sports, recreation and community activities (e.g. sports clubs) Social and emotional interventions (e.g. social and emotional learning (SEL) programmes) Practical life skills (e.g. lessons in managing finances)
Addressing problem behaviours ⁵	‘Gang’ and criminal network interventions (e.g. the Growing Against Gangs and Violence programme) Child exploitation and contextual safeguarding (e.g. contextual safeguarding interventions) Alcohol and Drug interventions (e.g. Brief alcohol treatment) Anti-bullying interventions (e.g. the All stars prevention programme) Direct violence prevention (e.g. dating violence programmes)
Family and carer interventions	Parents/main care giver(s) focused (e.g. parental education programmes) Family members focused (e.g. whole family programmes)
System approaches	Schools and service coordination and improvements (e.g. mental health services in school) Public health and multi- agency working approaches (e.g. information sharing approaches)
Crime and justice	Justice system interventions (e.g. diversion programmes) Opportunity-based crime prevention (e.g. environmental interventions such as increased street lighting)

⁵ It is important to note that for our purpose ‘problem behaviour’ does not always refer to direct behaviour of the child, but also captures the behaviour of others which involves a child and may contribute to behavior associated with offending e.g. child exploitation

Comparison

The YEF EGM contains studies that have a comparison group (e.g. comparing those that are receiving a programme to those that have not), as well as those without a comparison group e.g. measuring changes before and after an intervention.

Outcomes

The x-axis of the EGM categorises studies by their outcomes (the study findings).

Table 2 Outcome domains and sub-domains

Outcome Domain	Outcome Sub-domain
Child-centred	Attitudes and Beliefs (e.g. beliefs about violence)
	Mental health, internalizing behaviour and self-regulation (e.g. mood ratings)
	Social cognition, skills and pro-social behaviour (e.g. helpful behaviour)
	Attainment and knowledge (e.g. school grades)
	Externalizing and risk-taking behaviour (e.g. fighting)
	Victimisation, abuse and injury (e.g. experiencing bullying)
	Service use, attendance and engagement (e.g. school attendance)
Family and carer outcomes	Parental or main care giver outcomes (e.g. parental stress levels) Quality of family relationships and family functioning (e.g. measures of bonding)
Peer and adult	Peer outcomes (e.g. peer beliefs) Non-family relationships (e.g. adult mentor bonding)
School, professionals and community	School climate & performance (e.g. measures of feeling safe at school)
	Better services (e.g. improved service rating) Effective service linkage (e.g. increasing number of referrals between services)
	Social cohesion and neighbourhood perceptions (e.g. measures of feeling safe in the neighbourhood)
Offending and crime	Violent offences (e.g. charges of assault)
	Serious non-violent offences (e.g. drug offences)
	Other offences (e.g. unspecified offences)
	Antisocial and 'delinquent' behaviour (e.g. obtaining an Anti-Social Behaviour Order (ASBO)) Contact with custody services or justice system(e.g number of arrests)
Process Insights	Intervention details (e.g. details of an interventions) Theory of change (e.g. how an intervention works theoretically) Implementation (e.g. potential barriers to running an intervention) Cost (e.g. cost of an intervention per participant)

The EGM includes studies examining the effectiveness of interventions i.e. what effect the intervention has on individuals/systems (known as impact evaluations). Studies reporting the effect of an intervention are categorised by the type of effect they have (e.g. on attitudes and beliefs), and at which level (e.g. child or family and carer). The categories and subcategories can be found in Table 2 (above). Definitions of each subcategories are available in Annex 3 and a detailed development history of each of the categories and subcategories can be found in Annex 11.

Additionally, the map provides insights about *how* interventions work both theoretically (i.e., their theory of change) and practically (design, cost, implementation). These are known as process insights and can be found either in studies examining the impact of interventions, or more commonly, in descriptive studies of interventions conducted without an analysis of impact (in both cases they may be known as process evaluations). Studies containing process insights are categorised under the relevant heading and users are directed to the page numbers in the study where the relevant content appears e.g. for studies featuring a cost analysis, the study is also coded under 'cost' and users are directed to the relevant page number that describes the costs in the study summary. Studies that only contain qualitative descriptions will only be categorized under the type of intervention featured and the type of process insights they report on (i.e. theory of change, design, cost, implementation). A full description of the different categories can be found in Annex 3.

Study design

The map includes impact studies, systematic reviews and qualitative process evaluations. A description of each of these types of studies can be found below:

Impact evaluations: These studies examine how effective an intervention is i.e. how well it achieves its intended outcomes. This is done by measuring an outcome of interest, e.g. a reduction in violence, ideally in relation to a comparison group that did not receive the intervention. Higher quality designs typically involve randomly allocating participants to an intervention or a comparison group (Randomised Controlled Trials, RCTs), or creating statistically similar comparison

groups (Quasi Experimental Designs, QEDs). In both cases, the aim is to try and understand what impact the intervention had relative to what would have happened otherwise. In addition to RCTs and QEDs, the EGM also includes 'pre/post' studies, which look at a group's change in outcomes before and after an intervention, but without a comparison group. These types of studies do not provide rigorous of a causal effect but may possibly help identify potential areas of promise where more rigorous studies could be beneficial.

Process evaluations: These are studies about how interventions work both theoretically (e.g. theory of change) and practically (design, cost, implementation issues). Such insights can be found either alongside studies examining the impact of interventions, or more commonly, in descriptive studies of interventions conducted without an analysis of the intervention's impact.

Systematics reviews: These studies find, collate and evaluate the results of relevant research in response to a pre-defined question (typically assessing the effect of an intervention).⁶ Some of the systematic reviews also include meta-analyses, which also calculate an average estimate of the effect of the intervention(s) on outcomes of interest.

Inclusion/exclusion for all study types

We use a PICOS to decide what sorts of studies we are interested in. To help ensure we only include relevant studies in the map, we also use a brief set of inclusion/exclusion criteria to help filter out studies that are not associated with the YEF's core outcomes or cohort (i.e. young people), have additional quality concerns or where the YEF otherwise cannot practically include them in this map.

To be eligible for inclusion in the map all studies must be:

1. A study of an intervention intended to modify the behaviour (e.g. anti-social behaviour) or attitudes of children up to the age of 17⁷, either

⁶ See here for additional information: <https://campbellcollaboration.org/what-is-a-systematic-review.html>

⁷Age is at the time of intervention, not outcome measurement. At least 20% of intervention group aged <= 17. If not clear include.

directly (interventions for children themselves) or indirectly (e.g. interventions for their parents/caregivers or family members, or the professionals they interact with)

2. In English
3. Conducted at any time and in any country (filters can be used to narrow these searches in map)
4. Both ongoing and completed studies are captured (status of studies are included as a filter).

Additional criteria for impact evaluations and systematic reviews

Impact evaluations and systematic reviews are included in the map if they also meet the following criteria. They must be:

- A quantitative evaluation reporting on relevant YEF outcomes (with or without a comparison group) or a systematic review of such studies
- The outcomes include measures of attitudes, beliefs or behaviour of children, professionals or parents
- For systematic reviews they must also have⁸:
 - a clearly stated PICOS
 - a comprehensive search strategy
 - explicit inclusion and exclusion criteria for screening
 - systematic coding and reporting of all outcomes covered by the PICOS.

What studies are excluded?

Studies are excluded if they are universal interventions not directly affecting outcomes related to offending and other externalizing behaviour of children aged up to 17 years. For example, studies of the effects of after-school programmes on physical activity and obesity are not included, whereas studies of the effects of such programmes on anti-social behaviour are included. Similarly, studies of the effects of universal social and emotional learning interventions on academic

⁸ This additional criteria was added to ensure that included reviews are truly systematic in nature. Therefore, it would exclude reviews labeled 'systematic reviews' if they did not meet above criteria, conversely even if a review was not labeled a 'systemic review', it would be included if it met the above criteria

achievement are not included, but such studies are included if the programme is targeted to children at risk of problem behaviour or is universal and reports these behavioural outcomes.

In addition, many place-based interventions (i.e. interventions focused on a geographic location rather than a group of people, such as street lighting or alley-gating), which can affect crimes committed by children but are not specifically targeted at them, are not included in the map. We have only included place-based interventions which satisfy our population requirements (i.e. that target mainly children aged 0-17), but estimate this could have excluded in the region of 1,000 place-based studies. For details about what kind of interventions the map has not included please see Annex 10.

Step 2: Searching for studies

Studies can be found in lots of different places including scientific databases, journals and websites. The scientific databases that were searched were those either covering general social sciences, or with more specific content related to crime and justice. These included the following: Medline, Embase, PsycInfo, ERIC (education), Scopus, SSCI, Social Policy & Practice, Public Affairs Information Service, and National Criminal Justice Reference Service, Ebsco Discovery, Criminal Justice Abstracts and the Global Policing Database. Sample search strings are given in Annex 4.

In addition to a traditional, manual database search we conducted a machine-learning assisted search. The results from the two approaches to database searching were combined and de-duplicated.

Websites and journals were also searched. Details of these searches can be found in Annex 5.

Reference lists contained in the included systematic reviews were also screened for inclusion in the map⁹. Furthermore, selected literature reviews which were not

⁹ This does not apply to the most recent reviews

themselves included the map (e.g. did not contain an intervention) were also searched.

Step 3: Data extraction and coding

Once relevant studies were found the next step was to include them in the map and draw out the key information from the studies. This process is known as data extraction and coding. The information that was coded was:

1. the type of intervention in the study
2. the types of outcomes in the study (including process insights)
3. the quality of the studies included
4. the information featured in the map's filters (e.g. target group of interventions).

For more information about data extraction and coding please see the coding form in Annex 2.

Study quality review (critical appraisal)

In order to code the quality of different studies, each study was assessed using a critical appraisal tool. For primary studies, the critical appraisal tool was constructed to cover both quantitative and qualitative designs. It is included in Annex 6 along with a description of how the tool was developed.

The quality of the included systematic reviews was assessed using a gold standard industry tool: A Measurement Tool to Assess Systematic Reviews 2 (AMSTAR-2). Studies were rated as having high, medium or low quality (the latter including those rated as critically low by the AMSTAR approach).¹⁰

Step 4: Quality assurance

The final step in the process was to ensure the map was completed to a high standard and that users found it as useful as possible. All studies were coded independently by two coders, with a third-party arbitrator in the event of disagreement. Additionally, members of the YEF team also independently coded a

¹⁰ For more information about the AMSTAR 2 please see <https://amstar.ca/Amstar-2.php> or <https://www.bmj.com/content/358/bmj4008>

subset of studies. This was done as an additional layer of quality assurance on the coding process.

To check that the map is as useful as possible we sent early versions of it to various stakeholders to test and provide feedback. We also conducted internal tests with various teams to find out how they plan to use the map and what would be most useful for them. We then made adaptations based on the feedback we received, though it was not always possible to act upon suggestions due to technical limitations.C

Updating the map

The first edition of the map contained 2,017 studies (although only 1,721 were fully coded and so accessible through the map). During updating we removed duplicates and studies felt to be ineligible.

EGMs should be regularly updated to ensure they remain current, accurate, and relevant to evolving research, policy needs, and practice.. The original P-EGM has been updated by adding studies in new reviews commissioned by YEF, and supplementary searches undertaken during scoping of topics for the toolkit and in preparing the technical reports as the third level of the toolkit. We also rescreened studies which had been excluded from the first edition of the P-EGM. This second edition of the P-EGM report presents an overview of the evidence contained in the updated EGM.

What the updated map contains

Number of included studies

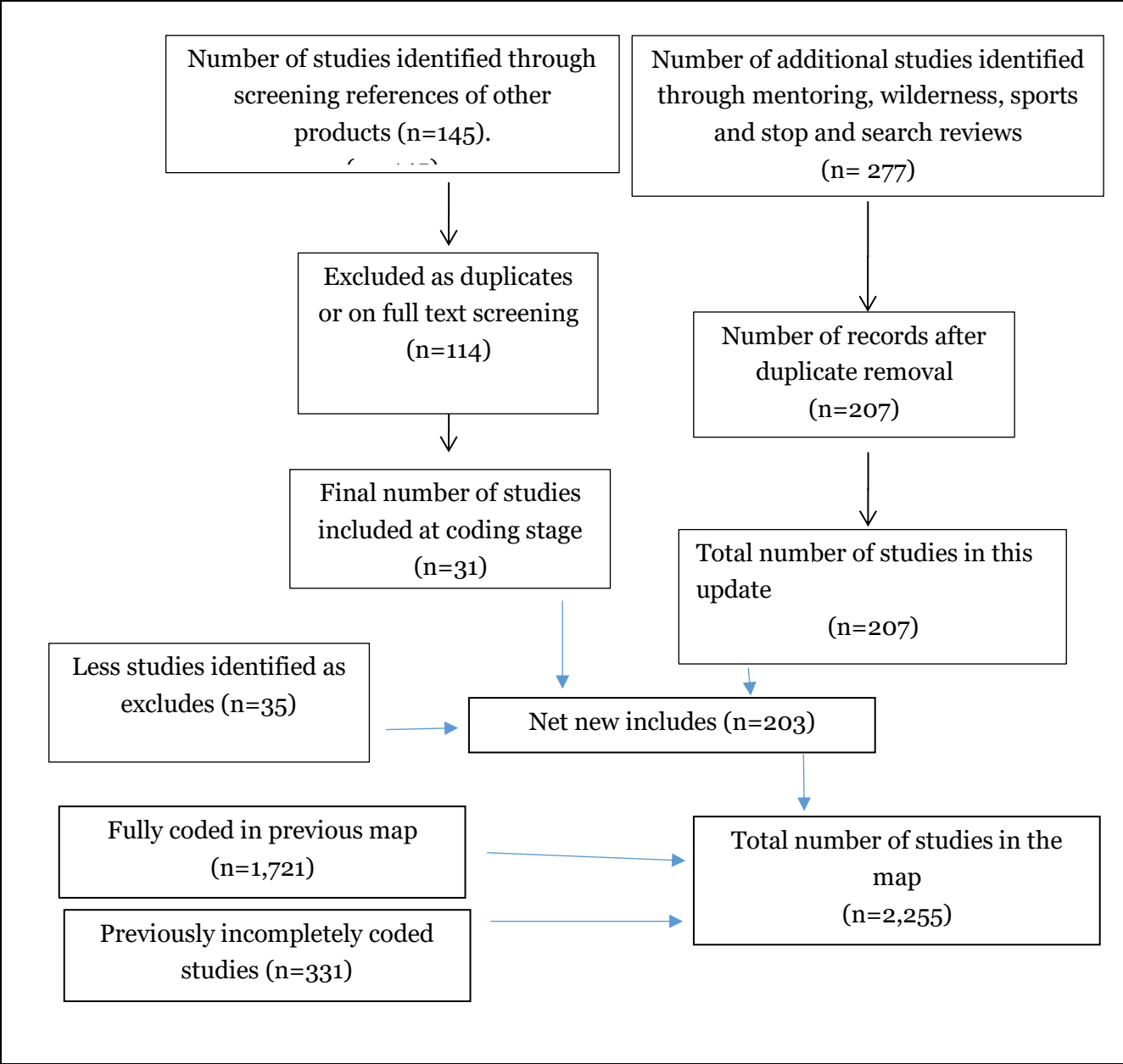
As mentioned above, the methodology for identifying relevant studies in this update added studies from products produced for the toolkit and re-screened previously excluded studies). The process for including new studies was twofold:

1. **Exploration of Related Products:** We screened all studies in the EGM which were identified during scoping for new systematic reviews (i.e. exploring topics for possible commissioned reviews) and in preparing the technical reports. This process identified 145 studies. However, the majority (114) were excluded as duplicates or on full text screening, resulting in 31 new studies being added to the EGM.
2. **Inclusion of Eligible Studies from Commissioned Reviews:** We screened the included studies in four reviews commissioned by YEF: mentoring, wilderness programs, sports, and stop and search (or frisk). This process added 277 studies. Of these 277, 70 were duplicates (i.e. already included in the EGM), resulting in 207 new studies to be added.

At this stage we also identified 35 studies which had been included in the map but should have been excluded. We thus made a net addition of 203 studies (31+207-35) to the 1,721 fully coded studies in the old map, yielding a total of 1,924 studies.

Next we compared this dataset with the coded studies from the first edition of the EGM to identify coded studies not actually included in the EGM. We identified 342 such studies, of which 11 were judged to be excluded on rescreening. This brings the total number of studies in the revised map to 2,255 (1,924+342-11).

Figure 7 Preferred Reporting Items for Systematic Reviews (PRISMA¹¹) flow chart



Note*: A study may contain both an impact evaluation and a process evaluation – or less commonly different effectiveness designs – and so appears in more than one place in the tables generated and may not add up to the total.

¹¹

Interventions and outcomes: an overview

Table 3 shows a consolidated overview of the studies included in the P-EGM, categorizing the breadth of research across various intervention types and outcome categories.

The color-coding in Table 3 represents the level of evidence available for each intervention–outcome pairing, based on the quantity of studies. Specifically, intervention types and outcomes with over 200 studies are classified as ‘extensively evidenced’ and marked in green, indicating a substantial body of research. Those with more than 100 but fewer than 200 studies are labelled as ‘moderately evidenced’ and highlighted in yellow, reflecting a moderate level of research activity. Areas with fewer than 100 studies are deemed ‘limited evidence’ and are coloured red, indicating gaps in research. It’s important to note that this color-coding reflects the volume of research rather than the quality of the studies, aiming to provide a clear, at-a-glance understanding of where research is abundant and where there may be gaps. This map is at the aggregate level, so it is recommended to ‘zoom in’ to get a more granular view of evidence gaps.

The most extensively evidenced areas are interventions supporting better behaviours, addressing problem behaviour and family interventions, with evidence related to child-centred outcomes particularly prevalent. Family and carer outcomes are extensively evidenced with family and carer interventions.

Table 3: Aggregated view of the P-EGM

	Child-centred	Family and carer outcomes	Peer and adult	School, professionals and community	Offending and crime	Total
Supporting positive behaviours	904	146	67	181	298	1596
Addressing problem behaviours	561	57	42	131	190	981
Family and carer interventions	377	329	16	46	154	922
System approaches	144	19	22	123	55	363
Crime and justice	65	9	6	9	177	266
Total	2051	560	153	490	874	2255

Note: Rows and column totals do not sum to cell contents as a single study may be coded for multiple interventions and outcomes.

Systems approaches is the intervention area that is least evidenced, though relevant research in this area is more likely to be in the Systems EGM. Child-centred outcomes make up two-thirds of the studies in the map, showing that the evidence is mainly focused on preventative approaches.

In the updated version of the map, the same areas identified in the first edition of this report as lacking sufficient research remain as gaps. The data continues to show a significant concentration of evidence in supporting positive behaviours and tackling problem behaviours. However, it highlights an increased need for research on interventions targeting peer and adult relationships, system-wide approaches, and specific strategies for family and carer interventions aimed at addressing problem behaviours. This continued presence of these gaps suggests a need for more comprehensive research in these underrepresented areas. Additionally, the gap in crime and justice outcomes further signals the necessity for broader studies to understand the effectiveness of interventions within the criminal justice context, emphasizing the importance of developing evidence-based practices to address these gaps more effectively in subsequent updates.

Table 4 shows that the largest share of studies (around half) are of primary interventions which are preventive in nature. This is followed at just under a third being secondary interventions for children at risk, and a quarter for children who have already offended (tertiary interventions).

Table 4: Primary, second, tertiary: Public health classification of interventions in the updated map

Point of intervention	Description	Number of studies
Primary	Preventive measures which are either universal or targeted at high risk groups	1084
Secondary	Interventions for children (or parents of children) with problem behaviours	613
Tertiary	Interventions for children (or parents of children) who are perpetrators and victims of crime and antisocial or delinquent behaviour	555
Multiple	Any combination of the above	103

Note: Number of studies do not sum to the total number of studies as a single study may be coded for more than one point of interventions.

Country and study design

Table 5 outlines study designs by country, acknowledging that a study might encompass both an impact evaluation and a process evaluation, or in rarer instances, different types of impact evaluation design, hence appearing in multiple categories within the table. The update reveals that the majority of studies originate from the USA, as was the case in the first edition. The UK is the second most represented country in the map, contributing 441 studies. This marks a significant increase compared to the first edition, with the UK studies now representing just under 20% of the total studies included in the updated map (compared to 16% in the first edition).

Table 5: Study design by country in the updated map

Countries	Randomised Control Trial	Matched comparison	Interrupted time series	IV/other regression	Pre/Post	Systematic review/meta-analysis	Process evaluation	Total
Australia	38	9	0	4	16	64	23	154
Canada	27	18	2	3	8	69	11	138
China	8	1	0	0	2	15	0	26
Finland	14	2	0	0	1	21	1	39
Germany	18	1	1	0	2	18	1	41
Hong Kong	19	3	0	0	4	6	0	32
India	1	3	0	0	1	1	0	6
Indonesia	4	2	0	0	0	0	0	6
Ireland	1	2	0	0	1	10	3	17
Italy	6	3	0	0	2	20	1	32
Mexico	2	3	0	0	1	3	0	9
Netherlands	41	12	0	2	2	31	4	92
New Zealand	4	1	0	1	8	12	15	41
Nigeria	1	3	0	1	1	0	0	6
Norway	7	2	0	0	1	24	2	36
South Africa	6	0	0	0	1	6	4	17
Sweden	6	7	0	0	2	17	4	36
Turkey	5	6	0	0	1	9	0	21
UK	64	39	12	4	56	76	190	441
USA	587	240	19	40	140	251	165	1442
Others	86	43	2	5	11	45	17	209
Total	945	400	36	60	261	698	441	2255

Note: A study may contain both an impact evaluation and a process evaluation – or less commonly different effectiveness designs – and so appears in more than one place in the table.

- **United States (USA):** The USA leads significantly in the number of studies conducted across all design types, especially in Randomised Control Trials (RCTs) with 587 RCTs and 165 Process Evaluations. This indicates a strong emphasis on both experimental designs and the evaluation of how interventions are implemented in practice.
- **United Kingdom (UK):** The UK also shows a substantial research output. There are more process evaluations in the map than from any other country (190 studies) and a large number of RCTs (64 studies). The UK has a ratio of approximately 3:1 of process evaluations to RCTs, whereas this ratio is reversed in the United States. This statistic suggests scope for more rigorous impact evaluations in the UK.
- **Australia and Canada:** Both countries show a diverse range of studies, with Australia having a total of 154 studies and Canada 138. A substantial share of these studies come from their inclusion in Systematic Reviews/Meta-Analyses (64 studies for Australia and 69 for Canada).
- **Emerging Research Regions:** Countries like China, India, and Indonesia have very few studies overall, which points to potential areas for growth in research capacity and output. India and Indonesia, for example, have only 6 studies each, with a limited range of study designs. In India only one of these six studies is an RCT, although in Indonesia there are four RCTs.

Major Gaps in Research:

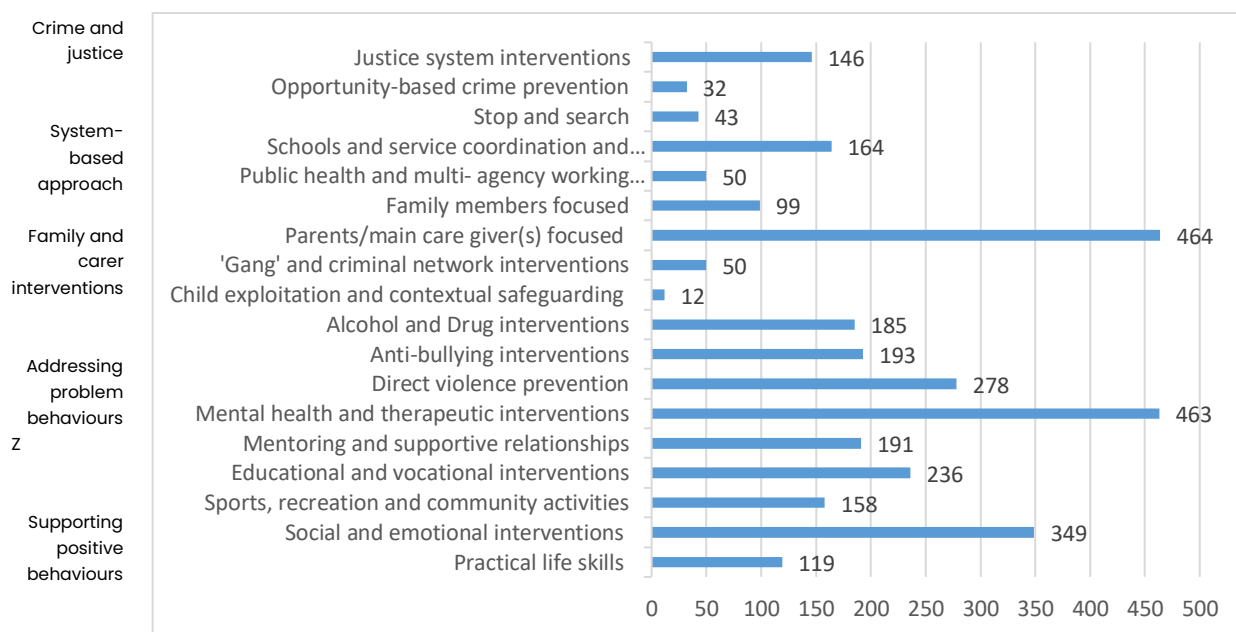
- **Low- and middle-income countries are under-represented:** The limited number of studies from countries like India, Indonesia, and Nigeria suggests a gap in research in these low and middle-income countries. Such studies are important for designing interventions that are culturally and contextually appropriate.
- **Underutilized Study Designs:** The lower use of certain non-experimental study designs – such as Interrupted Time Series which examines the change in outcome either side of a change in policy, and Regression Discontinuity Designs,

which exploit an allocation rule to compare outcomes for those just either side of a threshold - indicates a gap in adopting more varied and potentially robust methods for causal inference. These designs might be used where there has not been random assignment of the intervention.

Looking at interventions in more detail: sub-category analysis

Figure 8 shows the number of studies in each intervention sub-category. Certain areas have significant amounts of evidence. The most common intervention category is that for parents/caregivers. These interventions include both parenting classes and child-focused interventions, especially those for younger children, which include activities that engage parents. There are also many studies on interventions addressing mental health issues. Studies of educational and social interventions are also common. Conversely, the update highlights the lack of studies addressing issues like child exploitation and contextual safeguarding. There are also few studies of opportunity-based crime prevention, such as street lighting.

Figure 8 Intervention sub-categories (no. of studies)



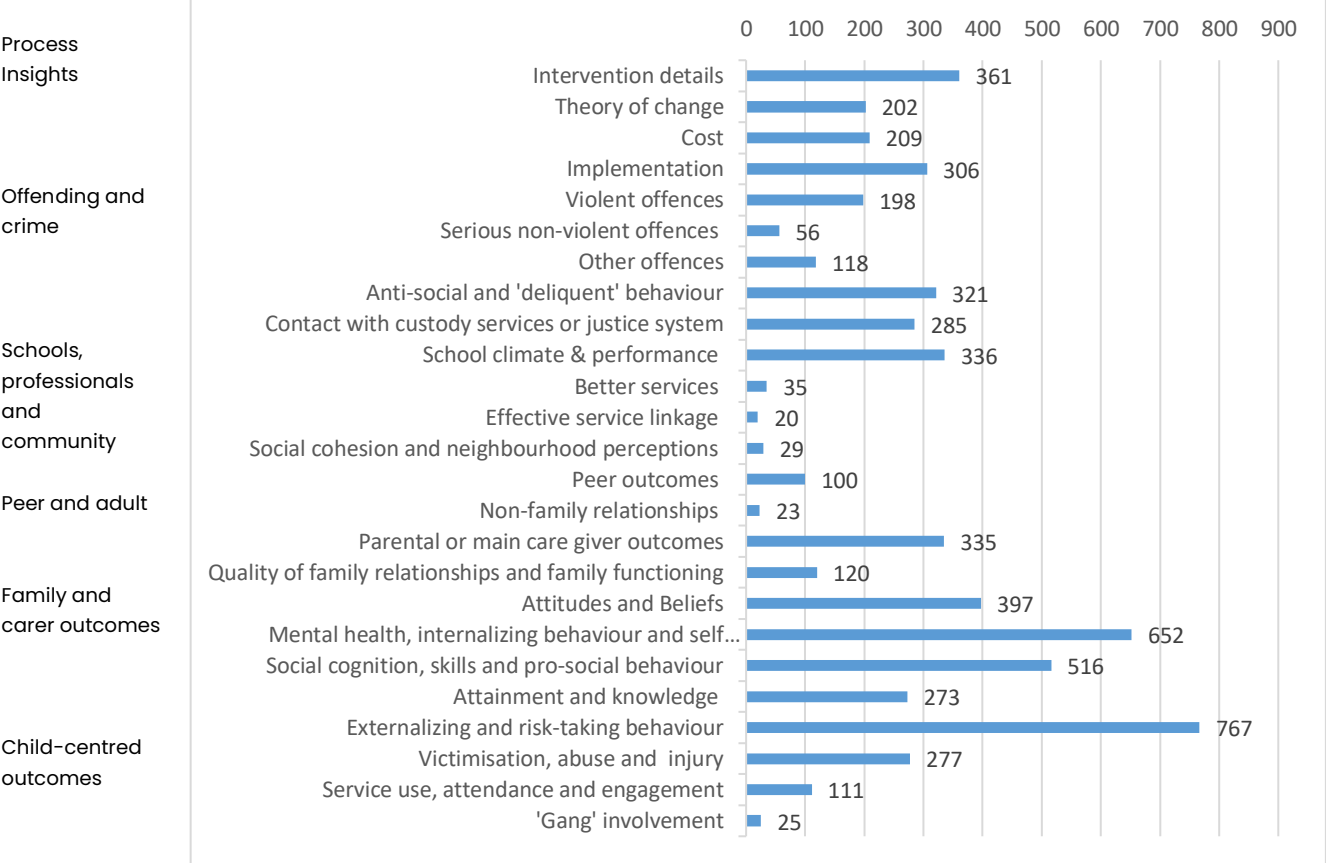
Note: Number of studies do not sum to the total number of studies as a single study may be coded for multiple interventions and sub-interventions.

Looking at outcomes in more detail: sub-category analysis

The data reflects an intervention landscape that is deeply invested in addressing mental health and behavioural issues, with a strong inclination towards outcomes that improve individual capabilities and modify risk-related behaviours. There is an

even balance of studies across personal, family, and educational influences on behaviour. However, the data also indicates areas where outcomes are not as frequently reported or possibly not as heavily targeted by interventions. Outcomes related to service delivery, community-level impacts, and non-violent offences are less represented.

Figure 9: Outcome sub-categories: Number of studies

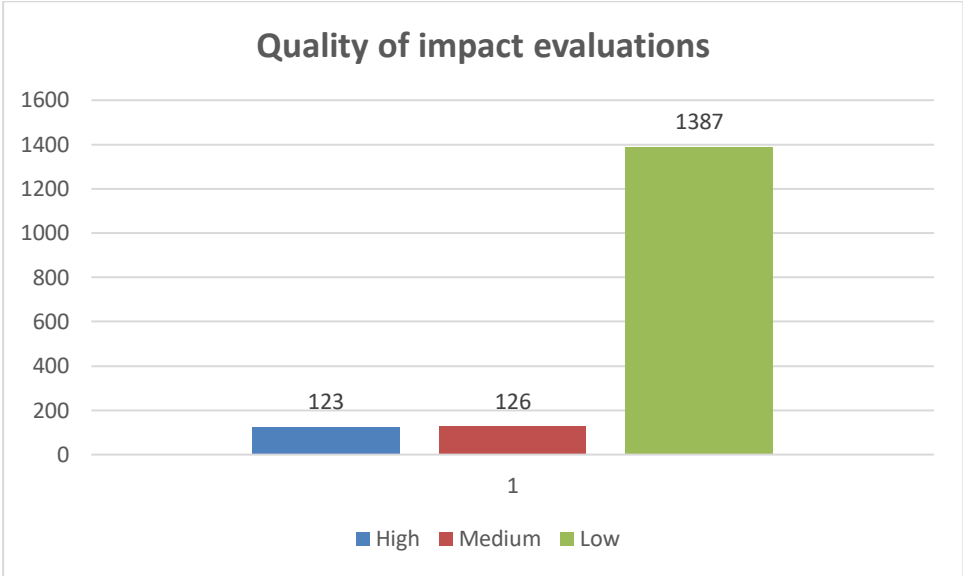


Note: Number of studies do not sum to the total number of studies as a single study may be coded for multiple outcomes and sub-outcomes.

Quality of evidence

Impact evaluations

Figure 10: Critical appraisal of impact evaluations

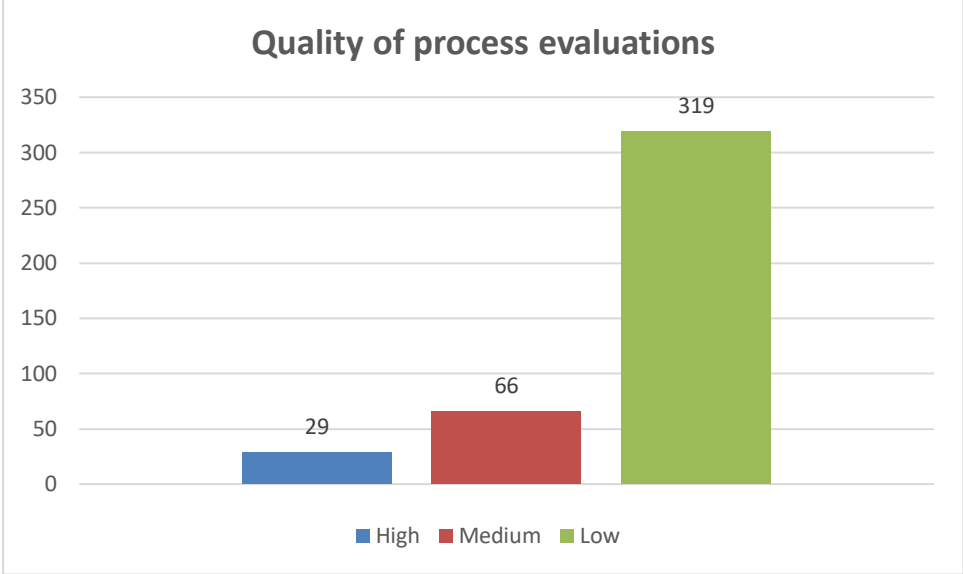


Note: There are 1668 impact evaluations included in the map. Of these 32 are ongoing impact evaluations that are not critically appraised.

Most of the impact evaluations were categorized as 'low quality', due to issues related to study design such as attrition rates, clarity of outcome descriptions, and the lack of power calculations to calculate the required sample size. The most common reason for the low-quality designation are the lack of power to determine the minimum sample size required to identify an effect, should one exist. Insufficient power due to inadequate sample size calculations in impact evaluations can lead to failing to find a significant effect of an intervention which does in fact have one.

Process evaluations

Figure 11: Critical appraisal of process evaluations



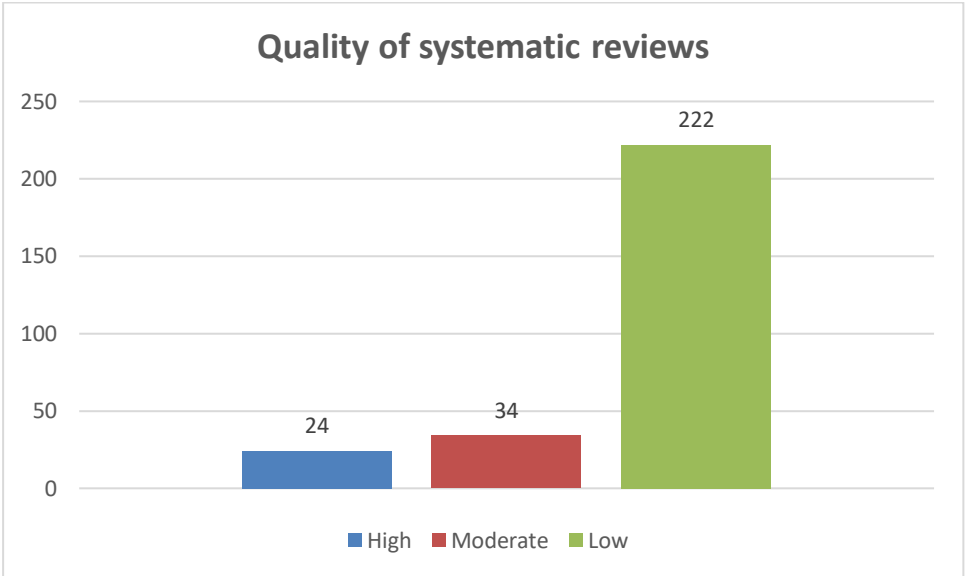
Note: There are 416 process evaluations included in the map; of these 4 are ongoing process evaluations that are not critically appraised.

The updated map indicates that most process evaluations have been assessed as low-quality. The evaluation of quality was conducted considering study characteristics such as the methodologies (both qualitative and quantitative) employed, the description of these methodologies, the strategy for sampling, underlying assumptions, attention to ethical considerations, the approach to data analysis, the implications of findings, and the clarity of the evaluation question. The primary reasons for the low-quality ratings are insufficient attention to ethical considerations and inadequate descriptions of the methodologies used in the studies.

Systematic reviews

The updated EGM shows that when critically appraised with the AMSTAR-2 tool, many systematic reviews and meta-analyses are found to be of low quality. The main shortcomings are that these reviews didn't carefully consider the possibility of bias in the studies they included, used inadequate methods to check for bias, or failed to disclose the funding sources for the studies.

Figure 12: Critical appraisal of systematic reviews



Note: There are 282 systematic reviews included in the map; of these 2 are ongoing systematic reviews that are not critically appraised.

Conclusion

The updated Programmes Evidence and Gap Map contains 2,255 studies, making it the largest repository of studies on youth violence in the world. The map organises this knowledge in a way that helps users to find evidence linked to intervention types and outcomes of interest, see how strong the evidence is in a given area, and click through to find the individual underlying studies.

The map shows that there is an extensive evidence base, but it is unevenly distributed geographically and by topic area; the quality of studies is promising but could be improved:

Implications

The findings from the updated Programmes Evidence and Gap Map (EGM) highlight critical implications for future research in the domain of youth violence prevention. Firstly, at the global level there is a strong need for expanding the geographical scope of studies to include underrepresented regions, ensuring that interventions are culturally and contextually relevant across diverse settings. Secondly, addressing the identified gaps in research, particularly in interventions targeting peer and adult relationships, system-wide approaches, and crime and justice outcomes, is paramount. This entails not only increasing the volume of research in these areas but also enhancing methodological rigor and quality to ensure that findings are reliable and applicable. Thirdly, the P-EGM highlights the necessity of conducting research that focuses on specific demographic groups that have been

less studied, such as children in care, people from ethnic minority backgrounds, and children with disabilities. Finally, the prevalent issue of low-quality evidence calls for a concerted effort to improve study designs, ethical considerations, and reporting standards.

Updating the Map

Updating and improving the map at regular intervals will ensure the YEF and other stakeholders have the best overview of the evidence base for interventions relevant to preventing children and young people's involvement in crime.

Glossary

AMSTAR-2: This stands for A Measurement Tool to Assess Systematic Reviews 2. This is a gold standard assessment tool for systematic reviews. For more information please see: <https://amstar.ca/Amstar-2.php>.

Approaches: An approach is a set of interventions with similar theories of change. It is not a manualised or precisely described activity. For example, the 'police in schools' approach covers a range of activities which aim to reduce youth violence by having a police officer visit schools. The police officer might use assemblies, small-group sessions or PSHE lessons to teach young people about policing and the law, personal safety, and local issues. These activities all share the expectation that police officers working directly with young people in schools will reduce youth crime.

Critical appraisal tool: This refers to the document used to help the project teams decide how to rate the quality of the studies included. For more details on this tool please see Annex 6.

Data: Data is the information collected in a study i.e. the answers to surveys.

Databases: These are places that store data and can be physical e.g. a filing cabinet/archives but more they refer to are digital stores of information.

Evidence and gap map (EGM): A 'evidence and gap map' is an interactive tool directing users to relevant studies within a specified area of interest e.g. mentoring programmes aimed at young people at risk of involvement in violent crime.

Evidence Map: Any evidence map is a product that systematically searches for, and present, evidence on a certain topic highlighting the gaps in research in a user-friendly way. An EGM is a type of map, but not all evidence maps are called EGMs.

Evidence Platforms: Sites which contain collections of evidence though not necessarily organised into standardised formats like Evidence Portals or Toolkits.

Evidence Portals: Also known as 'Evidence Toolkits' these are set of tools to help decision makers/practitioners interpret evidence more easily. They usually do this by providing a summary of key information, for more information about Toolkits please see the 'Toolkit' section in Annex 8.

Evidence Products: Any tool or resource e.g. report that is based on research or aims to help people use research.

Exclusion criteria: This is a list of items that, if featured in a study, disqualify it from inclusion in the map. In the YEF map a study will be excluded if it does not feature any YEF relevant outcomes, for example studies looking at reducing obesity only.

Filter terms: These are words or phrases that map users can select in the 'filter' section of the map to narrow their search. These include items such as 'country'.

Final outcomes: Also sometimes called 'ultimate outcomes' these are the changes in a population that we most hope to achieve but might occur in the longer term (rather than immediately following the intervention) . For YEF our final, or ultimate outcome, is reduced violence.

Inclusion criteria: this is a list of requirements that a study has to meet in order to be added to the map. An example is that the study must be written in English.

Impact evaluations: These studies examine how effective an intervention is i.e. how well it achieves its intended outcomes. This is done by measuring an outcome of interest, e.g. a reduction in violence, ideally in relation to a comparison group that did not receive the intervention. Higher quality designs typically involve randomly allocating participants to an intervention or a comparison group (e.g. RCTs), or creating statistically similar comparison groups (e.g. QEDs). In both cases, the aim is to try and understand what impact the intervention had relative to what would have happened otherwise. In addition to RCTs and QEDs, the EGM map also

includes 'pre/post' studies, which look at a group's change in outcomes before and after an intervention, but without a comparison group. These types of studies are less rigorous, though provide information on the extent of evaluation in different intervention areas, and potential areas of promise where more rigorous studies could be beneficial.

Implementation: This refers to how an intervention runs in practice. This is a subcategory in our 'process insights' category and points to details about what helps and hinders the running of an intervention in practice.

Intervention: An intervention is an activity, approach or programme aimed at achieving a desired change in an individual or group.

Intermediate outcomes: These are the changes in the population which are being measured which occur earlier than the final change that we might be interested in. For example if violence is our desired outcomes, an intermediate outcome that might occur before could be less fighting.

Interrupted time series: This is a type of study design that compares data collected at multiple points over an extended period of time both before and after an intervention, to help assess the effect of the intervention (which "interrupts" the time series). This is one of the types of QED designs that does not feature a comparison group, however it takes into account the fluctuations that can occur before and after an intervention, unlike pre/post studies.

Instrumental variable/other regression: This is a type of statistical analysis that is used to estimate the relationship between interventions and outcomes.

Level of targeting: This refers to how specific the group receiving an intervention is. There are two levels: universal (available to all children or young people) or targeted (only available to certain children or young people).

Map typology: This refers to the labels of the map on, horizontally (x-axis) and vertically (y-axis).

Matched comparison: This is a type of study in which one group of participants who receive an intervention are compared to another group of participants who do not receive the intervention, but that are similar to the participants who do in certain ways (called 'matching'). Good quality studies 'match' participants on a number of different items that could affect the outcomes, for example demographic factors such as age or factors that are particularly relevant to the intervention e.g. previous school grade might be important for an educational intervention. Matched comparison studies are an example of a QED.

Outcomes: These are the changes in the population which are being measured i.e. the result, or effect, of an intervention. These are usually what an intervention intends to change (and therefore measures) and could be intermediate or final outcomes.

PICOS: Stands for Population, Intervention, Comparison, Outcomes and Study design. PICOS is widely framework for ensuring that studies are clear is recommended by guidelines such The Cochrane Handbook for Systematic Reviews of Interventions. The PICOS of the YEF map is discussed on pages 11-14 of the full report.

Place-based intervention: Interventions that are focused on a geographic location rather than on a specific person or group of people. Examples of place-based interventions include street lighting and alley-gating, as well as targeted policing of specific crime hotspots, at a street or other small geographic area.

Point of intervention: This refers to *when* an activity, programme or approach takes place during an individual's potential journey through services and is an option for filtering the map. There are three options featured in this map which are based on the medical organization of services. They are *primary* (available to everyone, usually through universal services like a GP), *secondary* (available to some individuals who need more support than is available at the primary level) and *tertiary* (these are specialist services available to those most in need).

Population: When we refer to population we mean the people involved in a study.

Pre/post studies: These types of studies look at a group's change in outcomes before and after an intervention, but without a comparison group. They are less rigorous, though provide information on the extent of evaluation in different intervention areas, and potential areas of promise where more rigorous studies could be beneficial.

Primary studies: Studies of individual interventions.

Process evaluations: These are studies about how interventions work both theoretically (e.g. theory of change) and practically (design, cost, implementation issues). Such insights can be found either alongside studies examining the effect of interventions, or more commonly, in descriptive studies of interventions conducted without an analysis of effect (qualitative process evaluations).

Programmes: A collection of clearly defined ('manualised') activities, training, and/or resources. There is an expectation that a core set of activities happen in the same way across different contexts. The precise details of implementation can vary across contexts but the aim is that core activities are delivered consistently. These are often associated with a brand name e.g. Becoming a Man.

Quasi Experimental Designs (QEDs): Is an evaluation of an intervention that does not involve randomisation

Qualitative research/studies: Research/studies that explore themes and effects using words rather than numbers. Analysis can be conducted e.g. thematic analysis which looks for patterns in people's written or verbal answers, but these do not provide a numerical value.

Quality: When we discuss quality, this refers to how confident we can be in a study's findings.

Quantitative research/studies: Research/studies that feature a statistical analysis of items measured with a numerical value. For example, questionnaires that convert someone's answer into a score.

Theory of Change: A theory of change explains the rationale for why an intervention is needed and explains the theory for how it links to its intended outcomes. A good theory of change will identify short and long-term goals that are important and justify this with links to scientific literature.

Randomized control trials (RCTs): Sometimes referred to as randomized controlled trials, these studies feature at least one group that do not receive an intervention (control group) and participants are assigned to either the intervention group or control groups by chance (randomization). These studies are rigorous and considered the gold standard in research trials.

Systematics reviews: These studies find, collate and evaluate the results of relevant research in response to a pre-defined question (typically assessing the effect of an intervention).¹² Some of the systematic reviews also include meta-analyses, which also calculate an average estimate of the effect of the intervention(s) on outcomes of interest.

Unit of delivery: This refers to how an intervention is implemented and is a filter option available in the map. The options are individuals or groups (including couples).

¹² See here for additional information: <https://campbellcollaboration.org/what-is-a-systematic-review.html>

Annex 1 Screening tool

Below is the tool that the reviewers looking at the individual studies used to decide whether the study would be featured in the map or not. This tool is based on the inclusion/exclusion criteria discussion in the 'developing the specification of the map' section.

1.	Is the paper in English?	No	Exclude
		Yes	Continue to q2
2.	Is the paper about an intervention intended to modify the behaviour or attitudes, either directly or indirectly, of children up to the age of 17* or their parents/caregivers or professionals with whom they interact?	No	Exclude
		Yes	Continue to q3a
3a.	Is the paper a quantitative evaluation reporting measures of eligible outcomes compared to the outcomes (1) in a comparison group (either with or without baseline outcome measures), (2) before versus after with no comparison group, or (3) a systematic review** of such studies?	No	Continue to q3b
		Yes	Continue to q4
3b.	Is the paper a qualitative process evaluation describing intervention design or implementation, or an analysis of intervention costs?	No	Exclude
		Yes	Include (END)
4.	Do the outcomes include measures of attitudes, beliefs or behaviour of children, professionals or parents?	No	Exclude
		Yes	Include

Notes:

* Age is at the time of intervention, not outcome measurement. At least 50% of intervention group aged ≤ 17 . If not clear include if intervention is relevant to 10-14 years of age.

** To qualify as a systematic review the review must have: (i) a clearly stated PICOS, (ii) a comprehensive search strategy, (iii) explicit inclusion and exclusion criteria for screening; and (iv) systematic coding and reporting of all outcomes covered by the PICOS.

Annex 2 Coding form

After deciding that a study will be featured in the map a reviewer will need to identify the key information about the study and put the information in a database (a place that stores information, in this case it is the Eppi Reviewer 4 platform also used to create the map). Reviewers would identify bibliographic information, intervention types, outcome types and filter specific information from each study. A list of what information is noted is listed under each section below.

Bibliographic information

The information below was collected for all studies:

Title

Authors

Year

Journal name/report series

URL/DOI

Interventions

The type of intervention was also noted for each study. The options are presented below. Ideally, each singular intervention would be categorised under one intervention type. This is mainly based on what the most prominent feature of the intervention was i.e. what was most important element is, or what the majority of the time in the intervention was dedicated to. Where there may be multiple components that were key, equally important or time intensive, multiple interventions were coded for a single intervention, though reviewers did try to avoid this wherever possible to reduce duplication. Sometimes studies featured more than one types of interventions, in this case all interventions featured would be categorised if results were presented.

Intervention category	Intervention sub-category
Supporting positive behaviours	Mental health and therapeutic interventions
	Mentoring programmes
	Educational and vocational interventions

	Sports, recreation and clubs
	Social and emotional interventions
	Practical life skills
Addressing problem behaviours	'Gang' and criminal network interventions
	Child exploitation and contextual safeguarding
	Alcohol and Drug interventions
	Anti-bullying interventions
	Direct violence prevention
Family and carer interventions	Parents/main care giver(s) focused
	Family members focused
System approaches	Schools and service coordination and improvements
	Public health and multi- agency working approaches
Crime and justice	Justice system interventions
	Crime and anti-social behaviour prevention

Outcomes

Every study included was also categorised under any outcome(s) that were reported either in the analysis and/or that were intended to be investigated as per the aims of the study. The categories of outcomes are listed below.

Outcome Domain	Outcome Sub-domain
Child-centred	Attitudes and Beliefs
	Mental health, internalizing behaviour and self-regulation
	Social cognition, skills and connectedness
	Attainment and knowledge
	Externalizing and risk-taking behaviour
	Victimisation, abuse and injury
	Service use, Attendance and engagement
Family and carer outcomes	Parental/ main care giver outcomes
	Quality of family relationships and family functioning
Peer and adult	Peer outcomes
	Quantity and quality of (non-family) relationships
School, professionals and community	School climate & performance
	Better services
	Effective service linkage

	Social cohesion and neighbourhood perceptions
Offending and crime	Violent offences
	Serious non-violent offences
	Other offences
	Antisocial and 'delinquent' behaviour
	Contact with custody services or justice system

Filters

Finally, certain additional information was also captured from each study included in the map so that users can find relevant studies more quickly (i.e. so that user can filter studies). The filters used in the map are listed below.

Filter Category	Filter Sub-categories
Unit of delivery	Individual, couple or group
Location/setting	Remote, community, school, secure residence, family or foster home, care home, custody
Level of targeting	Universal, targeted
Ages	0-3, 4-9, 10-14, 15-17
Country	Any noted
Point of intervention	Primary, secondary, tertiary, multiple
Target group of interventions:	Infants (0-3), Child (4-9), Adolescent (10-14), Child/Youth age not reported, Parents/carers, Family (including wider family and significant adults), Professionals (e.g. teachers), gangs, looked-after children, race-specific targeting, children with disabilities
Key professionals involved in intervention	Health and social care workers, therapist/counsellors, teachers, law enforcement, probation services, prison officers, community voluntary sector (CVS) workers, <u>others</u>
Study design	RCT, matched comparison, interrupted time series, IV (instrumental variable)/other regression, systematic review/meta-analysis, before vs after.
Demographics	Male, Female, Non-binary, Both, Gender not reported Ethnic minority: Mainly/exclusively (80%), Partly, None, Not clear

Region	East Asia and Pacific, Europe and Central Asia, Latin America and Caribbean, North America, Middle East and North Africa, Sub-Saharan Africa, South Asia
Study quality and type	High and medium quality evaluations, low quality evaluations, high and medium quality systematic reviews, low quality systematic review
Quality of impact evaluation	High, medium, low
Quality of process evaluation	High, medium, low
Quality of systematic review	High, medium, low
Status of study	Completed, ongoing
Year of publication	1970-1979, 1980-1989, 1990-1999, 2000-2009, 2010-2020

Annex 3 Interventions, outcomes and process insights definitions

Below please find definitions for each of the intervention, outcomes subcategories as well as further details on the process insights components (which appear on the x-axis, after the listed outcomes). Each component (intervention type, outcome type etc) is discussed separately below, with references provided after each list.

List of intervention categories and sub-categories

Intervention type appears on the y-axis of the map. Listed below are the definitions of the subcategories included.

Intervention Category	Intervention Sub-category	Definitions
Supporting positive behaviours	Mental health and therapeutic interventions	Any recognised talking therapy, or intervention aimed specially at improving or treating mental health concerns. Includes both individual and group. (Castillo Enrico G., 2019)
	Mentoring and supportive relationships	Interventions [that] connect people who have specific skills and knowledge (mentors) with individuals (protégés) who need or want the same skills and advantages to move up in work, skill level, or school performance.' (Community tool box, n.d.) This broadly includes building supportive relationships with key adults.
	Educational and vocational interventions	Interventions that focus on gaining specific knowledge or that lead to educational or career progressions (Lestrud, 2013) (Mau, 2008)
	Sports, recreation and community activities	Interventions that promote the pursuit of positive activities such as sport or creative endeavours. (Khasnabis C, 2010)
	Social and emotional interventions	Interventions which aim to improve children's interaction with others and self-management of emotions (2) (Education Endowment foundation, n.d.)
	Practical life skills	Activities that focus on developing skills of daily living and/or planning for adult life. (Prajapati R, 2017)
	'Gang' and criminal network interventions	A gang, is defined by the social relationships of its members with each other and with those outside the group. This category, therefore,

Addressing problem behaviours ¹³		includes any intervention aiming to reduce gang related outcomes such as gang membership and activities or involvement in organised crime (Michael Sierra-Ar´evalo, 2017)
	Child exploitation and contextual safeguarding	Practices and procedures to reduce harm to children outside of the family home (University of Bedfordshire, 2020) , including those specifically related to child exploitation
	Alcohol and Drug interventions	Interventions addressing alcohol and/or drug related outcomes, including but not limited to direct use
	Anti-bullying interventions	Any interventions that identifies as ‘anti-bullying’ or is aimed at reducing persistent aggressive behaviour that is intended to cause another child harm or discomfort (American Psychological Association, n.d.) .
	Direct violence prevention	Any intervention specifically aiming to reduce or eliminate violence. Examples would include dating violence programmes or programmes to reduce reactive aggression.
Family and carer interventions	Parent/main care giver(s) focused	Interventions that focus on addressing behaviours/attitudes/outcomes for parental figures . Parenting skills would be categorised here.
	Family members focused	Interventions that target, or address, whole families and/or family systems, or include familial relationships outside the main carers. This is equivalent in care settings
System approaches	Schools and service coordination and improvements	Interventions pertaining any changes in the way services are delivered including developing service personnel or systems or procedures. Co-ordination between services in the same sector are captured here (e.g. transition between schools). Excluding justice system or contextual safeguarding specific activities.
	Public health and multi- agency working approaches	Pertaining to changes in whole systems or multi agency working to promote maximal health for all (Public Health England, 2019). Co-ordination between services across sectors are captured here.

¹³ It is important to note that for our purpose ‘problem behaviour’ does not always refer to direct behaviour of the child, but also captures the behaviour of others which involves a child and may contribute to behavior associated with offending e.g. child exploitation

Justice and opportunity-based crime prevention	Justice system interventions	Changes or adjustments to justice processes or interventions targeted at justice professionals and/or are conducted in justice settings such as prisons or police facilities.
	Opportunity based crime prevention	Interventions that increase risk/difficulty of committing a crime (Clarke, 1995). For our purposes this would include behaviour restrictions (e.g. curfews and ABSOs) as well as environmental factors (e.g. lighting and CCTV).

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List of outcome categories and sub-categories

Outcomes are featured on the x-axis of the map. Below are the definitions of each subcategories included.

Outcome Domain	Outcome Sub-domain	Definition
Child centred	Attitudes and beliefs	Any attitude or belief relating directly to crime/aggression or identified risk and protective factors e.g. Violence ideation, offending attitudes, moral beliefs, and attitudes to school. For our purposes this includes goals and future aspirations.
	Mental health, internalizing behavior and self regulation	Outcomes relating to managing emotions, impulses such as anger management, ability to manage impulsivity and distractedness and other mental health components, favorable or encouraging estimate or opinion/belief and attitude among oneself (e.g. self-esteem and self worth). Mental health status and diagnoses are also included in this category. (Leo Bogee, 1998) Internalizing behavior problems are described as inward occurrences, displaying as an inhibited style described as withdrawn, lonely, depressed, and anxious. (Patrick J.McGrath, 2015). Self regulation refers to skills described above, outside of the mental health context, for example general anger management.

Outcome Domain	Outcome Sub-domain	Definition
	Social cognition, skills and pro social behaviour	<p>Pertaining to understanding and relating to others. Including: empathy, attribution style, conflict resolution style. (Uta Frith, 2006)</p> <p>Outcomes related to improved interactive and communication skills with others in the society and community Measures of an individual's social network (Maurice Kugler, 2015) and sense of connectedness.</p> <p>Pro social behaviour are positive behaviours that children can engage in for example assisting with household or classroom tasks.</p>
	Attainment and knowledge	Outcomes relating to achievements (academic or extra-curricular), or measures of specific knowledge gained. E.g. Educational attainment, sports achievements or knowledge about knife crime. This includes cognitive outcomes such as memory and task switching, as well as age-dependent developmental measures.
	Externalizing and risk-taking behaviours	Any measure of externalizing behaviours including aggression and rule breaking behaviour OR risk-taking behaviour such as gambling, running away, truancy and drug and alcohol use. (Guita Movallali, 2017)
	Victimisation, abuse and injury	Any measure of individual victimisation including victim of crime, abuse/neglect, victim of bullying or harassment, an imminent risk of serious harm and/or relevant physical health outcomes such as wound severity or diagnoses (Barajas K., 2017)
	Service use, attendance and engagement	Any measures of participation in activities/services/community, including measures of involvement with activities/service's Eg Service utilization, involvement with family/peer activities, use of community activities, employment and class room behaviour
Family and carer outcomes	Parental or main care giver outcomes	Measures specifically related to parental figures only e.g. employment, intimate partner violence, parental mental health outcomes (Kuhlthau K, 2010)
	Quality of family relationships and family functioning	<p>Measures of attachment to/from any family member(s) or equivalent. This could also be related to perception of this bond.</p> <p>Measures of household systems, climate, cohesion and ability to meet all basic needs for example: domestic abuse/witnessing abuse, familial conflict resolution style</p>
Peer and adult	Peer outcomes	Any measures of peer specific outcomes including beliefs, attitudes, behavior (Taheri, Amini , Delavari , Bazrafkan, & MazidiMoradi , 2019)
	Non-family relationships	Measures related to number of relationships, attachment or perception of bond between peers and non-family adults.

Outcome Domain	Outcome Sub-domain	Definition
School, professionals and community	School climate & performance	Measures of factors relating to perception of school environment e.g. School bullying, teacher engagement. OR measures of factors affecting school performance, as well as overall school performance reports including truancy/exclusion levels, school ranking and ofsted reports. (Loukas, 2007)
	Better services	Any outcomes specific to any service provided, including access, availability etc.
	Effective service linkage	Any measure of successful referrals including numbers received and processed
	Social cohesion and neighbourhood perceptions	Measure of belief/bonds and trust within a community. (Larsen, 2014) And/or any measures of perceived safety, crime levels etc
Offending and crime	Violent offences	Any measure or record of recognised violent crimes such as assault, murder/manslaughter, use of weapons, robbery at an individual and community level (NIJ)
	Serious non-violent offences	Any measure or record of recognised serious crime that is not violent like drug dealing. At an individual or community level.
	Other offences	Any measure or record of undifferentiated offences, total offences including for individuals and communities, and offences not included above.
	Antisocial and 'delinquent' behaviour	Any measure or record of acting/behaviour that is likely to cause alarm or distress over a period of time (Shelter scotland)
	Contact with justice system/any custody service	Any measure or record of contact with any teams of services within the criminal justice or custody service

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Process insights description

Process insights also appear on the x-axis after the outcomes discussed above. Below please find a description subcategories included in the process insight domains.

Process insights

Column heading	Description
Intervention details	Intervention design features (i.e. what details of what is being delivered)
Theory of change	Theory of change for the intervention (i.e. how the intervention achieves its aim(s) in theory)
Implementation	Barriers and facilitators (i.e. what helps and/or hinders when delivering an intervention in practice)
Cost	Cost analysis (CA), Cost-Benefit-Analysis (CBA) and cost data (i.e. if the study contained any information about the cost of the intervention or featured any types of cost analysis).

Annex 4 Sample Search Strings

Examples of the times of search terms used to find studies in scientific databases are given below.

1. APA PsycInfo (Ovid) <1806 to May Week 4 2020> Draft search 1st June 2020

- 1 (adolescen* or boy* or child* or girl* or grader* or infant* or junior* or juvenile* or kindergarten or minors or paediatric* or pediatric* or postpubert* or postpubescen* or preadolescen* or prepubert* or prepubescen* or preschool* or preteen* or pubert* or pubescen* or school* or teen* or toddler* or youngster* or "young people" or "young person*" or "young population*" or youth*).ti,ab. (1175979)
- 2 (delinquen* or violen* or bully* or bullies or crime* or offend* or recidivis* or reoffen* or (law* adj2 (break* or breach* or violat* or contraven* or infring* or transgress*)) or lawbreaking or unlawful* or criminality or misdemeanor*).ti,ab. (165637)
- 3 1 and 2 (73037)
- 4 "Juvenile Delinquency"/ or predelinquent youth/ (17541)
- 5 3 or 4 (76903)
- 6 exp Adolescent Behavior/ or exp Adolescent Psychopathology/ (5698)
- 7 exp Child Behavior/ or exp Child Psychopathology/ (3357)
- 8 exp Behavior Change/ or exp Self-Destructive Behavior/ or exp Behavior Modification/ or exp Aggressive Behavior/ or exp Adaptive Behavior Measures/ or exp Disruptive Behavior Disorders/ or exp Criminal Behavior/ or self control/ or antisocial behavior measures/ or antisocial behavior/ or classroom behavior/ (295583)
- 9 (behavio* or psychopatholog* or "mental health" or "self control" or antisocial or (school* adj3 exclu*) or "conduct problem*").ti,ab. (1123170)
- 10 or/6-9 (1280990)
- 11 "Prevention"/ or "Crime Prevention"/ or exp Primary Mental Health Prevention/ or exp Drug Abuse Prevention/ or "School Based Intervention"/ or cognitive therapy/ (69505)
- 12 (prevent* or mitigat* or counteract* or avoid* or restrain* or reduc* or lessen* or "cognitive behavio*" or CBT).ti. (109480)
- 13 11 or 12 (153456)
- 14 ("emotional support" or "social support" or mentor* or "life skill*" or vocational or sport* or communit* or educat* or school* or music* or well-being or "well being").ti,ab. (1088511)
- 15 Support Groups/ or Social Support/ or mentor/ or role models/ or exp Skill Learning/ or exp Social Skills Training/ or vocational education/ or music/ or athletic participation/ or school environment/ or communities/ or well being/ (159603)
- 16 14 or 15 (1114188)
- 17 5 and 10 and 13 and 16 (4463)

- 18 (bullying or bully or bullies or gang* or "crim* network*" or exploit* or safeguard* or alcohol or drinking or drug or drugs).ti,ab. (350124)
- 19 bullying/ or cyberbullying/ or emotional abuse/ or physical abuse/ or school violence/ or teasing/ or exp Aggressive Behavior/ or exp Disruptive Behavior Disorders/ (162985)
- 20 gangs/ or juvenile gangs/ (1730)
- 21 alcohol abuse/ or "alcohol use disorder"/ or binge drinking/ or underage drinking/ (21799)
- 22 drug abuse/ or "substance use disorder"/ or inhalant abuse/ or polydrug abuse/ or drug abuse liability/ or drug abuse prevention/ or drug seeking/ (55529)
- 23 or/18-22 (512453)
- 24 5 and 10 and 13 and 23 (4614)
- 25 family/ or dysfunctional family/ or "family and parenting measures"/ or exp Family Crises/ or exp Family Conflict/ or exp Family Intervention/ (57764)
- 26 caregivers/ or caregiver burden/ or caring behaviors/ (31800)
- 27 parenting/ or parental involvement/ or parenting skills/ or parental attitudes/ or parent training/ (40284)
- 28 (family or families or parent* or carer* or caregiver*).ti,ab. (562872)
- 29 or/25-28 (572599)
- 30 5 and 10 and 13 and 29 (1995)
- 31 schools/ or school environment/ or college environment/ or integrated services/ or community services/ or community welfare services/ or outreach programs/ or mental health services/ or child guidance clinics/ or community mental health centers/ or social services/ (108947)
- 32 (((school* or (integrated or multi-agency or community or "mental health" or social)) adj2 service*) or outreach or ((child or adolescent) adj2 guidance)).ti,ab. (59342)
- 33 or/31-32 (142916)
- 34 5 and 10 and 13 and 33 (1385)
- 35 "Juvenile Justice"/ or criminal justice/ or crime prevention/ or "Criminal Rehabilitation"/ (15627)
- 36 (justice or judicial or court or courts or (law adj3 enforc*) or prison* or police or policing or ASBO* or "antisocial behavio* order*" or "electronic tag*" or curfew*).ti,ab. (109132)
- 37 or/35-36 (113129)
- 38 5 and 10 and 13 and 37 (1342)
- 39 17 or 24 or 30 or 34 or 38 (**5876**)

2. Scopus – Draft search 2nd June 2020

(((TITLE-ABS ((adolescen* OR boy* OR child* OR girl* OR grader* OR infant* OR junior* OR juvenile* OR kindergarten OR minors OR paediatric* OR pediatric* OR postpubert* OR postpubescen* OR preadolescen* OR prepubert* OR prepubescen* OR preschool* OR preteen* OR pubert* OR pubescen* OR school* OR teen* OR toddler* OR youngster* OR "young people" OR "young person*" OR "young population*" OR youth*))) AND (TITLE-ABS ((delinquen* OR violen* OR bully* OR bullies OR crime* OR offend* OR recidivis* OR reoffen* OR (law* W/2 (break* OR breach* OR violat* OR contraven* OR infring* OR transgress*)) OR lawbreaking OR unlawful* OR criminality OR misdemeanor*))) AND (TITLE-ABS ((behavio* OR psychopatholog* OR "mental health" OR "self control" OR antisocial OR (school* W/3 exclu*) OR "conduct problem*"))) AND (TITLE-ABS (prevent* OR mitigat* OR counteract* OR avoid* OR restrain* OR reduc* OR lessen* OR "cognitive behavio*" OR cbt))) AND ((TITLE-ABS ("emotional support" OR "social support" OR mentor* OR "life skill*" OR vocational OR sport* OR communit* OR educat* OR school* OR music* OR well-being OR "well being"))) OR (TITLE-ABS ((bullying OR bully OR bullies OR gang* OR "crim* network*" OR exploit* OR safeguard* OR alcohol OR drinking OR drug OR drugs))) OR (TITLE-ABS (family OR families OR parent* OR carer* OR caregiver*)) OR (TITLE-ABS (((school* OR (integrated OR multi-agency OR community OR "mental health" OR social)) W/2 service*) OR outreach OR ((child OR adolescent) W/2 guidance))) OR (TITLE-ABS (justice OR judicial OR court OR courts OR (law W/3 enforc*) OR prison* OR police OR policing OR asbo* OR "antisocial behavio* order*" OR "electronic tag*" OR curfew*)) AND (LIMIT-TO (SUBJAREA, "PSYC") OR LIMIT-TO (SUBJAREA, "SOCI") OR LIMIT-TO (SUBJAREA, "HEAL") OR LIMIT-TO (SUBJAREA, "MULT") - 5824

3. **Social Sciences Citation Index (Web of Science)**

13 **9,439**

#11 AND #5 AND #4 AND #3

Refined by: WEB OF SCIENCE CATEGORIES: (PUBLIC ENVIRONMENTAL OCCUPATIONAL HEALTH OR PSYCHIATRY OR SOCIAL ISSUES OR PSYCHOLOGY DEVELOPMENTAL OR CRIMINOLOGY PENOLOGY OR FAMILY STUDIES OR PSYCHOLOGY CLINICAL OR SOCIAL WORK OR PSYCHOLOGY MULTIDISCIPLINARY OR SUBSTANCE ABUSE OR PSYCHOLOGY EDUCATIONAL OR EDUCATION EDUCATIONAL RESEARCH OR PSYCHOLOGY SOCIAL OR PSYCHOLOGY APPLIED OR PSYCHOLOGY OR SOCIAL SCIENCES INTERDISCIPLINARY OR LAW OR SOCIOLOGY OR MULTIDISCIPLINARY

SCIENCES OR EDUCATION SCIENTIFIC DISCIPLINES OR EDUCATION SPECIAL OR BEHAVIORAL
SCIENCES OR REHABILITATION)

Indexes=SSCI Timespan=1970-2020

12 10,709

#11 AND #5 AND #4 AND #3

11 1,918,263

#10 OR #9 OR #8 OR #7 OR #6

10 187,214

TS=(justice or judicial or court or courts or (law NEAR/3 enforc*) or prison* or police or
policing or ASBO* or "antisocial behavio* order*" or "electronic tag*" or curfew*)

9 63,666

TS=((school* or (integrated or multi-agency or community or "mental health" or social))
NEAR/2 service*) or outreach or ((child or adolescent) NEAR/2 guidance))

8 484,029

TS=(family or families or parent* or carer* or caregiver*)

7 339,961

TS=(bullying or bully or bullies or gang* or "crim* network*" or exploit* or safeguard*
or alcohol or drinking or drug or drugs)

6 1,226,593

TS=("emotional support" or "social support" or mentor* or "life skill*" or vocational or
sport* or communit* or educat* or school* or music* or well-being or "well being")

5 797,590

TS=(prevent* or mitigat* or counteract* or avoid* or restrain* or reduc* or lessen* or
"cognitive behavio*" or CBT)

4 970,740

TS=(behavio* or psychopatholog* or "mental health" or "self control" or antisocial or (school* NEAR/3 exclu*) or "conduct problem*")

3 64,307

#2 AND #1

2 187,516

TS=(delinquen* or violen* or bully* or bullies or crime* or offend* or recidivis* or reoffen* or (law* NEAR/2 (break* or breach* or violat* or contraven* or infring* or transgress*)) or lawbreaking or unlawful* or criminality or misdemeanor*)

1 1,055,735

TS=(adolescen* or boy* or child* or girl* or grader* or infant* or junior* or juvenile* or kindergarten or minors or paediatric* or pediatric* or postpubert* or postpubescen* or preadolescen* or prepubert* or prepubescen* or preschool* or preteen* or pubert* or pubescen* or school* or teen* or toddler* or youngster* or "young people" or "young person*" or "young population*" or youth*)

Annex 5 Details of additional searches

In addition to scientific databases, searches were conducted on websites and were searched for by hand in a number of journals. Experts were also consulted to reduce the possibility that relevant studies were not featured in the map. Further details about this process can be found below, including examples of websites and journals that were consulted.

Websites

In addition to electronic studies, over 50 websites and publications were searched including:

- Incredible Years Library <http://www.incredibleyears.com/research-library/>
- National Institute on Drug Abuse (NIDA) <http://www.nida.nih.gov/nidahome.htm>
- The European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) <http://www.emcdda.europa.eu/index.cfm>
- National Council for Crime Prevention (Sweden) <https://www.bra.se/bra-in-english/home.html>
- US Office of Juvenile Justice and Delinquency Prevention
- UK College of Policing
- UK Home Office
- Substance Abuse and Mental Health Services Administration (SAMHSA) <http://www.samhsa.gov/>
- Google
- Google Scholar

Hand-searched journals

Whilst the database search should identify relevant articles in published journals more recent publications may be not be included on account of indexing delays. Therefore, hand searches were also conducted on the table of contents of the last five years of the following journals:

Addiction

Aggression and Violent Behavior

American Journal on Drug & Alcohol Abuse

Child Development

Child Welfare

Criminal Justice and Behavior
Criminology
Criminology and Public Policy
Developmental Psychology
Drug and Alcohol Dependence
International Journal on Violence and Schools
Journal of Child & Adolescent Substance Abuse
Journal of Clinical and Adolescent Psychology
Journal of Consulting and Clinical Psychology
Journal of Drug Education
Journal of Emotional Abuse
Journal of Experimental Criminology
Journal of Gang Research
Journal of Interpersonal Violence and Child Abuse and Neglect
Journal of School Health
Journal of Social Work Practice in the Addictions
Journal of Substance Abuse Treatment
Journal of Youth and Adolescence
Justice Quarterly
Psychology, Crime and Law
Psychology in the Schools
Psychology, Crime and Law
Research on Social Work Practice
South African Crime Quarterly
South African Journal of Criminal Justice
Victims and Offenders
Violence and Victims

Contacting researchers

We sent copies of a preliminary version of the map to selected authors of included studies, which serves both a dissemination purpose and to invite submission of additional studies.

Annex 6: Critical Appraisal Tool

The critical appraisal tool helped reviewers provide an indication of the quality of the studies included in the map. All studies were rated against how clear the intervention and evaluation questions described in the study and overall scores were also calculated in the same way. For more a more detailed look at study quality, separate questions were considered for impact and process evaluations because they have different purposes and therefore different elements that can affect their quality.

The tool can be found below and was developed in conjunction with the Campbell Collaboration and along with our partners at the Early Intervention Foundation (EIF). It was made by consulting other quality tools available (namely the Critical Appraisal Skills Programme (CASP) Checklist¹⁴), seeking further input from partners at the EIF as well as experts in the field.

Critical appraisal tool for primary studies:

Question for all studies

Item	Description	Key	Notes
Intervention	Is the intervention clearly named and described, including all relevant components. See examples below.	High: full and clear description, so that the main components and how they are delivered are clear Medium: Partial description Low: Little or no description	

¹⁴Please see here for more details about the CASP Check lists <https://casp-uk.net/casp-tools-checklists/>

Evaluation questions	Are the evaluation questions clearly stated?	High: full and clear description, so that the main components and how they are delivered are clear Medium: Partial description Low: Little or no description	
Overall score calculations	The overall score uses the weakest link in the chain principle i.e. is the lowest score on any item	High: High on all items Medium: No lower than medium on any item Low: At least one low	

Questions for impact evaluations only

Item	Description	Key	Notes
Study design	Use the study design coding	High: Experimental Medium: Non-experimental Low: Pre/post	
Outcomes	Are the outcomes clearly defined? Where appropriate do	High: full and clear definition using validated instruments where	

	<p>they use an existing, validated measurement tool? See examples below.</p>	<p>available (a researcher wishing to use these outcomes would have sufficient information to do so) Medium: Partial definition. May use validated instruments but without sufficient references to source. Low: Little or no definition</p>	
<p>Sample size (power calculation)</p>	<p>Do the authors report a power calculation as the basis for sample size?</p>	<p>High: Power calculation report and sample size meets necessary sample size Medium: Power calculation mentioned and sample size meets necessary sample size Low: No mention of power calculation.</p>	
<p>Attrition</p>	<p>Reported for endline and longest follow up. Calculate overall attrition and differential attrition (see</p>	<p>High: Attrition within IES conservative standard Medium: Attrition within IES liberal standard</p>	

	example below). It is often necessary to calculate from table of results. If sample size varies by outcome calculate for highest attrition.	Low: Attrition outside IES liberal standard	
Note IES Attrition Brief https://ies.ed.gov/ncee/wwc/Docs/referenceresources/wwc_brief_attrition_080715.pdf			

Questions for process evaluations (used for any study coded as containing process insights)

			High		Medium		Low		Low
1	Is the qualitative methodology described?		Yes				No	>> 3	
2	Is the qualitatively methodology appropriate to address the evaluation questions?		Yes		Partially		No		Insufficient detail
3	Is the recruitment or sampling strategy described?		Yes				No	>> 5	

Annex 7: Other filter tables

In addition to the figures discussed in the main report, data is available on the number of studies for each filter options. The options that are not discussed in the main report can be viewed below.

Unit of delivery	Number of studies
Individual	699
Group (including couples)	1513

Note: Number of studies do not sum up to the total number of studies as studies/systematic review may be based on both unit of deliveries

Location/Setting	Number of studies
Remote	72
Community	709
School	1021
Secure residence	50
Family or foster home	309
Care home	37
Custody	191

Note: Number of studies do not sum up to the total number of studies as individual study/systematic review may be based on more than one location/setting

Level of targeting	Number of studies
Universal	887
Targeted	1167

Note: Number of studies do not sum up to the total number of studies/systematic review as studies may be based on both universal and targeted group

Ages	Number of studies
0-3 years	212
4-9 years	641
10-14 years	1358
15-17 years	1034

Not reported/None	282
Target group of interventions	Number of studies
Infants (0-3)	127
Child (4-9)	538
Adolescent (10-14)	1276
Adolescent (15-17)	980
Child/Youth age not reported	195
Parents/carers	545
Family (including wider family and significant adults)	124
Professionals (e.g. teachers)	121
Gangs	17
Looked-after children	16
Race-specific targeting	15
Children with disabilities	26

Note: Number of studies do not sum up to the total number of studies as studies may be based on more than one target group of interventions

Key professionals involved in intervention	Number of studies
Health and social care workers	430
Therapist/counsellors	592
Teachers	588
Law enforcement	160
Probation services	63
Prison officers	34
Community voluntary sector (CVS) workers	103
Others	801

Target group of interventions	Number of studies
Infants (0-3)	50
Child (4-9)	185
Adolescent (10-14)	384
Adolescent (15-17)	314
Child/Youth age not reported	48
Parents/carers	217
Family (including wider family and significant adults)	55
Professionals (e.g. teachers)	44
Gangs	14
Looked-after children	10
Race-specific targeting	9

Demographics	Number of studies
Male	144
Female	99
Non-binary	6
Both	1521
Gender not reported	310

Note: Number of studies do not sum up to the total number of studies as studies/systematic reviews may include different combination of gender.

Ethnic minority population	Number of studies
Mainly/Exclusive (80%)	239
Partly	824
None	459
Not clear	625

Annex 8: The evidence revolution

Recent decades have witnessed an evidence revolution in social policy. The foundation of this revolution has been the use of impact evaluations – notably randomized controlled trials (RCTs) – to evaluate what difference interventions make. The field of crime and justice research is one in which there was early use of RCTs, with many studies undertaken, mainly in the United States, in the 1970s. For example, Walter and O'Donnell (1975) report the findings of a study in which 'subjects were randomly distributed to either an experimental group consisting of 264 youths, who were assigned to adult 'buddies', or a no treatment control group comprised of 178 youngsters who were referred to the program, met all the eligibility criteria but were not invited to participate' (1975: 523). Further, Jesness (1975) reports a 'Youth Center Research Project [which] studied the effectiveness of two different treatment programs with 983 adjudicated delinquents assigned by random procedures to two institutions, one of whose programs was based on transactional analysis (O. H. Close School) and the other on the principles of behaviour modification (Karl Holton School)' (1975: 758-779).

The rapidly growing number of studies can help decision-makers understand which interventions are most likely to support those children who are at risk of becoming involved in violence. But if the number of studies becomes overwhelming, sometimes with apparently conflicting evidence, then decision-makers will require considerable time and resource to effectively draw on this evidence. A solution to this is to provide an overview of the evidence by summarising the findings from a number of studies, as done by reviews. If studies are identified and summarized in a pre-specified and uniform manner, this is called a systematic review. They're different from literature reviews, because they follow a careful methodology to account for biases. One early example is a review by Garrett (1985), which presented a statistical synthesis (meta-analysis) of 111 studies of interventions to reduce juvenile crime. The findings challenged the prevailing consensus that 'nothing works' which had been the basis of a move to more punitive approaches to targeting youth offending.

Toolkits

The best-known example of an evidence toolkit from the What Works Centres is the Education Endowment Foundation's Teaching and Learning Toolkit (Figure 13). The toolkit contains approaches to improving learning outcomes, such as Arts Participation and Feedback, presenting three key pieces of information for every included item: (i) intervention impact (measured in additional months' progress*), (ii) the strength of evidence on which the assessment is based, and (iii) intervention cost. The user can click through to an additional document containing further information about the intervention and underlying evidence.

Figure 13 A section of the EEF Teaching and Learning Toolkit

Toolkit Strand ^	Cost v	Evidence Strength ^	Impact (
Arts participation Low impact for low cost, based on moderate evidence.	£ £ £ £ £	🔒 🔒 🔒 🔒 🔒	+2
Aspiration interventions Very low or no impact for moderate cost, based on very limited evidence.	£ £ £ £ £	🔒 🔒 🔒 🔒 🔒	0
Behaviour interventions Moderate impact for moderate cost, based on extensive evidence.	£ £ £ £ £	🔒 🔒 🔒 🔒 🔒	+3
Block scheduling Very low or no impact for very low cost, based on limited evidence.	£ £ £ £ £	🔒 🔒 🔒 🔒 🔒	0

Annex 9: Details about how to use the map and features available

As previously mentions the map is an interactive tool with numerous features available to help identify relevant studies more quickly. Discussed below are how to use some of these features.

Using filters

There are numerous filters you can use to refine the results and search for studies, these include:

- Country
- Location setting
- Level of targeting (i.e. universal or targeted)
- Point of intervention (i.e. primary, secondary, tertiary, multiple)
- Target group of interventions
- Unit of delivery (i.e. individual or group)
- Demographics (i.e. age or ethnicity)
- Study quality
- Year of publication
- Status of study

You can access the filters by clicking the 'Filters' tab in the top left-hand corner of the screen, then ticking your chosen options or click on a relevant column/row header on the map.

Figure 14

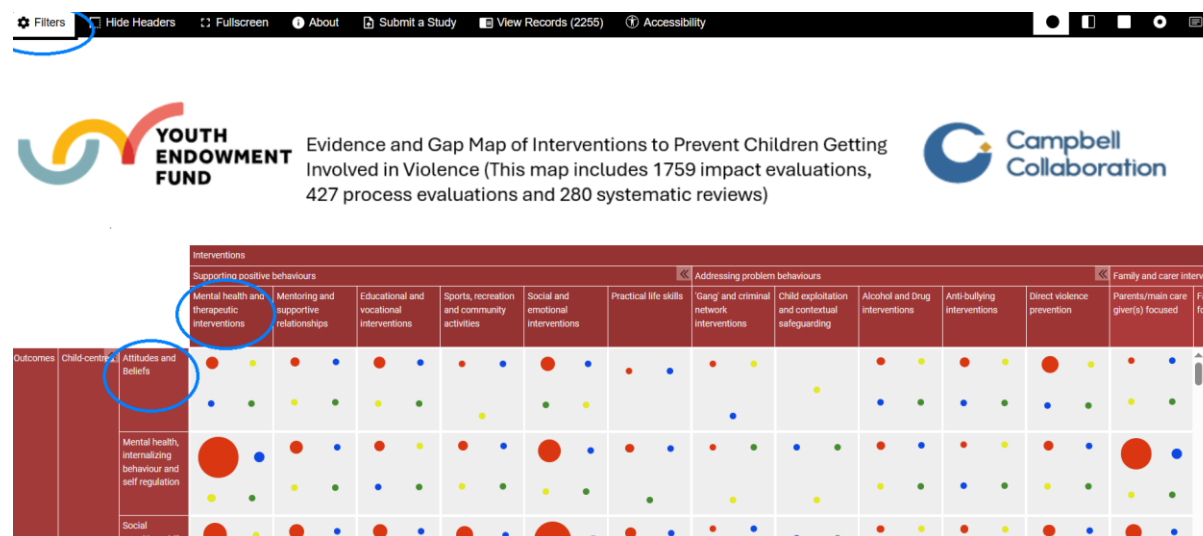
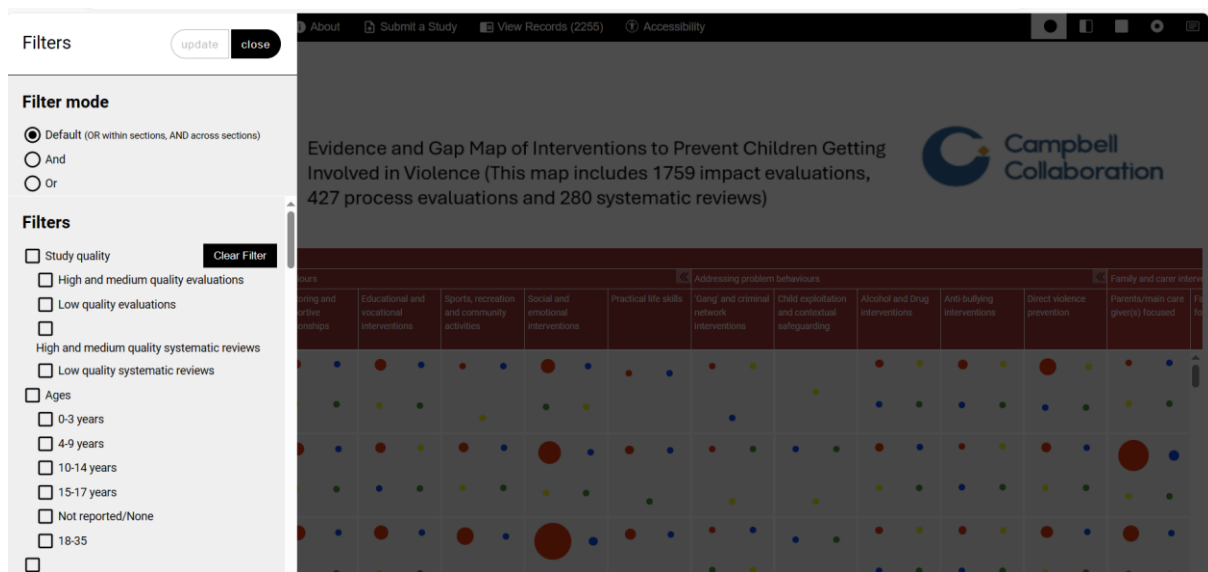


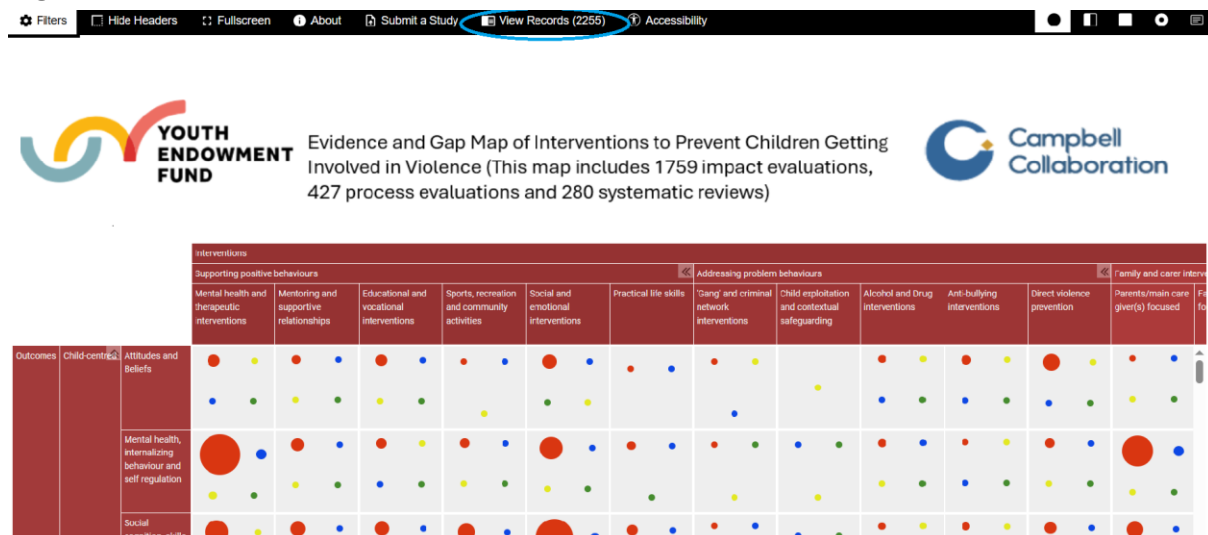
Figure 15



In addition to the filters you can also choose whether each filter option is required for the search (using the AND) button, or in addition components of the search (using the OR option).

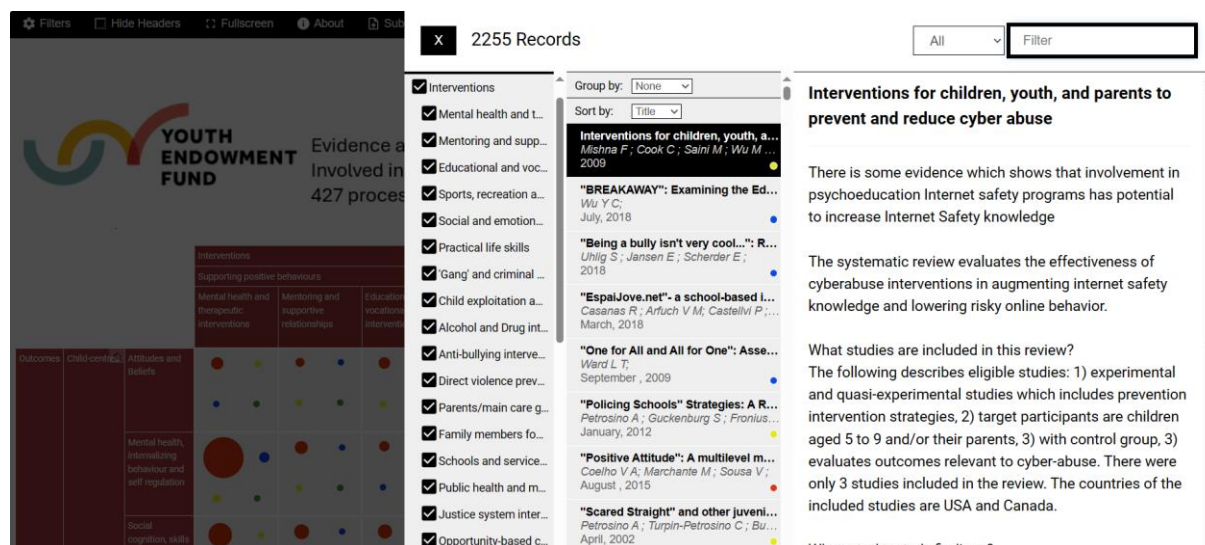
Other ways to search the map

Figure 16



You can also search for studies by outcomes and interventions. To do this, click the 'View Records' tab at the top of the screen.

Figure 17

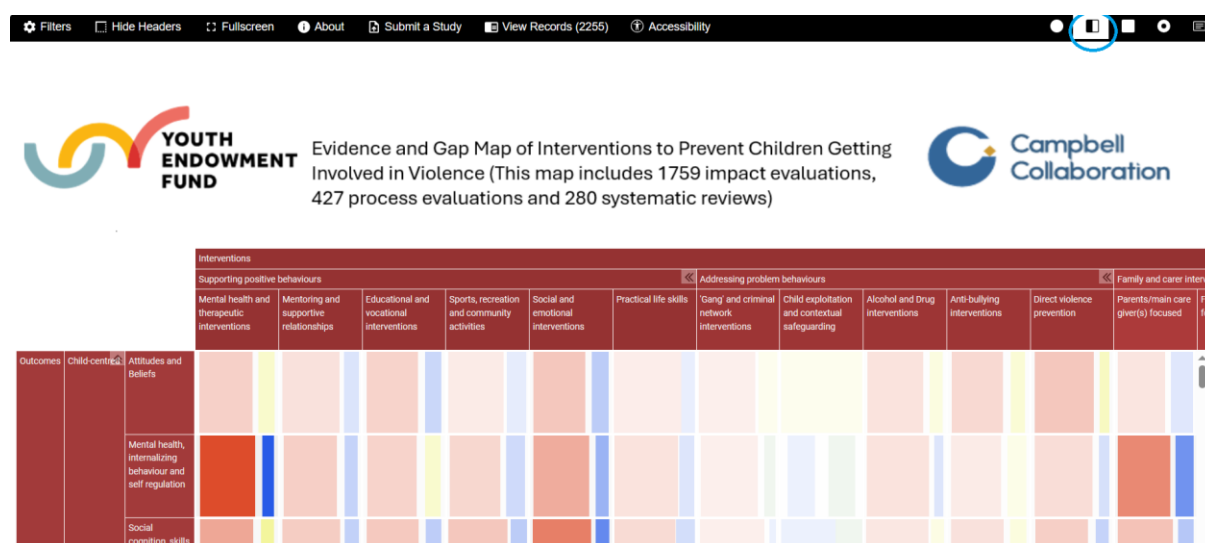


Other presentation options available

Although the default map presentation is the bubble map, the way that studies are displayed in the cells can be changed to suit the user. The additional options are: heat-map, mosaic and donut-map which can be found in the right hand of the *filter* options. An example of each can be found below.

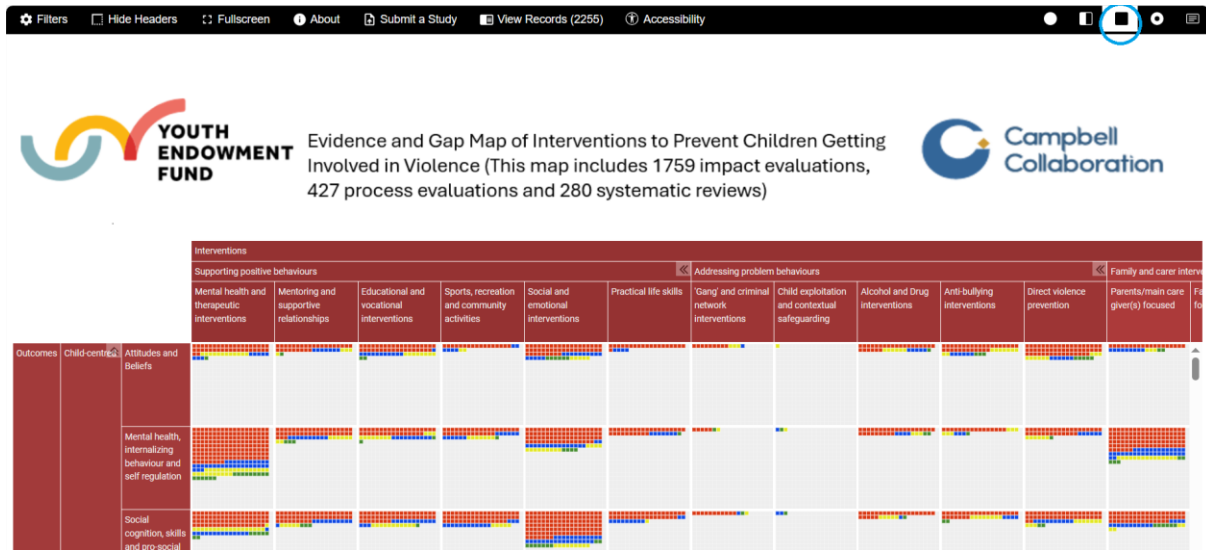
Heat map

Figure 18



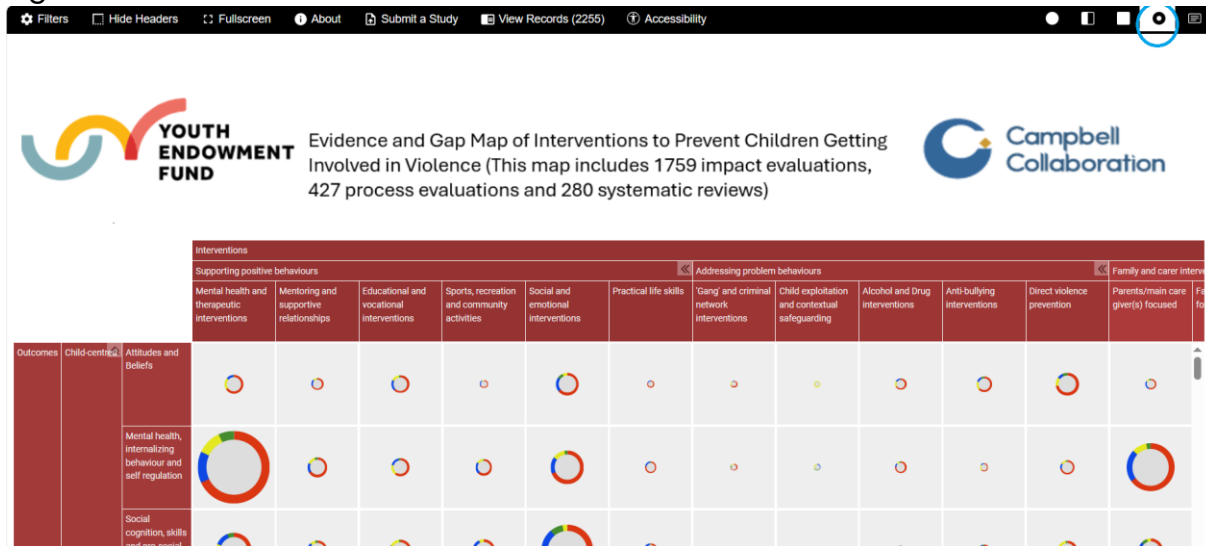
Mosaic map

Figure 19



Donut map

Figure 20



Annex 10: Types of studies which the map may not have captured

Currently the map only features studies that measure outcomes for children and young people. However, it is important to note that this means that crime and violence interventions which may also affect children and young people but do not specifically report outcomes for children and young people, have been excluded. A number of current gaps in the map may be at least partially impacted by this issue, including opportunity based crime prevention and systems approaches, often collectively called “place-based interventions”. Table 6 below offers a classification of such studies.

Table 6 Types of intervention the current map may miss

Type	Definition	Examples
Built environment	Reduce the opportunities for crime by physical features of the built environment	Streetlighting Closing streets and alleys with gates or bollards Closed-circuit television (CCTV)
Policing strategies	Policing approaches which are focused on a particular place, including community policing	Stop and search Street level drug enforcement
Community and citizen initiatives	Interventions organized by community members	Neighbourhood watch Guardian Angels
Public health approaches	Coordinated response from public and social services to provide early, preventive interventions	Glasgow model

Annex 11 Developing the categories and sub-categories of the map

The categories and subcategories of the map underwent a number of iterations. Broadly the steps underwent were as follows:

- Created a long list of intervention and outcomes (we used the ecological framework as a model for outcomes)
- Combined items that were similar¹⁵ to produce a first version of the categories
- Sought feedback from external stakeholders (through workshops, interviews, emails etc)
- Refined categories
- Tested categories by coding a selection of studies
- Refined categories
- Sought external feedback¹⁶
- Repeated steps 3-7 a number of times until the categories exceeded technical capacity of the map
- Combined categories where possible to fit map's technical limitations
- Collated all feedback and considered all feedback together to check nothing was missed.
- Actioned feedback where it was possible to do so. Where conflicting feedback was received, the action most beneficial to the YEF was selected.
- Sought feedback from experts on the final categories and updated all stakeholders with the progress

The final broad categories and their development histories can be found below. For all intervention categories it is important to note that the first iterations conflated delivery details (such as who and where the intervention occurred) and the of intervention offered type. The final categories below are therefore distilled to focus on core aim regardless of *who* the intervention is delivered to and *where* it is delivered (these were added as filters).

¹⁵ Examples of similar in this instance means similar aims for interventions (e.g. both brief alcohol treatment and counselling for addiction aims to reduce alcohol use) and similar effect of interest for outcomes (e.g. both alcohol and drug use could be classified as risk taking behavior)

¹⁶ This did not always occur immediately following an adjust and different stakeholders were consulted at different point throughout the process

Intervention Category	Development History
Supporting positive behaviours	<p>This category was created to identify interventions that were based on the idea of supporting positive development as a way to reduce likelihood of involvement in violence. These are sometimes called 'strength based' approaches and were identified as very important by our stakeholders.</p> <p>Once the category was created it remained broadly unchanged, save for an adjustment of wording (from 'better' to 'positive').</p>
Addressing problem behaviours	<p>Addressing problem behaviors is the category reserved for more targeted interventions for children and young people. These interventions focus on children and young people who are already involved in crime, violence and/or related problems such as drugs and alcohol use.</p> <p>It is important to note that for our purpose 'problem behaviour' does not always refer to direct behaviour of the child, but also captures the behaviour of others which involves a child and may contribute to behavior associated with offending e.g. child exploitation.</p> <p>Once this category was created it remained unchanged, though our stakeholders highlighted that it was important to communicate the note above.</p>
Family and carer interventions	<p>This category was initially 'family' interventions however, in order to make clear that they might also be relevant for non-traditional family structures 'carer' was added to the title. This was based on feedback from our stakeholders.</p>
System approaches	<p>Systems approaches was created based on feedback from our stakeholders which highlighted the importance of capturing the impact of policies and changes to systems which could also impact child involvement in violence.</p> <p>Once the category was created it remained unchanged.</p>
Justice and opportunity-based crime prevention	<p>This category was created in order to more easily identify interventions that are <i>specifically</i> relevant to crime, including interventions involving the justice system or environmental interventions designed to reduce crime. This was done both as a response to stakeholder feedback and because it is a useful category for the YEF.</p> <p>In terms of labels, the category underwent several revisions, with the final label simply reflecting the subcategories of interventions captured.</p>

Outcome Domain	Development History
Child centred	Based on the 'individual' level factors in the ecological model of crime. The label was adjusted as per stakeholder feedback and captures outcomes of an identified child (or children) who are potentially at risk of involvement in crime and violence.
Family and carer outcomes	This category related to the 'family' level factor in the ecological model of crime, but was altered to make clear that it included outcomes of non-traditional family structures (ie carers) were included. Again, this was prompted by stakeholder feedback.
Peer and adult	Peer and adult outcomes are based on the 'peer' level factors of the ecological model of crime. However, it was widened to include the outcomes from non-family adults e.g. mentors. Our stakeholders pointed to the importance of trusted relationships with adults (and peers), and this category was widened to capture this.
School, professionals and community	Based on the 'community' level factors in the ecological model of crime. Initially school interventions were separate, however, due to technical limitations categories were combined and the school (and professional) elements were highlight in the label for clarity.
Offending and crime	This category was the not based on the ecological model of crime, but rather added to help us (and other stakeholders specifically interested in crime) more easily identify studies that measured crime outcomes. This was also encouraged by various stakeholders.

The final subcategories and their development can be found below:

Intervention Category	Sub-category	Development History
Supporting positive behaviours	Mental health and therapeutic interventions	This subcategory has remained broadly the same throughout its development, with the word 'therapeutic' added to highlight that this category also contained 'treatments' that were not necessarily labeled as mental health.
	Mentoring and supportive relationships	Originally this subcategory was just for mentoring interventions. However, it became clear that a number of other interventions relied on the similar mechanism as mentoring (e.g. forming trusting relationships). An example of such interventions includes general youth work. Mentoring was therefore widened to include the formation of supportive relationships due to technical limitations of the map.
	Educational and vocational interventions	Educational and vocational interventions remained broadly the same throughout iterations.
	Sports, recreation and	This subcategory was designed to capture the focus of 'positive' activities and was originally named 'sports and

Intervention Category	Sub-category	Development History
	community activities	recreation'. The 'community' aspect was added later based on stakeholder recommendations as a way to include other 'positive' activities that were not just sports or recreative such as faith-based activities.
	Social and emotional interventions	Social and emotional interventions can overlap with 'mental health and therapeutic interventions'. Although this is not ideal, we felt that it was important to distinguish interventions designed to 'treat' problems and those that were more generally designed to enhance skills that are beneficial to all. Social and emotional interventions are interventions designed to be beneficial to all. The majority of our stakeholders also supported the separation of 'Social and emotional learning' from 'mental health and therapeutic'.
	Practical life skills	This category was made as a distinct place for interventions that target living skills that are not captured in the other categories e.g. cooking. Since the other categories were already broad we thought it was important to separate out this aspect as far as possible. However, it is important to note that there remains some overlap with 'social and emotional skills' and 'education and vocational' intervention types. One of the reasons for this is that studies often use 'life skills' to mean a wide range of intervention types.
Addressing problem behaviours	'Gang' and criminal network interventions	Originally this category was called 'gang' interventions. However, some of stakeholders noted that the term 'gang' may not be used in other cultures to identify programmes that essentially address the same concern. Therefore, 'criminal networks' was added to the label. Some of our stakeholders were also concerned about the term 'gangs' as it can be stigmatizing. Though we understand the concern here we also felt it was important to not miss a key label within the literature. Therefore, quotation marks were added to reflect the label within the literature.
	Child exploitation and contextual safeguarding	From meetings with our stakeholders it was evident that exploitation and contextual safeguarding were important types of interventions to include in the map. This category remained broadly unchanged throughout different iterations of the map axis.
	Alcohol and Drug interventions	This subcategory remained broadly unchanged as it refers to a distinct set of interventions that are usually easy to identify.
	Anti-bullying interventions	Anti-bullying interventions were identified as a distinct subset of interventions during the practice coding sessions (step 5 above). Once established this category remained unchanged.

Intervention Category	Sub-category	Development History
	Direct violence prevention	During practice coding another distinct subset of interventions specifically addressing violence were identified which were not easily sorted into the other subcategories. This subcategory was therefore created and supported by stakeholders. The labeling of this category underwent a number of revisions, however 'direct violence prevention' was chosen because the programmes themselves identified violence prevention directly, rather than it being targeted indirectly through other approaches.
Family and carer interventions	Parent/main care giver(s) focused	As with the main category, 'main care-giver' was added to the label as a way to be inclusive for families with a non-traditional structure, as per stakeholder feedback.
	Family members focused	Initially the subcategory was called 'whole family' to identify interventions that supported the whole family rather than just the main caregivers (as above). Some of our stakeholders suggested that some interventions, rather than targeting whole families, targeted other family members that were not the main caregivers e.g. siblings. Due to technical limitations 'whole family' and 'other family members' were combined to create this subcategory.
System approaches	Schools and service coordination and improvements	<p>School and community were initially separate subcategories with further differentiation between systems (processes) and people (professional based) interventions. However, due to technical limitation categories were combined and the key focus was decided to be improving individual services e.g. school, regardless of how this was conducted.</p> <p>During practice coding some interventions e.g. school transition management programmes, were not individual service improvement, nor inter-agency working. Therefore we highlighted the service coordination aspect and decided that if coordination was being managed within a sector e.g. education to education, the intervention will fall under this approach.</p>
	Public health and multi-agency working approaches	This sub-category was created to highlight inter-agency working practices and processes. As above we defined this to be working between different sectors e.g. education and health. Both 'public health' and 'multi-agency working' were preferred terms by different stakeholder groups and therefore the final label incorporated both terms.
Justice and opportunity-based crime prevention	Justice system interventions	The justice systems intervention subcategory was created to be able to locate these types of interventions more quickly as they may be of particular interest to the YEF and other stakeholders. Once this category was created it remained unchanged.

Intervention Category	Sub-category	Development History
	Opportunity based crime prevention	This subcategory underwent a number of name changes including 'crime prevention'. The intention was to have a discrete subcategory for crime prevention through environmental factors and opportunity reduction e.g. curfews, as recommended by our stakeholders. The label 'opportunity based crime prevention' was borne out of the idea that both environmental factors such as lighting and other interventions such as curfew reduce the opportunity for crime and violence in various ways (e.g. restriction in terms of curfew and increased risk of getting caught with increased lighting).

Outcome Domain	Outcome Sub-domain	Development history
Child centred	Attitudes and beliefs	Attitudes and beliefs remained unchanged, though through the practice coding sessions, aspirations were also specifically highlighted in the definition.
	Mental health, internalizing behavior and self regulation	Initially these outcomes were separate. However, it was decided to combine them due to the overlap between them and also due to technical limitations of the map. During practice coding this subcategory worked well. The final label underwent minor adjustments.
	Social cognition, skills and pro social behaviour	Again, initially these were separate outcomes, however, social skills and cognition were combined because of their overlap. Feedback from our stakeholder, as well as our own practice coding, revealed that pro social behaviour was an outcome in many studies but not clearly captured in the other subcategories. Due to the shared aspects between social skills, cognition and pro social behaviour it was added to this subcategory and highlighted in the label.
	Attainment and knowledge	Originally this subcategory was called 'attainment'. However, during the practice coding sessions it became clear that many interventions included an outcome related to gaining specific knowledge e.g. knowledge about drugs or patterns of abuse. The subcategory was therefore widened to increase specific gains in knowledge.
	Externalizing and risk-taking behaviours	Externalizing and risk-taking behaviours were initially separate subcategories (as well as drug and alcohol outcomes). However, both due to technical limitation of the map, as well as the overlap in behaviours of these once separate subcategories, this combined subcategory was created. Although the label of the map remains technical, most of our stakeholders reported being comfortable and familiar with the term 'externalising' behaviour.

Outcome Domain	Outcome Sub-domain	Development history
	Victimisation, abuse and injury	This subcategory represents a combination of 'victimisation' and 'health'. The health category was refined to 'physical health' and later thought too broad from a violence perspective, recognising that health information due to injury or abuse remained the most relevant outcomes for the YEF. This was later combined with victimisation due to the similarity of the categories.
	Service use, attendance and engagement	Originally 'engagement' this category was widened to highlight that individual service use, and similarly attendance, were important outcomes noted by our stakeholders.
Family and carer outcomes	Parental or main care giver outcomes	Apart from the addition of 'main care giver' to include non traditional family structures, this outcome label has remained unchanged.
	Quality of family relationships and family functioning	Quality of relationships was highlighted as an important outcome by our stakeholders, therefore this outcome was highlighting in the label. Originally this label was just 'family functioning'.
Peer and adult	Peer outcomes	Peer outcomes remained unchanged from the ecological model of crime 'peer level' factors.
	Non-family relationships	As noted quality of non family relationship was seen as a very important factor by our stakeholders and so was included as a distinct subcategory. Initially, peer and other adults were separated but they were later combined due to map limitations.
School, professionals and community	School climate & performance	School outcomes remained a distinct subcategory (combined from being its own broader category) as many of our stakeholders were interested in school level outcomes. In the labelling the different aspects of the outcomes were highlighted including 'softer' outcome such as 'climate' and 'harder' outcomes such as school performance. The highlighting of climate was particularly encouraged by our stakeholders.
	Better services	This subcategory was designed to capture the service improvement of individual service changes, which were not captured by other outcome but could be important to know i.e. if the intervention designed to improve a service actually measured service improvement. Originally these were split into basic and 'enrichment' services, but later combined under 'better services' as the feedback was that this differentiation was confusing.
	Effective service linkage	Again, this subcategory was created to capture the outcome of public health/multi-agency approaches.

Outcome Domain	Outcome Sub-domain	Development history
		The label underwent minor rephrasing once it was established.
	Social cohesion and neighbourhood perceptions	This subcategory remained unchanged in nature, but the wording was tweaked to specifically highlight both the perception and cohesion elements. This was supported by our stakeholders.
Offending and crime	Violent offences	Violent offences were felt to be particularly important to highlight for YEF and for other stakeholders. Once established this subcategory remained unchanged.
	Serious non-violent offences	Another category that was felt particularly important to highlight for the YEF are serious non-violent offences. This is to separate out other important outcomes, but that are not violence related.
	Other offences	This subcategory was designed as a catch-all for other types of offences and unspecified offences. This was because many studies do not differentiate type of offenses, but it is important to capture any offending data.
	Antisocial and 'delinquent' behaviour	This subcategory was created for data such as 'Anti-Social Behaviour Orders' or other measures of anti-social behaviour. This was encouraged by our stakeholders.
	Contact with justice system/any custody service	This sub-category was created because many of our stakeholders highlighted that contact with police/courts/probation etc. was an important outcome within the justice sector.