



Protocol for a Systematic Review: Preventive Interventions to Reduce Youth Involvement in Gangs and Gang Crime in Low- and Middle-Income Countries: A Systematic Review

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| <input type="checkbox"/> | Nutrition |
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| <input type="checkbox"/> | No | | |
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| <input type="checkbox"/> | Maybe | | |

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BACKGROUND

The Problem

The involvement of young people in gangs and gang crime is not only an issue in western nations, but also across low- and middle-income countries. Research demonstrates the existence of youth gangs in Africa, Asia, Central and South America, with much of the evidence coming from Latin American nations (Decker & Pyrooz, 2010; Gatti, Haymoz & Schadee, 2011). Although official and academic estimates of gang membership differ, estimates put the number of gang members in Central America at up to 200,000 (UNODC, 2007), and research suggests that over 85,000 people are members of gangs in El Salvador, Guatemala and Honduras (Seelke, 2013). In South Africa, it is estimated that there are up to 100,000 members in Western Cape alone (Reckson & Becker, cited in Decker & Pyrooz, 2010). Gang activities – and particularly those of youth gangs – contribute significantly to the violent crime problem in low- and middle-income countries. The cost of violence in Latin America is estimated at approximately 14.2 per cent of GDP – almost three times the proportion of GDP reported in industrialised countries (Seelke, 2013). Gang violence makes up a significant proportion of this cost: the annual cost of violent crime in El Salvador is reported at US\$ 1.7 billion, with gang violence accounting for 60 per cent (Seelke, 2013).

Gang violence undermines social cohesion in communities, creating fear amongst residents (see Lane & Meeker, 2003; Seelke, 2013; Washington Office of Latin America [WOLA], 2006) and results in people avoiding certain areas of neighbourhoods known to be gang areas. George Tita and his colleagues explain that these places develop an appearance of visible disorder as non-gang activity in the neighbourhood is abandoned (Tita, Cohen, & Engberg, 2005). Youth gangs are also increasingly associated with trafficking in drugs, arms and humans (Organization of American States [OAS], 2007).

Gang violence and crime can occur between gangs and non-gang individuals, as well as between or within gangs. Violence may be used to defend or expand gang turf, recruit new members, keep members from leaving, exclude or remove undesired members, exercise revenge or seek redress for actual or perceived wrongs, enhance perceptions of power and invincibility, gain respect or dominance over others, and enforce the gang rules (Pacheco, 2010). Although there are significant negative repercussions in the life course for members of youth gangs (Cruz, 2007; Davies & MacPherson, 2011; OAS, 2007; WOLA, 2006), for many young people who lack other opportunities, gangs offer a sense of belonging and purpose (Howell, 2012; Tobin, 2008).

Researchers often contest a uniform definition of a youth gang, as it varies by time and place (Howell, Egley, & O'Donnell, n.d.). Notwithstanding these debates, the literature typically describes a gang as: comprising between 15 to 100 members, generally aged 12 to 24; having members that share an identity linked to name, symbols, colours or physical or economic territory; having members and outsiders that view the group as a gang; having some permanence and degree of organisation; and involvement in an elevated level of criminal

activity (Decker & Curry, 2003; see also Esbensen, Winfree, He, & Taylor, 2001; Howell et al., n.d.; Huff, 1993; Miller, 1992; Rodgers, 1999; Spergel, 1995; Theriot & Parker, 2008). There have been significant efforts amongst academics and policy makers to reach agreement on the definition of a youth gang. The “Eurogang Working Group” (see The Eurogang Project, 2012) consensus definition is as follows: “A street gang (or troublesome youth group corresponding to a street gang elsewhere) is any durable, street-oriented youth group whose involvement in illegal activity is part of its group identity” (Weerman et. al., 2009, p.20). A youth gang is differentiated from an adult gang if the majority of the gang members are aged between 12 and 25 (Weerman et. al., 2009).

The General Secretariat of the Organization of American States (OAS) describes the social function that the gang plays for its members as a means to overcome “extreme poverty, exclusion, and a lack of opportunities” (OAS, 2007, p.5). The OAS further elaborates on the role of the gang using a rights-based approach:

"Youth gangs represent a spontaneous effort by children and young people to create, where it does not exist, an urban space in society that is adapted to their needs, where they can exercise the rights that their families, government, and communities do not offer them. Arising out of extreme poverty, exclusion, and a lack of opportunities, gangs try to gain their rights and meet their needs by organizing themselves without supervision and developing their own rules, and by securing for themselves a territory and a set of symbols that gives meaning to their membership in the group. This endeavor to exercise their citizenship is, in many cases, a violation of their own and others' rights, and frequently generates violence and crime in a vicious circle that perpetuates their original exclusion. This is why they cannot reverse the situation that they were born into. Since it is primarily a male phenomenon, female gang members suffer more intensively from gender discrimination and the inequalities inherent in the dominant culture." (OAS, 2007, p.5)

Youth gang violence is a problem that is widespread throughout the developing world. Not all youth gangs are involved in crime or violence; however it is understood that gangs evolve along a continuum towards criminality and violence, from youth gangs that engage in non-criminal activities to youth gangs actively involved in serious violent behaviour (OAS, 2007). Gang types have been described on a continuum “from weakly organized playgroups to more clearly organized supergangs” (Tobin, 2008, p.62).

It is well established that gang-involved youth commit more crime than non-gang-involved youth, and violence has been described as central to gang membership (Klein & Maxson, 2006). Overall, however, the offending of gang members tends to be generalist, rather than specialising in violent crime (Klein & Maxson, 2006). In order to reduce the prevalence of youth gang violence, it is important not only to target the violence directly but also to target the process of young people joining youth gangs.

The Interventions

Responses to the problem of youth gang violence in low- and middle-income countries can be grouped into one of two categories: suppression or prevention. Suppression approaches aim to combat gang violence in a reactive way that attempts to stop the criminal behaviour reoccurring, generally using legislative or policing resources. By contrast, prevention programs focus on capacity building and social prevention and are designed to work proactively to stop gang crime before it occurs, either by preventing youth from joining gangs (primary and secondary prevention) or by rehabilitating gang members outside of the criminal justice system (tertiary prevention) (Esbensen, 2000; Van Der Merwe & Dawes, 2007). Whilst acknowledging the many suppression strategies that are enacted to combat youth gang violence, this review will focus on interventions that use primary, secondary or tertiary prevention strategies.

Primary prevention strategies are applied most broadly to the entire population who are potentially able to join gangs (Esbensen, 2000); in this case, all young people. Primary prevention programs include general community and school based programs to enhance the life skills and resilience of adolescents. An example of a primary prevention program is the Gang Resistance Education and Training (GREAT) program, a school-based curriculum run by law enforcement officers that uses elements of cognitive-behavioural training, social skills development and conflict resolution to improve young people's resistance to gang membership (Esbensen & Osgood, 1999). This program was developed in North America, and has been delivered in Belize, Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, and Panama (GREAT, 2013).

Secondary prevention strategies target those individuals who are identified as being at higher risk of joining gangs¹ (Esbensen, 2000). Many of these programs provide a mix of education, therapeutic services, and recreational opportunities. An example of a program that has a secondary prevention component is the Por Mi Barrio Outreach Centres, a program implemented in Central America by the United States Agency for International Development (USAID) that focuses on creating a safe space for youth to engage in recreational activities (USAID, 2010a). Further examples of secondary prevention programs supported by USAID that provide skills training for at-risk youth include: the Educados program in Honduras, which provides basic education for at-risk youth; the Civil Rights and Values for Youth program in Honduras, that focuses on participatory citizenship and problem solving skills for at-risk youth; and the Community Empowerment and Transformation project (COMET) in Jamaica, that provides micro-entrepreneurship opportunities for at-risk youth (USAID, 2010b). In South Africa, examples of secondary prevention interventions include the Usiko program, funded by NGOs, businesses and communities, which uses 'rites of passage'

1

We will hereafter refer to the subset of youth who are at higher risk of joining gangs as "at-risk youth".

programs for young offenders and at-risk youth, and the Chrysalis Academy, funded by the West Cape Department of Community Safety, an intensive program that provides training and support for a five-year period with the aim of transforming at-risk youth into community leaders (Ward & Cooper, 2012).

Tertiary prevention strategies target youth who have already become involved in gangs or criminal behaviour (Esbensen, 2000). Tertiary prevention programs are designed to reintegrate ex-gang members into society pro-socially, by focusing on rehabilitation and education. An example of a tertiary prevention program is the Medellin program in Colombia, which provides at-risk youth with access to long-term employment programs through state and private institutions on the proviso that gang members withdraw from their gang (Cooper & Ward, 2008). Tertiary prevention programs in South African prisons include the Reintegration and Diversion for Youth (READY) program, the Tough Enough Program, and the Destinations Program (Ward & Cooper, 2012). Tertiary programs can also include negotiations and gang truces, as these strategies aim to engage with current gang members to reduce the levels of violence occurring within or between gangs, even if they do not result in the participants completely disengaging from a gang framework.

How the Intervention Might Work

The predictors of gang membership are routinely categorised across five domains: individual, peer, family, school and community (Decker et al., 2013; Hawkins et al., 2000; Howell, 2012; Howell & Egley, 2005; Katz & Fox, 2010; Klein & Maxson, 2006; O'Brien et al., 2013; Tobin, 2008). Research in high-income countries demonstrates that the predictors of gang involvement cut across all five domains, that youth with multiple risk factors have a proportionately higher risk of gang involvement, and that those youth with risk factors in multiple domains have further increased likelihood of gang involvement (Decker et al., 2013; Howell & Egley, 2005). Preventive interventions seek to target these predictors in order to disrupt the developmental pathway to gang membership.

Building on Thornberry and colleagues' developmental framework of gang membership (Thornberry et al., 2003), Howell and Egley (2005) propose a developmental perspective that incorporates predictors from early childhood through to adolescence. The model is illustrated in Figure 1, and can be viewed as a 'life-cycle' approach to gang prevention.

The logic model of gang membership (Howell & Egley, 2005) begins with preschool factors, where it is theorised that structural disadvantage and lack of social capital at the community level, combined with family factors such as low human capital, family conflict and poor parenting, and child level risk factors such as aggressive and impulsive temperament, can lead to conduct disorders at the pre-school stage. It is suggested that these aggressive and disruptive behaviours can lead to rejection by pro-social peers, which increases the likelihood of early delinquent behaviour and decreased school performance. In later childhood, it is argued that peer factors become even more important. Early rejection by pro-social peers may increase the likelihood of association with aggressive or delinquent

peers, and therefore the likelihood of further delinquent behaviour and the weakening of social bonds. School level factors such as poor grades, low-quality schooling or school policies such as suspension or expulsion, are also theorised to increase the likelihood of gang membership due to the weakening of school-student bonds and the potential for increased time without adult supervision.

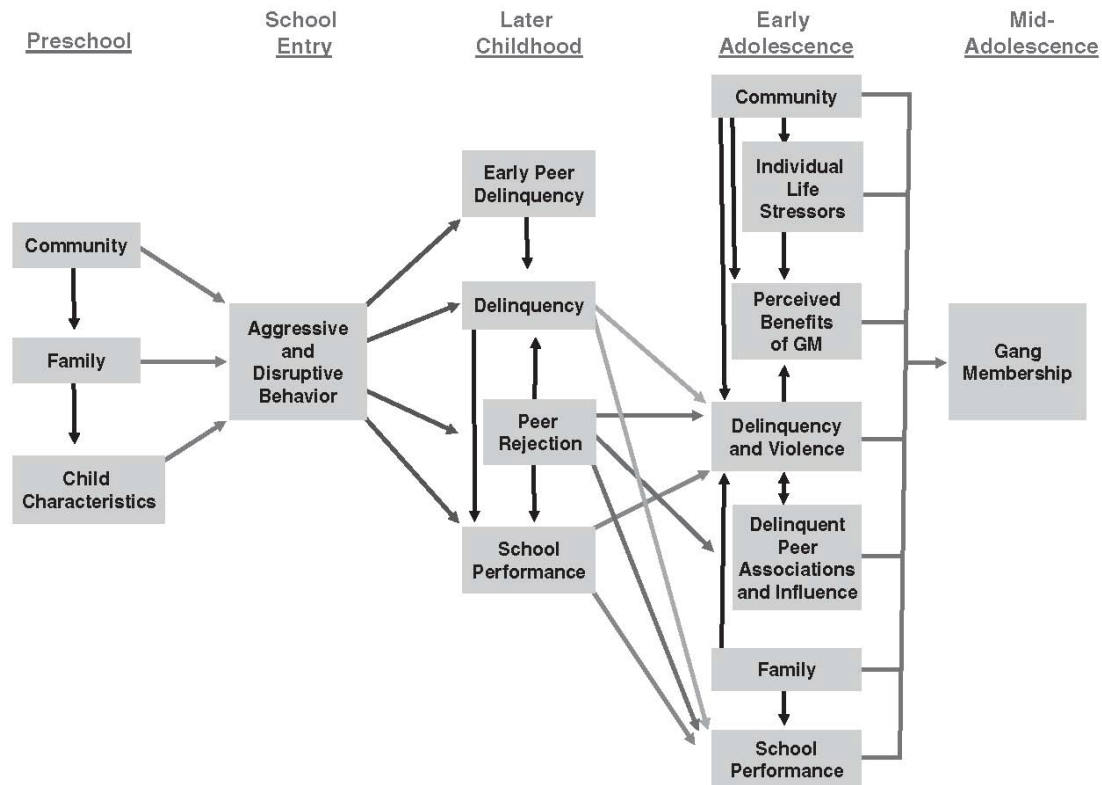


Figure 1: Logic model of predictors of gang membership (Source: Howell & Egley, 2005)

In early adolescence, it is argued that the influence of community level predictors increases. Community factors such as high crime rates, drug use, and concentrated disadvantage may lead to decreased informal social control and decreased community attachment. This may lead to negative life stressors, delinquency, and the perception that gang membership offers benefits to the young person. Negative family characteristics (both structural and social process factors) may continue to affect young people by decreasing family bonds, increasing delinquency and reducing school performance. School risk factors such as poor academic performance, low aspirations, negative labelling by teachers and feeling unsafe at school may reduce attachment and increase the risk of gang membership. Delinquent beliefs and delinquent peers in early adolescence, and individual predictors including substance use, delinquency and life stressors such as violent victimisation may further increase the likelihood of delinquency and violence, a key precursor of youth gang membership.

Gang membership is theorised to be a culmination of interrelated structural and process factors. The model suggests that individual, community and structural family characteristics influence early pro-social behaviours and pro-social bonds. In an interactive feedback relationship, the model suggests that antisocial behaviours decrease pro-social friendships and in turn increase the impact of negative peer attachments and the risk of delinquent behaviours. These social and structural factors, in combination with negative life events, negative school experiences and a lack of school attachment, may increase the attractiveness of gang membership, not only for the most desperate in a community, but also for more 'ambitious' youth who see gangs as providing a positive alternative pathway.

Interventions to prevent youth gang membership can act on any of the five domains of risk factors, and at any of the developmental stages. The logic of preventive interventions is that they disrupt the developmental pathway to gang formation across any of the risk domains of individual, peer, family, school and community. There is no standard approach to preventive interventions, and as such, there is considerable variety in the programs implemented. Scholars suggest, however, that due to the cumulative and interactive impact of risk factors, interventions that address risk factors across multiple domains are likely to be the most successful (O'Brien et al., 2013; Klein & Maxson, 2006; Esbensen et al., 2009). Interventions can target all youth (primary prevention), at-risk youth (secondary prevention) or youth who are already gang-involved (tertiary prevention). The success or otherwise of preventive interventions can be measured both by the direct outcome of gang membership, and by the impact on gang-related crime, and we argue that the monitoring and evaluation of gang prevention programs using such outcomes is extremely important for the ongoing development of successful strategies. Figure 2 represents the relationship between categories of youth targeted by interventions and the outcomes and impacts that can be used as measurements of intervention effectiveness.

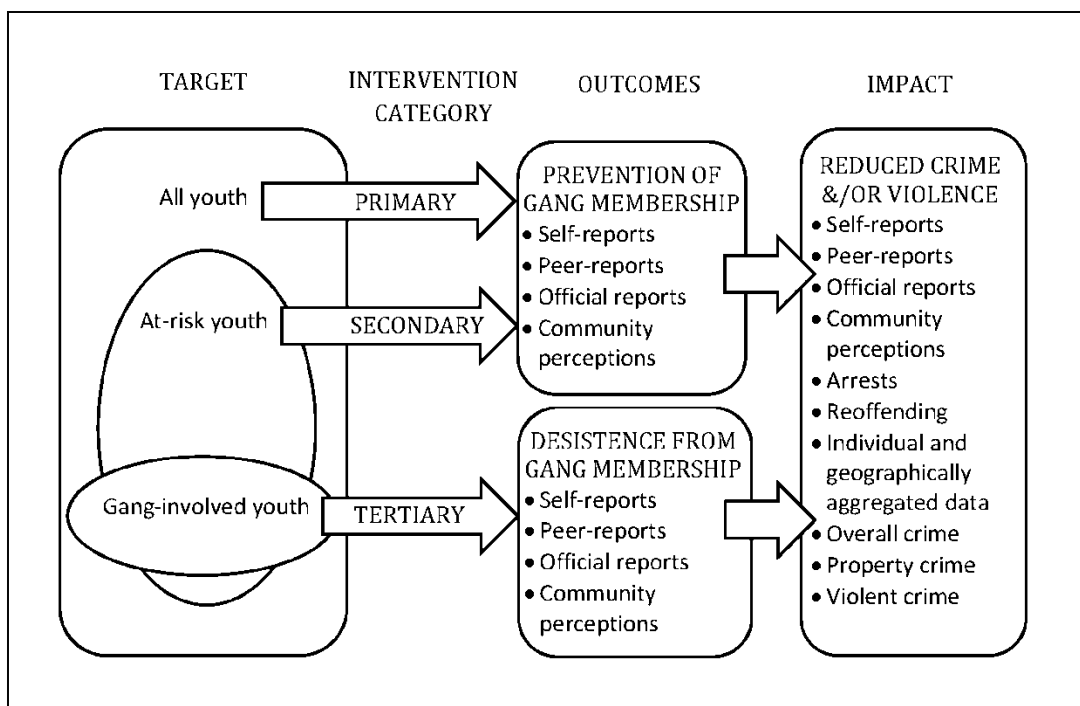


Figure 2: Relationship between interventions, outcomes and impacts

Why it is Important to do this Review

Two systematic reviews previously published in the Campbell library consider gang involvement for children and young people (Fisher, Montgomery, & Gardner, 2008a, 2008b), focusing on cognitive-behavioural and opportunities provision interventions to prevent gang involvement – interventions predominantly utilised in high-income nations. These reviews were essentially empty reviews as they did not identify any studies that met all of their inclusion criteria. Another review of comprehensive interventions designed to reduce gang-related crime was conducted by the Evidence for Policy and Practice Information and Co-ordinating Centre (EPPI-Centre, 2009). This also focused on high-income countries, and found that there was a small positive but not statistically significant effect of comprehensive intervention in reducing gang crime.

We propose that there are clear differences in the application and success of gang prevention programs between those implemented in high income (predominantly western) nations, and those implemented in low- and middle-income nations. We suggest that the motivations for joining and remaining with a gang will differ across regions for a variety of reasons, primarily because many low- and middle-income countries experience – or have experienced – some form of war or conflict (for example, Colombia, Nicaragua and South Africa). Post-conflict societies can provide fertile ground for gang formation and gang violence. In some post conflict nations, people live within an existing culture of violence, experiencing a low sense of citizen security and distrust of authorities alongside poor economic outlooks and easy access to firearms and drugs (Cruz, 2007; Davies & MacPherson, 2011).

Given the different antecedents, motivations, and social, economic and political conditions that give rise to gang formation and gang violence, a review on interventions aimed at combating youth gang formation and violence in countries classified as low- and middle-income by the World Bank will address some of the identified gaps in the research literature (World Bank, 2013).

This review aims to inform not only the academic literature on the effectiveness of preventive interventions, but also to provide a valuable resource for both policy makers and practitioners to assist in selecting the most appropriate interventions for implementation. Preventive gang interventions in low- and middle-income countries are funded and implemented by NGOs, government agencies, international aid agencies, and community organisations. This systematic review has been funded by the United States Agency for International Development (USAID), with the aim of informing best practice in youth gang interventions. USAID supports a variety of preventive anti-gang programs in Latin America and the Caribbean, including both primary and secondary prevention programs, and argues that evaluation is important to improve programs and build support for crime prevention programs (USAID, 2010b).

OBJECTIVES

There are two key objectives to this review.

1. The first objective is to review the evidence on the effectiveness of interventions designed to prevent youth involvement in gangs and gang crime in low- and middle-income countries. This objective has two parts:
 - a. to summarise the overall effectiveness of interventions, and
 - b. to examine variability in effectiveness across different interventions and populations.
2. The second objective of the review is to identify the reasons why preventive interventions to reduce youth involvement in gangs and gang crime may fail or succeed in low- and middle-income countries.

METHODOLOGY

CRITERIA FOR INCLUDING STUDIES IN THE REVIEW

Characteristics of the studies relevant to the objectives of the review

To be included in the review, a study must either evaluate the impact of preventive gang interventions using an appropriate quantitative methodology (Objective 1) or evaluate the reasons for success or failure of preventive gang interventions using either a quantitative or qualitative methodology (Objective 2). The review is conducted alongside a broader project on conduct problems and crime in low- and middle-income countries (Murray et al., 2013) and utilises the broad set of studies identified in that project, with further refinement during screening to ensure that the studies are relevant to preventive gang interventions.

Types of participants (population)

This review focuses on preventive interventions aimed at reducing youth involvement in gangs and gang violence. Whilst research suggests the majority of gang members are 12 to 24 years of age (Howell et al., n.d.; Huff, 1993; Rodgers, 1999; Seelke, 2013), we acknowledge that the definitions of youth vary by country, and that a strict age cut-off may not be appropriate. We will therefore extend the age range to include studies where the participants are aged between 10 and 29, in part because formal definitions of youth vary across countries, and in part to ensure that the age range is broad enough to ensure that tertiary prevention programs targeting current and ex gang members are not excluded.

We acknowledge that there is no consensus definition of a youth gang; therefore we take a broad approach and include any intervention where (1) the target group meets the Eurogang definition of youth gangs, "a street gang (or troublesome youth group corresponding to a street gang elsewhere) is any durable, street-oriented youth group whose involvement in illegal activity is part of its group identity" (Weerman et. al., 2009, p.20), (2) the target group is identified by the authors as members of a youth gang or equivalent (for example, pandilla,

maras etc), or (3) involvement in youth gangs is a measured outcome of the study. We exclude groups described as organised crime gangs, terrorist gangs and piracy gangs.

This review is focused on interventions to reduce youth gang membership in low- and middle-income countries; therefore, we will only include studies that take countries that have been classified by the World Bank as low- and middle-income countries for at least 50 per cent of the time since 1987, when recordings of country classifications start (World Bank, 2013).

Types of interventions

Interventions must adopt a preventive approach, implemented at either primary, secondary, or tertiary stages of prevention, as described in the Interventions section of the Background (above). There are a very wide range of activities that fall under the banner of preventive interventions; however, in general, preventive interventions focus on capacity building or social prevention to prevent or reduce gang membership or gang violence.

We take a broad approach to inclusion, based on the stated intent of the intervention to reduce or prevent gang membership or gang crime, and we exclude interventions that achieve this aim purely by the use of suppression strategies and tactics such as increased law enforcement or focused legislation. Interventions included in this review must use a preventive approach and either explicitly aim to (1) reduce participation in youth gangs, or (2) to reduce youth involvement in gang crime.

Types of outcome measures

Studies included to address the objective of assessing the effects of preventive interventions to reduce youth gang membership (Objective 1) may include a number of outcomes. These include the change in youth gang participation and the change in the negative consequences of youth gang activities, including levels of crime and violence.

We will include all outcomes related to individual or aggregate measures of youth participation in gangs and/or gang crime. These outcomes may include: individual measures of arrests, reoffending, or gang membership; self-reported, peer-reported or officially-reported crime; geographically aggregated measures of youth gang participation, youth gang arrests and/or youth gang violence; and perceptions of youth gang participation and/or youth gang violence. We will analyse these outcomes separately at the synthesis stage. In particular, we will ensure that individual and geographically aggregated outcomes are analysed separately.

Other issues

To address the objective of identifying reasons for implementation success or failure (Objective 2), we will include a broader range of studies that assess the reasons for success or failure of preventive gang interventions as outlined above. From these studies we will include any research based findings relating to implementation. Examples of types of

findings include those relating to political support, funding, training, the presence of international aid, community participation, education component, social support components, and the socio-political context of the implementation of the intervention.

Types of study designs

To address the two objectives of this review, we will use two different, but potentially overlapping, sets of studies. The analysis for Objective 1 (intervention effectiveness) will use experimental and quasi-experimental counterfactual evidence, whilst the analysis for Objective 2 (reasons for intervention success or failure) will include relevant studies from the corpus for objective 1, as well as a further set of qualitative or descriptive quantitative studies and process evaluation studies. The study designs for the two objectives are listed in detail below.

Study designs for Objective 1: Intervention effectiveness

To be included in the synthesis of intervention effectiveness, studies must use an experimental or quasi-experimental evaluation design with a valid comparison group as defined below. We will include the following experimental and quasi-experimental study designs, all of which provide a counterfactual analysis:

1. randomised control trials
2. regression discontinuity designs
3. quasi-experimental, cross-sectional, cohort or panel designs that use multiple regression analysis and control for some combination of pre-intervention control variables listed below
4. matched control group designs (with or without baseline measurement)
5. unmatched control pre- and post-test designs, and
6. time-series designs (at least 25 pre- and 25 post-intervention observations).

Studies that use valid comparison (control) groups are those that use randomly assigned control groups, propensity score matched control groups, or statistically matched control groups. Appropriate matching variables include: baseline measures of crime, delinquency, aggression or gang membership, or pre-intervention socio-demographic characteristics such as some combination of age, gender, ethnicity, socio-economic status, and education. We will also include designs that use non-matched control groups, if the study also takes a pre-intervention baseline measure of the outcome, thereby allowing difference-in-difference analysis.

The quasi-experimental designs we have included can be used to provide causal inference, albeit weaker inference than that which is provided by RCTs, as they provide a counterfactual by attempting to control for selection bias. This can be done in a number of different ways, such as: simulating randomisation of the treatment and control groups (regression discontinuity), matching the characteristics of the treatment and control groups (matched control), statistically accounting for differences between the treatment and control

groups (multiple regression analysis), or providing a difference-in-difference analysis (short interrupted time series, unmatched control with pre-test). We do recognise that including a wide range of quasi-experimental study designs may lead to an increased risk of bias introduced into the analysis. We will conduct meta-analysis separately for randomised and non-randomised research designs, and will conduct moderator analysis on study design to assess whether including these studies changes the estimate of effect size.

We will include studies that measure the outcome at either the individual level or an aggregate level of geography such as the community; however, we will synthesise the results separately for different levels of analysis.

To be eligible for inclusion in a meta-analysis, the study must report an effect size, or provide sufficient detail such that an effect size can be calculated.

Eligible comparison conditions

We will include studies where the control group receives no intervention, placement on a wait-list or “business as usual”. We will also include studies that compare two treatments without reference to a no-intervention, wait-list or business as usual control group. We will conduct meta-analysis separately for studies that compare two active treatments.

Study designs for Objective 2: Reasons for intervention success or failure

To be included in the synthesis of factors influencing implementation success, studies are not required to use experimental or quasi-experimental designs. These studies need not be linked to the studies of intervention effectiveness, and will form an additional corpus of literature in which the authors have identified mechanisms, activities, people or resources that influence the success of the intervention implementation.

In order to capture the broadest range of evidence that speaks to the reasons for success or failure, we will include (1) qualitative or descriptive quantitative studies and (2) process evaluations and other types of implementation evaluations. These studies may use qualitative rather than experimental or quasi-experimental designs; for example, key informant interviews or focus groups.

We will only include studies that empirically assess the intervention using either a quantitative or qualitative methodology, and report on the sampling strategy, data collection, and the type of analysis. We will exclude descriptive papers and opinion pieces where an analysis of primary data was not conducted. Studies rated as low quality on the CASP checklist will be excluded from the review.

Exclusion criteria

We will exclude studies from countries that have not been categorised as low- or middle-income by the World Bank for at least 50% of the time since 1987.

SEARCH METHODS FOR IDENTIFICATION OF RELEVANT STUDIES

The search for eligible studies is conducted as part of a broader project that is systematically reviewing literature on conduct problems and crime in low- and middle-income countries (Murray et al., 2013). The search strategy will include published and unpublished literature with no date constraints. We will also not place any language restrictions on the eligibility of documents; however our search of published literature will be conducted in English and we will search grey literature in seven languages: English, French, Chinese, Arabic, Russian, Spanish and Portuguese. The geographic location of studies will be limited to countries located in a LMIC, defined according to the World Bank² as low- or middle-income at least 50 per cent of the time since 1987, when the recordings start³. The countries and regions currently classified by the World Bank as low- and middle-income are shown in Table 1.

Table 1. Countries classified as "low- and middle-income" and their corresponding region (World Bank, 2013)

| Regions | Countries |
|---------------------------------|--|
| East Asia and Pacific | American Samoa; Cambodia; China; Fiji; Indonesia; Kiribati; Korea, Dem. Rep.; Lao, People's Dem. Rep; Malaysia; Marshall Islands; Micronesia, Fed. Sts; Mongolia; Myanmar (also searched as Burma); Palau; Papua New Guinea; Philippines; Samoa; Solomon Islands; Thailand; Timor-Leste; Tuvalu; Tonga; Vanuatu; Vietnam |
| Europe and Central Asia | Albania; Armenia; Azerbaijan; Belarus; Bosnia and Herzegovina; Bulgaria; Georgia; Hungary; Kazakhstan; Kosovo; Kyrgyz Republic; Macedonia, Former Yugoslav Rep.; Moldova; Montenegro; Romania; Serbia; Tajikistan; Turkey; Turkmenistan; Ukraine; Uzbekistan |
| Latin America and the Caribbean | Argentina; Belize; Bolivia; Brazil; Colombia; Costa Rica; Cuba; Dominica; Dominican Republic; Ecuador; El Salvador; Grenada; Guatemala; Guyana; Haiti; Honduras; Jamaica; Mexico; Nicaragua; Panama; Paraguay; Peru; St Lucia; St Vincent and the Grenadines; Suriname; Venezuela, RB |
| Middle East and North Africa | Algeria; Djibouti; Egypt, Arab Rep.; Iran, Islamic Rep.; Iraq; Jordan; Lebanon; Libya; Morocco; Syrian Arab Rep.; Tunisia; West Bank and Gaza; Yemen, Rep. |
| South Asia | Afghanistan; Bangladesh; Bhutan; India; Maldives; Nepal; Pakistan; Sri Lanka |

² <http://data.worldbank.org/about/country-classifications/country-and-lending-groups>

³ This approach ensures that we include countries which have consistently been ranked as LMIC. For the vast majority of countries there has been very little change in status over the last few decades, therefore rather than cross-referencing countries against categorisations in the year the study was conducted, it is more efficient to establish the list of countries that meet 50% criteria. All excluded countries had either been consistently ranked as high-income or had moved from upper-middle-income to high-income during this period.

| Regions | Countries |
|--------------------|--|
| Sub-Saharan Africa | Angola; Benin; Botswana; Burkina Faso; Burundi; Cameroon; Cape Verde; Central African Republic; Chad; Comoros; Congo, Dem. Rep.; Congo, Rep.; Cote d'Ivoire (also searched as Ivory Coast); Eritrea; Ethiopia; Gabon; Gambia, The; Ghana; Guinea; Guinea-Bissau; Kenya; Lesotho; Liberia; Madagascar; Malawi; Mali; Mauritania; Mauritius; Mayotte; Mozambique; Namibia; Niger; Nigeria; Rwanda; Sao Tome and Principe; Senegal; Seychelles; Sierra Leone; Somalia; South Africa; Sudan; Swaziland; Tanzania; Togo; Uganda; Zambia; Zimbabwe |

Search terms

This systematic review is conducted as part of a larger project focusing on conduct problems and crime in low- and middle-income countries (Murray et al., 2013) and alongside a systematic review on predictors of youth gang membership in low- and middle-income countries (Higginson et al., 2013). The search terms are broad enough to capture a corpus of studies for the present systematic review as well as for the predictors review (Higginson et al., 2013), and further refinement will occur at the abstract and title screening stage for each review. For the present review, the studies located in the search will be examined to determine whether they are eligible to address Objective 1 or Objective 2, or both, as studies may address questions of impact effectiveness as well as reasons for intervention success or failure (see *Full text eligibility screening* for further details).

The search strategy was developed using the Cochrane Collaboration's Effective Practice and Organisation of Care Group search strategy for low- and middle-income countries, combined with selected MeSH/DeCS terms and free text terms relating to conduct problems, crime and violence. To maximise sensitivity, no methodological filters were used. The full search strategy is listed in Appendix A.

Search locations

We will search a wide range of electronic academic databases, international organisation databases, the websites of NGOs and other organisations. The search locations are listed in Table 2. All locations will be searched electronically.

Table 2. Search locations used in the English language systematic search (hosting platforms in parentheses)

| Search Locations |
|--|
| PsycINFO (Ovid) 1967 to 2013 |
| Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) 1946 to Present |
| EMBASE (Ovid) 1974 to 2013 Week 35 |
| CINAHL (EBSCOhost) |
| EconLit (EBSCOhost) |
| Criminal Justice Abstracts (EBSCOHost) |
| Russian Academy of Sciences Bibliographies (EBSCOHost) |
| Sociological Abstracts + Social Services Abstracts (ProQuest) |
| Applied Social Sciences Index and Abstracts (ProQuest) |
| International Bibliography of the Social Sciences (IBSS) (ProQuest) |

Search Locations

ERIC (ProQuest)
Web of Science
LILACS (Note: included Spanish and Portuguese search terms)
SciELO (Note: included Spanish and Portuguese search terms)
National Criminal Justice Reference Service Abstracts Database
JOLIS (IMF, World Bank and International Finance Corporation)
World Bank
Open Grey
Acta Criminologica
Journal of Gang Research
Caribbean Journal of Criminology and Public Safety
Caribbean Journal of Criminology and Social Psychology
African Journal of Criminology and Justice Studies (via WCJLN)
African Development Bank website
Asian Development Bank website
AusAID website
British Library for Development Studies database
Don M. Gottfredson Library of Criminal Justice Gray Literature Database
ELDIS Development Research (www.eldis.org)
IDEAS: International economics research database
Inter-American Development Bank website
International Initiative for Impact Evaluation (3ie) database
International Juvenile Justice Observatory (IJJO) Documentation Center
Institute for Security Studies website (www.issafrica.org)
National Gang Center website (www.nationalgangcenter.gov/Publications)
National Gang Center Bibliography of Gang Literature (www.nationalgangcenter.gov)
United Nations Development Programme website
United Nations Office on Drugs and Crime website
USAID website
WHO Collaborating Centre for Violence Prevention website (www.preventviolence.info)
WHO Global Health Library
World Criminal Justice Library Network
Pakistani Journal of Criminology
African Journal of Criminology and Justice Studies
Asian journal of Criminology
Indian Journal of Criminology
South African Journal of Criminal Justice
South African Crime Quarterly
Turkish Journal of Criminology
ProQuest dissertations
J-Pal
NBER

Table 3 shows the locations to be searched in languages other than English. Due to the nature of database interfaces, the searches in these databases will be less systematic. The outcome search terms will be used and, where possible, the search terms for child and youth age groups. The non-English language searches will be conducted by a team of six researchers (four native speakers and two speaking the search language fluently).

Table 3. Search locations used in the non-English language systematic search

| Language | Search Locations |
|----------|------------------|
|----------|------------------|

| Language | Search Locations |
|------------------------|--|
| Arabic | Index Medicus for the Eastern Mediterranean Region King Saud University Repository YU-DSpace Repository Google Scholar |
| Chinese | China National Knowledge Infrastructure (CNKI) Wanfang Data Chongqing VIP Information Company (CQVIP) BabelMeSH – National Institutes of Health Google Scholar |
| French | African Index Medicus (WHO) Afrilib (WHO) Global Health Library Revue de Médecine tropicale Refdoc Google Scholar |
| Russian | Elibrary.ru Google Scholar |
| Spanish and Portuguese | LILACS SciELO Google Scholar |

We will conduct citation searches and undertake citation harvesting from the references of included studies. We will contact members of the Advisory Group as well as other prominent scholars in the field to locate further studies that may not yet be published or located in our search. Any new literature of interest will be obtained and assessed for eligibility.

DATA COLLECTION AND ANALYSIS

Selection of Studies

Title and abstract screening

As the wider search strategy includes a broad array of studies on youth in low- and middle-income countries, the first step will be to search within the results for terms specific to gangs. We will export the full search results from EndNote to Access and search for any occurrence of the gang-specific terms that appear in Table 4. The group of studies that contain these terms will be considered potentially eligible and will be imported into SysReview, a Microsoft Access database designed for screening and coding of documents for systematic reviews.

Table 4. Gang-specific search terms for first step of title and abstract screening

| Gang-specific search terms |
|----------------------------|
|----------------------------|

Gang-specific search terms

| | |
|---------------------------|--------------------|
| Gang | "Street children" |
| Gangs | "street-children" |
| Maras | "Urban youth" |
| Pandilla* | "Street connected" |
| "Youth violence" | "Street-connected" |
| "Troublesome youth group" | "At risk" |
| "Deviant youth group" | "At-risk" |

A team of trained research assistants will use a set of inclusion criteria to assess, on the basis of titles and abstracts, whether the studies returned from the systematic search are potentially eligible for inclusion in the systematic review. After training to ensure that each reviewer is adopting the same approach to screening, each document will be screened by only one reviewer. The training will include a comprehensive briefing by the review manager, including reading and discussion of the protocol, followed by each reviewer independently screening a set of 20 studies. The results of the initial screening of the training corpus will then be mediated by the review manager, in consultation with the full review team. Further blocks of 20 studies will be reviewed independently by each member of the review team, and mediated by the review manager. Once the review team reaches an agreement rate of above 95 per cent, the subsequent screening of each document will be conducted by only one reviewer. Any issues or questions that arise during coding will be discussed amongst the review team and the review manager, and the review manager will randomly check screening decisions to ensure consistency.

The title and abstract screening inclusion criteria are:

1. all participants are 10-29 years old
2. the study is located in a LMIC, defined according to the World Bank as low- or middle-income at least 50 per cent of the time since 1987, when the recordings start
3. the document reports on youth gangs

Documents will be excluded if the answer to any one of the criteria is unambiguously "No", and will be classified as potentially eligible otherwise. We will err on the side of inclusivity and only exclude studies where it is clear that these criteria are not met.

Full text eligibility screening

The full text document will be located for all studies screened as potentially eligible at the title and abstract stage, and attached to SysReview. If dissertations are located that are potentially eligible for inclusion we will contact the author or their institution for a copy of the document. In order to narrow down the results of the initial search to the subset of studies that specifically focus on preventive interventions in youth gangs, different criteria are included at the full text eligibility screening stage.

The team of research assistants will be trained on full text eligibility screening and will each screen a corpus of 20 eligible studies independently. All screening conducted during training will be double checked by the review manager to ensure accuracy and consistency of information capture. Screening discrepancies at the training stage will be resolved by discussion between reviewers, in consultation with the review manager if required. Once training is completed, each document will be screened by one research assistant only.

The full text eligibility screening criteria consists of nine screening questions, the answers to which will determine whether a study is eligible for the meta-analysis (Objective 1) or the thematic synthesis (Objective 2), or both. It is important to note that a study may be eligible for both the meta-analysis and the thematic synthesis. The process and the screening criteria are shown in the flowchart in Figure 3

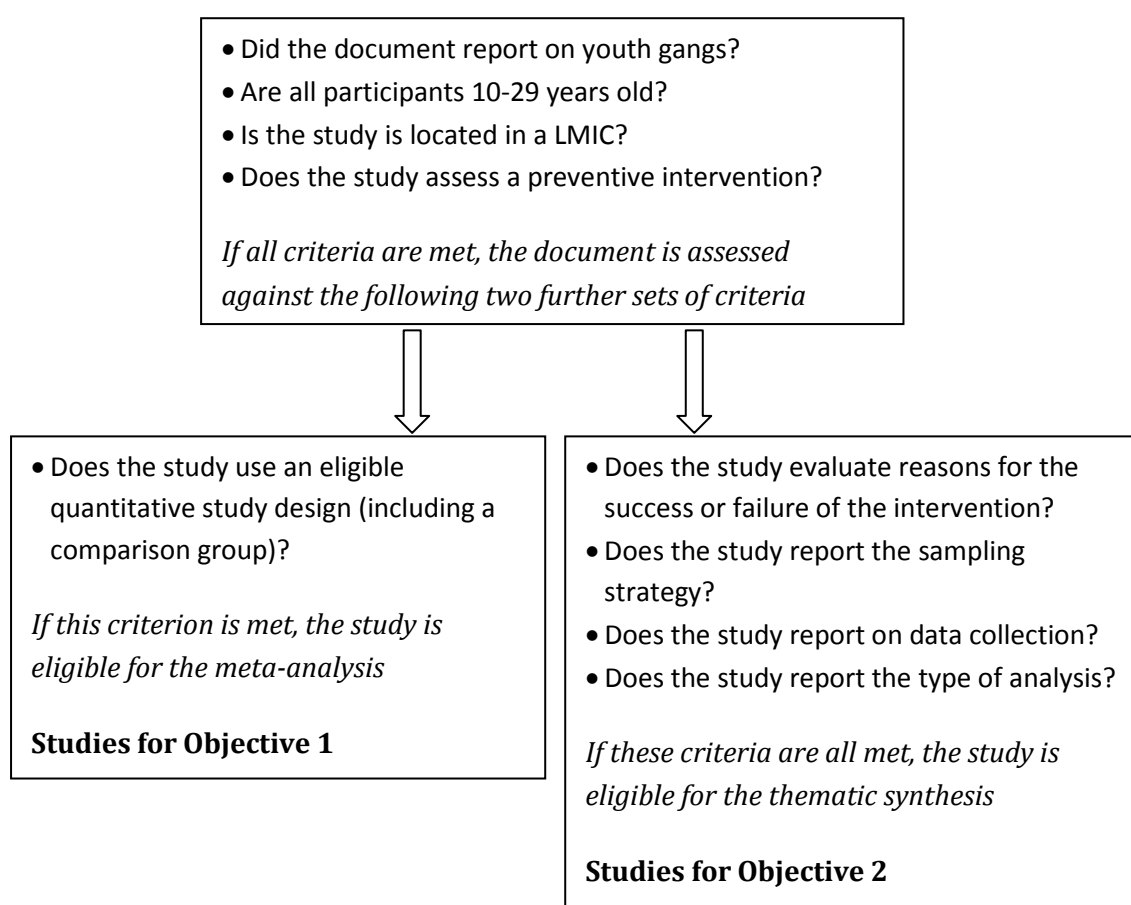


Figure 3: Screening criteria for meta-analysis and thematic synthesis

Data Extraction

Trained research assistants will use the SysReview database, along with a detailed coding companion document, to code in detail the documents that are eligible for inclusion in the meta-analysis. The coding fields are shown in Appendix B, including information on study information, sample characteristics, risk of bias, outcomes reported, and effect size data.

The team of research assistants will be trained on coding and will each code a corpus of 10 eligible studies independently. All coding conducted during training will be double checked by the review manager to ensure accuracy and consistency of information capture. For the final coding, all coding and effect size data will be checked by a second reviewer who is not blinded to the initial coding. Coding discrepancies will be resolved by discussion between reviewers, in consultation with the review manager if required. For data from between-groups studies, relevant data will be input into Comprehensive Meta-Analysis software (Borenstein, Hedges, Higgins & Rothstein, 2005) to calculate standardised effect sizes and their standard errors.

Assessment of methodological quality and risk of bias

We will separately assess the risk of bias of experimental and quasi-experimental studies included in the analysis for Objective 1, and of quantitative and qualitative studies included in the analysis for Objective 2. For studies included in the analysis for Objective 1, we will use the IDCG Risk of Bias tool (see Appendix C for details). For the studies included in the analysis for Objective 2, we will use a modified version of the Critical Appraisal Skills Programme (CASP) Qualitative Research Checklist 31.05.13, adapted to deal with descriptive quantitative studies and process evaluations (see Appendix D for details). The risk of bias of each study will be assessed by one reviewer, and all studies will be double checked by the review manager, who will not be blind to the assessment. Coding discrepancies will be resolved by discussion between reviewers, in consultation with the review manager.

For the synthesis of effectiveness (Objective 1), we will not exclude studies on the basis of risk of bias, but will conduct moderator analysis to determine whether inclusion of studies with higher risk of bias impacts on the summary effect size, using the number of Yes answers as a continuous moderator variable. When assessing risk of bias we will not allocate a score or index, as extreme failure in one area can be more serious than minor breaches across multiple arenas. We will present the results of the assessments of risk of bias in a “traffic light” format (see de Vibe et al., 2012).

For the synthesis of reasons for success or failure of intervention implementation (Objective 2) we will not include studies where the quality is rated as low. For the purposes of this review, a study will be rated as low quality if the answer to all of the following items is ‘No’ or ‘Can’t tell’:

- Is the research design appropriate to answer the research question?
- Was the sampling strategy appropriate to the aims of the research?
- Were the analyses sufficiently rigorous?

STATISTICAL PROCEDURES AND CONVENTIONS

Statistical procedures and conventions for Objective 1: Synthesis of intervention effectiveness

Measures of treatment effect

For continuous outcomes we will use Hedges’ *g* as the measure of effect size, as it includes an adjustment for estimator bias in smaller samples (Borenstein, 2009). If binary outcomes are found, we will calculate a log odds ratio as the measure of effect size.

We will input all effect size data into Comprehensive Meta-Analysis software (Borenstein et al., 2005) to allow the calculation of standardised effect sizes and their standard errors, and the conversion between effect size types, to ensure that a common metric is used. Should an outcome be measured across different studies using binary data in some studies and continuous data in others, we will convert all effect sizes and their variances for this outcome

to a common metric. For example, log odds ratios will be converted first to Cohen's *d* and then to Hedges' *g*, and the meta-analysis will be conducted on all outcomes using Hedges' *g* as the effect size of choice. Following Borenstein and colleagues (2009), we argue that this approach, whilst imperfect, is preferable to conducting two separate meta-analyses.

Some studies may use an interrupted time-series design with observations at multiple time points before and after the implementation of an intervention in an area and some may use comparison groups in addition to multiple time points. For studies that collect data at multiple time points, we assume an underlying uniform distribution for violent crime, and a step function for the effect of the intervention on the outcome. We will therefore calculate an average effect size for the time points before the intervention, and an average effect size for the time points after the intervention, and compare the two. We recognise that there are many other ways to deal with this type of time series data; however, given the research questions and the likely nature of the intervention effect, we believe that this method is the most defensible and parsimonious. We will synthesise the results of time-series studies separately from other experimental and quasi-experimental designs, as time series designs standardise for variability over time rather than variability over units, resulting in a different scaling (D. Wilson, personal communication, September 20, 2013).

Unit of analysis

The standardised coding sheet contains fields to code both the unit of treatment and the unit of analysis. We will also assess each study for unit of analysis error, as part of the IDCG risk of bias tool. If a study is assessed as suffering from unit of analysis error, we will correct for the standard error and confidence intervals of the studies, using the formula

$SE_{corrected} = SE_{uncorrected} * \sqrt{(1 + (m - 1) * ICC)}$, where *m* is the number of units in each cluster, if the intra-class correlation (ICC) can be obtained or estimated.

Missing data

We will use reported statistics such as *t*, *F*, *p*, or *z*-values to convert to effect sizes if effect size data is not reported. If data required to compute effect sizes is missing, we will attempt to contact the authors of the studies.

Method of synthesis

If the systematic search results in at least three studies that provide effect sizes for a conceptually equivalent outcome we will use meta-analysis to synthesise the results for each equivalent outcome reported. We will use a random-effects model and inverse variance weighting to combine study results, given the likely heterogeneity in the interventions and populations studied. We will conduct all analyses using Comprehensive Meta-Analysis software (Borenstein et al., 2005).

We will only combine results of evaluations if the outcomes are conceptually equivalent. For example, if studies report on self-reported gang membership and officially reported gang-related crime, we will conduct two separate meta-analyses – one for gang membership and

one for gang-related crime outcome – as we do not consider that these two outcomes are conceptually equivalent.

The following is a preliminary list of outcomes that we will synthesise separately:

- Individual (self-reported, peer-reported or officially-reported) measures of:
 - total crime
 - violent crime /assault/aggravated assault/robbery
 - property crime/break and enter/ vandalism/theft
- Geographically aggregated measure of:
 - total crime
 - violent crime/assault/aggravated assault/robbery
 - property crime/break and enter/ vandalism/theft
- Individual (self-reported, peer-reported or officially-reported) measures of:
 - arrests
 - reoffending
 - gang membership
- Geographically aggregated measures of:
 - arrests
 - reoffending
 - gang membership

We will conduct separate meta-analyses for outcomes measured at different levels of analysis (for example, individual, municipality, country). We will present the results of the meta-analysis in forest plots, including 95 per cent confidence intervals for individual studies and the overall effect.

We will conduct meta-analyses separately for randomised and non-randomised study designs, as well as for designs that compare two active treatments. If statistical meta-analysis is not possible due to a small numbers of effect sizes in each category, we will present the effect sizes from each study in a forest plot without providing an overall summary of effect sizes.

Assessment and investigation of heterogeneity

We will test for heterogeneity using I^2 , and Q statistics, following Borenstein et al. (2009). We will also estimate and report the between studies variance component (τ^2).

We will code a range of study-level moderators that we expect would have an impact on the effect size. If there is sufficient information available, we will test the effect of key variables on the heterogeneity of the intervention impact, using moderator analysis for categorical predictors and meta-regression for continuous predictors. We will use a random effects model with inverse variance weighting for all moderator analyses. We anticipate that we will perform moderator analysis on target population (for example, school based samples, gender specific, age specific, gang members), geographic region (for example, school district, city,

state), the type of preventive strategy used (for example, primary, secondary, tertiary, combined), source of data (for example, official data, self-reported, peer-reported, family-reported, practitioner-reported, other), and study design (experimental, quasi-experimental). We will distinguish in the final review between a priori planned analyses (those listed in the protocol) and post hoc analyses identified only during the analytic stage.

Criteria for determination of independent findings

There are two issues of independence that may occur in this review. The first is that documents may report multiple outcomes for one study. Documents will be allowed to contribute multiple effect sizes to the syntheses, but only one effect size for each outcome. If a study reports multiple effect sizes for one outcome, for example across multiple intervention sites within the one study, the mean effect size for that outcome will be calculated.

The second issue of independence is that multiple documents may evaluate the same intervention using the same data. Each intervention may only contribute one effect size for each outcome; therefore, if multiple related studies are identified, we will assess all sources in order to select an effect size. This assessment will be based on the completeness of the data and the risk of bias assessment of the studies, and all decisions will be reported in the final review.

Sensitivity analysis

We will conduct subgroup analyses in order to assess the impact of risk of bias assessments and study design. Using moderator analysis for categorical variables, and meta-regression for continuous variables, we will perform sensitivity analysis on the effect of risk of bias, publication status, publication year, and geographic level of analysis. We will use a random effects model with inverse variance weighting for all sensitivity analyses. We will distinguish in the final review between a priori planned analyses (those listed in the protocol) and post hoc analyses identified only during the analytic stage.

Assessment of publication bias

We will test and adjust for publication bias using funnel plots and trim-and-fill analysis as suggested in Rothstein, Sutton, and Borenstein (2005).

Treatment of qualitative research

We will not use qualitative research to evaluate the effectiveness of preventive youth gang interventions, but we will include qualitative research to address objective 2, as outlined below.

Methods of synthesis for Objective 2: Reasons for intervention success or failure

To address the second objective of the review and assess the reasons for the success or failure of preventive youth gang interventions, we will conduct a thematic synthesis of evidence on the reasons for success or failure of the implementation of preventive youth gang interventions. The aim of this is to supplement the findings of the synthesis of effectiveness. The synthesis will specifically focus on practical, policy-focused implications from the literature.

Method of synthesis

We will use the method of thematic synthesis outlined by Thomas and Harden (2008). A review team member with expertise in the analysis of qualitative data will use Leximancer 4 and NVivo 10 text analytic software (Leximancer Pty Ltd, 2012; QSR International, 2012) to identify and code the key themes in the included studies. The eligible studies will be initially categorised according to the type of intervention that is reported. One reviewer will read the full text of all eligible studies and record any barriers or facilitators of implementation that are identified by the study authors using NVivo software. In an iterative process, the extracted data will then be tabulated and each study re-examined in light of the collated list to ensure full data capture. The corpus of studies will be analysed using Leximancer software to identify any key overarching themes that can be identified using data mining. The facilitators and barriers will be mapped onto key themes. Each study will be classified by intervention type and the frequency of each key theme will be tabulated across intervention types. The identified factors will be examined both within intervention groups and across intervention groups to examine questions of generalisability.

The synthesis will be organised in two parts. The first part will be a descriptive analysis. The studies will be grouped according to intervention type, and each section will include a summary of study characteristics, textual descriptions of the studies, and the authors' conclusions about barriers and facilitators of implementation success. The descriptive analysis in the first part of the review will also include the development of logic models for those interventions with sufficient data to allow a robust model to be constructed. The second part of the review will contain a thematic summary. The results will be summarised according to key identified themes, and this section will contain an analysis of any barriers and facilitators of intervention success cut across the various interventions, and the extent to which the identified factors can be generalised. Tables of summaries of findings will be presented in the final review.

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None of the authors have any known conflicts of interest.

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| Title: | Professor |

| | |
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- Systematic review methods: Angela Higginson, Joseph Murray, Yulia Shenderovich
- Statistical analysis: Angela Higginson
- Information retrieval: Yulia Shenderovich, Kathryn Benier, Laura Bedford

PRELIMINARY TIMEFRAME

| | |
|--|-----------------------------|
| Search for published and unpublished studies | October – December 2013 |
| Relevance assessments and coding | October 2013 – January 2014 |
| Statistical analysis | January – February 2014 |
| Initial results available for presentation | February 2014 |
| Preparation of report | February 2014 |
| Submission of completed report | July 2014 |

PLANS FOR UPDATING THE REVIEW

The authors plan to update the review every five years.

AUTHORS' RESPONSIBILITIES

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Form completed by: Angela Higginson

Date: 15 July 2014.

APPENDIX A: SEARCH STRATEGY STRUCTURE

A AND B AND D

or

C AND D

| Concept | Search terms |
|---------|---|
| A | aggression antisocial behaviour behavior disorder behavior problem bullying conduct disorder conduct problem crime criminal behavior disruptive behaviour disorder externalising externalizing gang homicide oppositional defiant disorder school violence social behavior disorders violence violent crime workplace violence |
| B | child youth infant baby toddler adolescent teenager |
| C | juvenile delinquency child behavior disorders school violence |

D

Africa or Central Africa or Latin America or Caribbean or West Indies or Eastern Europe or Soviet or South America or Arab or Middle East or Latin America or Central America

Afghanistan or Albania or Algeria or Angola or Antigua or Barbuda or Argentina or Armenia or Armenian or Aruba or Azerbaijan or Bahrain or Bangladesh or Barbados or Benin or Byelarus or Byelorussian or Belarus or Belorussian or Belorussia or Belize or Bhutan or Bolivia or Bosnia or Herzegovina or Hercegovina or Botswana or Brasil or Brazil or Bulgaria or Burkina Faso or Burkina Fasso or Upper Volta or Burundi or Urundi or Cambodia or Khmer Republic or Kampuchea or Cameroon or Cameroons or Cameron or Camerons or Cape Verde or Central African Republic or Chad or Chile or China or Colombia or Comoros or Comoro Islands or Comores or Mayotte or Congo or Zaire or Costa Rica or Cote d'Ivoire or Ivory Coast or Croatia or Cuba or Cyprus or Czechoslovakia or Czech Republic or Slovakia or Slovak Republic or Djibouti or French Somaliland or Dominica or Dominican Republic or East Timor or East Timor or Timor Leste or Ecuador or Egypt or United Arab Republic or El Salvador or Eritrea or Estonia or Ethiopia or Fiji or Gabon or Gabonese Republic or Gambia or Gaza or Georgia Republic or Georgian Republic or Ghana or Gold Coast or Greece or Grenada or Guatemala or Guinea or Guam or Guiana or Guyana or Haiti or Honduras or Hungary or India or Maldives or Indonesia or Iran or Iraq or Isle of Man or Jamaica or Jordan or Kazakhstan or Kazakh or Kenya or Kiribati or Korea or Kosovo or Kyrgyzstan or Kirghizia or Kyrgyz Republic or Kirghiz or Kirgizstan or Lao PDR or Laos or Latvia or Lebanon or Lesotho or Basutoland or Liberia or Libya or Lithuania or Macedonia or Madagascar or Malagasy Republic or Malaysia or Malaya or Malay or Sabah or Sarawak or Malawi or Nyasaland or Mali or Malta or Marshall Islands or Mauritania or Mauritius or Agalega Islands or Mexico or Micronesia or Middle East or Moldova or Moldavia or Moldovian or Mongolia or Montenegro or Morocco or Ifni or Mozambique or Myanmar or Myanma or Burma or Namibia or Nepal or Netherlands Antilles or New Caledonia or Nicaragua or Niger or Nigeria or Northern Mariana Islands or Oman or Muscat or Pakistan or Palau or Palestine or Panama or Paraguay or Peru or Philippines or Philipines or Phillipines or Phillippines or Poland or Portugal or Puerto Rico or Romania or Rumania or Roumania or Russia or Russian or Rwanda or Ruanda or Saint Kitts or St Kitts or Nevis or Saint Lucia or St Lucia or Saint Vincent or St Vincent or Grenadines or Samoa or Samoan Islands or Navigator Island or Navigator Islands or Sao Tome or Saudi Arabia or Senegal or Serbia or Montenegro or Seychelles or Sierra Leone or Slovenia or Sri Lanka or Ceylon or Solomon Islands or Somalia or South Africa or Sudan or Suriname or Surinam or Swaziland or Syria or Tajikistan or Tadzhikistan or Tadjikistan or Tadjhik or Tanzania or Thailand or Togo or Togolese Republic or Tonga or Trinidad or Tobago or Tunisia or Turkey or Turkmenistan or Turkmen or Uganda or Ukraine or Uruguay or USSR or Soviet Union or Union of Soviet Socialist Republics or Uzbekistan or Uzbek or Vanuatu or New Hebrides or Venezuela or Vietnam or Viet Nam or West Bank or Yemen or Yugoslavia or Zambia or Zimbabwe or Rhodesia

LMICs

developing/less developed/under developed/underserved/deprived/poor countries

transitional countries

| Database | Search strategy |
|---------------------------------|--|
| PsycINFO (Ovid) 1967 to 2013 | <p>developing countries/ (Africa or "Latin America" or Caribbean or "West Indies" or "Eastern Europe" or Soviet or "South America" or "Middle East" or "Latin America" or "Central America").hw,ti,ab. (Afghanistan or Albania or Algeria or Angola or Antigua or Barbuda or Argentina or Armenia or Armenian or Aruba or Azerbaijan or Bahrain or Bangladesh or Barbados or Benin or Byelarus or Byelorussian or Belarus or Belorussian or Belorussia or Belize or Bhutan or Bolivia or Bosnia or Herzegovina or Hercegovina or Botswana or Brasil or Brazil or Bulgaria or Burkina Faso or Burkina Fasso or Upper Volta or Burundi or Urundi or Cambodia or Khmer Republic or Kampuchea or Cameroon or Cameroons or Cameron or Camerons or Cape Verde or Central African Republic or Chad or Chile or China or Colombia or Comoros or Comoro Islands or Comores or Mayotte or Congo or Zaire or Costa Rica or Cote d'Ivoire or Ivory Coast or Croatia or Cuba or Cyprus or Czechoslovakia or Czech Republic or Slovakia or Slovak Republic or Djibouti or French Somaliland or Dominica or Dominican Republic or East Timor or East Timur or Timor Leste or Ecuador or Egypt or United Arab Republic or El Salvador or Eritrea or Estonia or Ethiopia or Fiji or Gabon or Gabonese Republic or Gambia or Gaza or Georgia Republic or Georgian Republic or Ghana or Gold Coast or Greece or Grenada or Guatemala or Guinea or Guam or Guiana or Guyana or Haiti or Honduras or Hungary or India or Maldives or Indonesia or Iran or Iraq or Isle of Man or Jamaica or Jordan or Kazakhstan or Kazakh or Kenya or Kiribati or Korea or Kosovo or Kyrgyzstan or Kirghizia or Kyrgyz Republic or Kirghiz or Kirgizstan or Lao PDR or Laos or Latvia or Lebanon or Lesotho or Basutoland or Liberia or Libya or Lithuania or Macedonia or Madagascar or Malagasy Republic or Malaysia or Malaya or Malay or Sabah or Sarawak or Malawi or Nyasaland or Mali or Malta or Marshall Islands or Mauritania or Mauritius or Agalega Islands or Mexico or Micronesia or Middle East or Moldova or Moldovia or Moldovian or Mongolian or Montenegro or Morocco or Ifni or Mozambique or Myanmar or Myanma or Burma or Namibia or Nepal or Netherlands Antilles or New Caledonia or Nicaragua or Niger or Nigeria or Northern Mariana Islands or Oman or Muscat or Pakistan or Palau or Palestine or Panama or Paraguay or Peru or Philippines or Philipines or Phillipines or Poland or Portugal or Puerto Rico or Romania or Rumania or Roumania or Russia or Russian or Rwanda or Ruanda or Saint Kitts or St Kitts or Nevis or Saint Lucia or St Lucia or Saint Vincent or St Vincent or Grenadines or Samoa or Samoan Islands or Navigator Island or Navigator Islands or Sao Tome or Saudi Arabia or Senegal or Serbia or Montenegro or Seychelles or Sierra Leone or Slovenia or Sri Lanka or Ceylon or Solomon Islands or Somalia or South Africa or Sudan or Suriname or Surinam or Swaziland or Syria or Tajikistan or Tadjikistan or Tadjikistan or Tadjhik or Tanzania or Thailand or Togo or Togolese Republic or Tonga or Trinidad or Tobago or Tunisia or Turkey or Turkmenistan or Turkmen or Uganda or Ukraine or Uruguay or USSR or Soviet Union or Union of Soviet Socialist Republics or Uzbekistan or Uzbek or Vanuatu or New Hebrides or Venezuela or Vietnam or Viet Nam or West Bank or Yemen or Yugoslavia or Zambia or Zimbabwe or Rhodesia).hw,ti,ab,cp. ((developing or less* developed or under developed or underdeveloped or middle income or low* income or underserved or under served or deprived or poor* or foreign) adj (countr* or nation? or population? or world or region*)).hw,ti,ab. ((developing or less* developed or under de veloped or underdeveloped or middle income or low* income) adj (economy or economies)).hw,ti,ab. (lmic or Imics or third world or lami countr*).hw,ti,ab. transitional countr*.hw,ti,ab. OR/1-8</p> <p>antisocial behavior/ OR conduct disorder/ OR exp behavior problems/ OR behavior disorders/ OR impulse control disorders/ OR adjustment disorders/ OR violence/ OR exp violent crime/ OR workplace violence/ OR crime/ OR criminal behavior/ OR crime.mp. OR crimes.mp. OR criminal*.mp. OR</p> |

exp homicide/ OR
homicid*.mp. OR
exp perpetrators/ OR
attack behavior/ OR
acting out/ OR
exp gangs/ OR
gang.mp. OR
gangs.mp.
exp bullying/ OR
bully*.mp. OR
aggress*.mp. OR
aggressive behavior/ OR
(conduct adj1 problem*).mp. OR
(behavio?r adj1 problem*).mp. OR
(conduct adj1 disorder*).mp. OR
(behavio?r adj1 disorder*).mp. OR
(antisocial adj1 behavio?r*).mp. OR
(anti-social adj1 behavio?r*).mp. OR
(oppositional adj1 defiant adj1 disorder*).af. OR
(disruptive adj1 behavio?r adj1 disorder*).af.
(externalizing adj1 behavio?r adj1 problem*).mp.
externalizing.mp.
externalising.mp.
externalized.mp.
externalised.mp.
externaliz*.mp.
externalis*.mp.
(childhood adj1 externalizing adj1 behavio?r).mp.
(externalizing adj1 behavio?r).mp.
(externalising adj1 behavio?r).mp.

11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22

10 and 23

exp [Childhood Development](#)/
Adolescent development/
Child Welfare/
Child Care/
baby.ti,ab.
babies.ti,ab.
toddler.ti,ab.
toddlers.ti,ab.
adolescen*.ti,ab.
adolescent.ti,ab.
adolescents.ti,ab.
adolescence.ti,ab.
child*.ti,ab.
child.ti,ab.
children*.ti,ab.
childhood*.ti,ab.
childhood.ti,ab.
youth*.ti,ab.
youth.ti,ab.
youths.ti,ab.
student*.ti,ab.
Students.ti,ab.
Student.ti,ab.
teen*.ti,ab.
teenager.ti,ab.
teenagers.ti,ab.

boy.ti,ab.
boys.ti,ab.
girl.ti,ab.
girls.ti,ab.
pupil.ti,ab.
pupils.ti,ab.
pupil*.ti,ab.
youngster*.ti,ab.
youngster.ti,ab.
youngsters.ti,ab.
juvenile*.ti,ab.
juvenile.ti,ab.
juveniles.ti,ab.
Infant*.ti,ab.
infant.ti,ab.
infants.ti,ab.
young adj1 adult*.ti,ab.

30 or 31 or 32 or 33 or 34 or 35 or 36 or 37 or 38 or 39 or 40 or 41

28 and 42

Or/ 47-

AND

exp juvenile delinquency/
(juvenile adj1 delinquen*).mp.
school violence/

or/

**Ovid
MEDLINE(R) In-
Process & Other
Non-Indexed
Citations and
Ovid
MEDLINE(R)
1946 to Present**

Developing Countries.sh.
(Africa or Central Africa or Latin America or Caribbean or West Indies or Eastern Europe or Soviet or South America or Arab or Middle East or Latin America or Central America).hw,kf,ti,ab,cp.
(Afghanistan or Albania or Algeria or Angola or Antigua or Barbuda or Argentina or Armenia or Armenian or Aruba or Azerbaijan or Bahrain or Bangladesh or Barbados or Benin or Byelarus or Byelorussian or Belarus or Belorussian or Belorussia or Belize or Bhutan or Bolivia or Bosnia or Herzegovina or Hercegovina or Botswana or Brasil or Brazil or Bulgaria or Burkina Faso or Burkina Fasso or Upper Volta or Burundi or Urundi or Cambodia or Khmer Republic or Kampuchea or Cameroon or Cameroons or Cameron or Camerons or Cape Verde or Central African Republic or Chad or Chile or China or Colombia or Comoros or Comoro Islands or Comores or Mayotte or Congo or Zaire or Costa Rica or Cote d'Ivoire or Ivory Coast or Croatia or Cuba or Cyprus or Czechoslovakia or Czech Republic or Slovakia or Slovak Republic or Djibouti or French Somaliland or Dominica or Dominican Republic or East Timor or East Timor or Timor Leste or Ecuador or Egypt or United Arab Republic or El Salvador or Eritrea or Estonia or Ethiopia or Fiji or Gabon or Gabonese Republic or Gambia or Gaza or Georgia Republic or Georgian Republic or Ghana or Gold Coast or Greece or Grenada or Guatemala or Guinea or Guam or Guyana or Haiti or Honduras or Hungary or India or Maldives or Indonesia or Iran or Iraq or Isle of Man or Jamaica or Jordan or Kazakhstan or Kazakh or Kenya or Kiribati or Korea or Kosovo or Kyrgyzstan or Kirghizia or Kyrgyz Republic or Kirghiz or Kirgizstan or Lao PDR or Laos or Latvia or Lebanon or Lesotho or Basutoland or Liberia or Libya or Lithuania or Macedonia or Madagascar or Malagasy Republic or Malaysia or Malaya or Malay or Sabah or Sarawak or Malawi or Nyasaland or Mali or Malta or Marshall Islands or Mauritania or Mauritius or Agalega Islands or Mexico or Micronesia or Middle East or Moldova or Moldova or Moldovan or Mongolia or Montenegro or Morocco or Ifni or Mozambique or Myanmar or Myanma or Burma or Namibia or Nepal or Netherlands Antilles or New Caledonia or Nicaragua or Niger or Nigeria or Northern Mariana Islands or Oman or Muscat or Pakistan or Palau or Palestine or Panama or Paraguay or Peru or Philippines or Philipines or Phillipines or Phillippines or Poland or Portugal or Puerto Rico or Romania or Rumania or Roumania or Russia or Russian or Rwanda or Ruanda or Saint Kitts or St Kitts or Nevis or Saint Lucia or St Lucia or Saint Vincent or St Vincent or Grenadines or Samoa or Samoan Islands or Navigator Island or Navigator Islands or Sao Tome or Saudi Arabia or Senegal or Serbia or Montenegro or Seychelles or Sierra Leone or Slovenia or Sri Lanka or Ceylon or Solomon Islands or Somalia or South Africa or Sudan or Suriname or Surinam or

Swaziland or Syria or Tajikistan or Tadjhikistan or Tadjikistan or Tadzhhik or Tanzania or Thailand or
Togo or Togolese Republic or Tonga or Trinidad or Tobago or Tunisia or Turkey or Turkmenistan or
Turkmen or Uganda or Ukraine or Uruguay or USSR or Soviet Union or Union of Soviet Socialist
Republics or Uzbekistan or Uzbek or Vanuatu or New Hebrides or Venezuela or Vietnam or Viet
Nam or West Bank or Yemen or Yugoslavia or Zambia or Zimbabwe or Rhodesia).hw,kf,ti,ab,cp.
((developing or less* developed or under developed or underdeveloped or middle income or low*
income or underserved or under served or deprived or poor* or foreign) adj (countr* or nation? or
population? or world or region*)).ti,ab.
((developing or less* developed or under developed or underdeveloped or middle income or low*
income) adj (economy or economies)).ti,ab.
(Imic or Imics or third world or lami countr*).ti,ab.
transitional countr*.ti,ab.
or/1-8

juvenile delinquency.sh.
(juvenile adj1 delinquen*).mp.
"Child Behavior Disorders".sh.
(school adj1 violence).mp.
(childhood adj1 externalizing adj1 behavio?r).mp.
or/

Social Behavior Disorders.sh.
conduct disorder.sh.
(conduct adj1 disorder*).mp.
aggression.sh.
aggress*.mp.
(acting adj1 out).mp.
(aggressive adj1 behavio?r).mp.
(behavio?r* adj1 problem*).mp.
(behavio?r* adj1 disorder*).mp.
(conduct adj1 problem*).mp.
(conduct adj1 disorder*).mp.
(impulse adj1 control adj1 disorder*).mp.
(antisocial adj1 behavio?r*).mp.
(anti-social adj1 behavio?r*).mp.
(oppositional adj1 defiant adj1 disorder*).af.
(disruptive adj1 behavio?r adj1 disorder*).af.
violen*.mp.
(violent adj1 crime*).mp.
exp crime/
crime.mp.
crimes.mp.
criminal*.mp.
(criminal behavio?r*).mp.
bully*.mp
bullying.sh.
gang.mp.
gangs.mp.
homicid*.mp.
homicide.sh.
(externalizing adj1 behavio?r adj1 problem*).mp.
externalizing.mp.
externalising.mp.
externalized.mp.
externalised.mp.
externaliz*.mp.
externalis*.mp.
(externalizing adj1 behavio?r).mp.
or/14-

11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25

9 and 26

exp child/
"Child Health Services".sh.
"Child Welfare".sh.
"Child Behavior".sh.
"Child Care".sh.
"Child Development".sh.
Infant.sh.
baby.ti,ab.
babies.ti,ab.
toddler.ti,ab.
toddlers.ti,ab.
adolescen*.ti,ab.
adolescent.ti,ab.
adolescents.ti,ab.
adolescence.ti,ab.
child*.ti,ab.
child.ti,ab.
children*.ti,ab.
childhood*.ti,ab.
childhood.ti,ab.
youth*.ti,ab.
youth.ti,ab.
youths.ti,ab.
student*.ti,ab.
student.ti,ab.
students.ti,ab.
teen*.ti,ab.
teenager.ti,ab.
teenagers.ti,ab.
boy.ti,ab.
boys.ti,ab.
girl.ti,ab.
girls.ti,ab.
pupil.ti,ab.
pupils.ti,ab.
pupil*.ti,ab.
youngster*.ti,ab.
youngster.ti,ab.
youngsters.ti,ab.
juvenile*.ti,ab.
juvenile.ti,ab.
juveniles.ti,ab.
Infant*.ti,ab.
infant.ti,ab.
infants.ti,ab.
(young adj1 adult*).ti,ab.

27 or 28 or 29 or 30 or 31 or 32 or 33 or 34 or 35 or 36 or 37 or 38 or 39

26 and 40

| | |
|--|--|
| EMBASE (Ovid) 1974 to 2013 Using EMTREE | Exp developing country/ (Developing adj1 Countr*).hw,ti,ab,cp. (Africa or Central Africa or Latin America or Caribbean or West Indies or Eastern Europe or Soviet or South America or Arab or Middle East or Latin America or Central America).hw,ti,ab,cp. (Afghanistan or Albania or Algeria or Angola or Antigua or Barbuda or Argentina or Armenia or Armenian or Aruba or Azerbaijan or Bahrain or Bangladesh or Barbados or Benin or Byelarus or Byelorussian or Belarus or Belorussian or Belorussia or Belize or Bhutan or Bolivia or Bosnia or Herzegovina or Hercegovina or Botswana or Brasil or Brazil or Bulgaria or Burkina Faso or Burkina |
|--|--|

Fasso or Upper Volta or Burundi or Urundi or Cambodia or Khmer Republic or Kampuchea or Cameroon or Cameroons or Cameron or Camerons or Cape Verde or Central African Republic or Chad or Chile or China or Colombia or Comoros or Comoro Islands or Comores or Mayotte or Congo or Zaire or Costa Rica or Cote d'Ivoire or Ivory Coast or Croatia or Cuba or Cyprus or Czechoslovakia or Czech Republic or Slovakia or Slovak Republic or Djibouti or French Somaliland or Dominica or Dominican Republic or East Timor or East Timur or Timor Leste or Ecuador or Egypt or United Arab Republic or El Salvador or Eritrea or Estonia or Ethiopia or Fiji or Gabon or Gabonese Republic or Gambia or Gaza or Georgia Republic or Georgian Republic or Ghana or Gold Coast or Greece or Grenada or Guatemala or Guinea or Guam or Guiana or Guyana or Haiti or Honduras or Hungary or India or Maldives or Indonesia or Iran or Iraq or Isle of Man or Jamaica or Jordan or Kazakhstan or Kazakh or Kenya or Kiribati or Korea or Kosovo or Kyrgyzstan or Kirghizia or Kyrgyz Republic or Kirghiz or Kirgizstan or Lao PDR or Laos or Latvia or Lebanon or Lesotho or Basutoland or Liberia or Libya or Lithuania or Macedonia or Madagascar or Malagasy Republic or Malaysia or Malaya or Malay or Sabah or Sarawak or Malawi or Nyasaland or Mali or Malta or Marshall Islands or Mauritania or Mauritius or Agalega Islands or Mexico or Micronesia or Middle East or Moldova or Moldavia or Moldovian or Mongolia or Montenegro or Morocco or Ifni or Mozambique or Myanmar or Myanma or Burma or Namibia or Nepal or Netherlands Antilles or New Caledonia or Nicaragua or Niger or Nigeria or Northern Mariana Islands or Oman or Muscat or Pakistan or Palau or Palestine or Panama or Paraguay or Peru or Philippines or Philipines or Phillipines or Phillippines or Poland or Portugal or Puerto Rico or Romania or Rumania or Roumania or Russia or Russian or Rwanda or Ruanda or Saint Kitts or St Kitts or Nevis or Saint Lucia or St Lucia or Saint Vincent or St Vincent or Grenadines or Samoa or Samoan Islands or Navigator Island or Navigator Islands or Sao Tome or Saudi Arabia or Senegal or Serbia or Montenegro or Seychelles or Sierra Leone or Slovenia or Sri Lanka or Ceylon or Solomon Islands or Somalia or South Africa or Sudan or Suriname or Surinam or Swaziland or Syria or Tajikistan or Tadjhikistan or Tadjikistan or Tadjhik or Tanzania or Thailand or Togo or Togolese Republic or Tonga or Trinidad or Tobago or Tunisia or Turkey or Turkmenistan or Turkmen or Uganda or Ukraine or Uruguay or USSR or Soviet Union or Union of Soviet Socialist Republics or Uzbekistan or Uzbek or Vanuatu or New Hebrides or Venezuela or Vietnam or Viet Nam or West Bank or Yemen or Yugoslavia or Zambia or Zimbabwe or Rhodesia).hw,ti,ab,cp.
((developing or less* developed or under developed or underdeveloped or middle income or low* income or underserved or under served or deprived or poor* or foreign) adj1 (countr* or nation? or population? or world or region)).ti,ab.
((developing or less* developed or under developed or underdeveloped or middle income or low* income) adj1 (economy or economies)).ti,ab.
(low adj3 middle adj1 countr*).ti,ab.
(lmic or Imics or third world or lami countr*).ti,ab.
(transitional countr*).ti,ab.
or/1-8

exp delinquency/
(juvenile adj1 delinquen*).mp.
(school adj1 violence).mp.

or/

(conduct adj1 problem*).mp.
(conduct adj1 disorder*).mp.
(behavio?r* adj1 problem*).mp.
(behavio?r adj1 disorder*).mp.
(oppositional adj1 defiant adj1 disorder*).af.
(disruptive adj1 behavio?r adj1 disorder*).af.
(impulse adj1 control adj1 disorder*).mp.
(criminal adj1 behavio?r*).mp.
(violent adj1 crime*).mp.
homicid*.mp.
homicide.mp.
homicides.mp.
conduct disorder/
aggression.mp.
aggressive.mp.
aggress*.mp.

violen*.mp.
violent.mp.
violence.mp.
crime.mp.
crimes.mp
criminal*.mp.
gang.mp.
gangs.mp.
bully*.mp.
bully.mp.
bullying.mp.
(aggressive adj1 behavio?r).mp.
(antisocial adj1 behavio?r).mp.
(anti-social adj1 behavio?r*).mp.
exp aggression/
homicide/
gang/
crime/
criminal behavior/
abnormal behavior/
behavior disorder/
disruptive behaviour/
criminology/
homicide/
acting out/
violence/
workplace violence/
impulse control disorder/

oppositional defiant disorder/
conduct disorder/
(externalizing adj1 behavio?r adj1 problem*).mp.
(externalizing adj1 behavio?r).mp.
(externalising adj1 behavio?r).mp.
externalizing.mp.
externalising.mp.
externalized.mp.
externalised.mp.
externaliz*.mp.
externalis*.mp.

11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25

9 and 26

exp child/
adolescent.sh.
Infant.sh.
baby.ti,ab.
babies.ti,ab.
toddler.ti,ab.
toddlers.ti,ab.
adolescen*.ti,ab.
adolescent.ti,ab.
adolescents.ti,ab.
adolescence.ti,ab.
child*.ti,ab.
child.ti,ab.
children*.ti,ab.
childhood*.ti,ab.
childhood.ti,ab.

youth*.ti,ab.
youth.ti,ab.
youths.ti,ab.
student*.ti,ab.
students.ti,ab.
student.ti,ab.
teen*.ti,ab.
teenager.ti,ab.
teenagers.ti,ab.
boy.ti,ab.
boys.ti,ab.
girl.ti,ab.
girls.ti,ab.
pupil.ti,ab.
pupils.ti,ab.
pupil*.ti,ab.
youngster*.ti,ab.
youngster.ti,ab.
youngsters.ti,ab.
juvenile*.ti,ab.
juvenile.ti,ab.
juveniles.ti,ab.
Infant*.ti,ab.
infant.ti,ab.
infants.ti,ab.
(young adj1 adult*).ti,ab.

57-

27 or 28 or 29 or 30 or 31 or 32 or 33 or 34 or 35 or 36 or 37 or 38 or 39

26 and 40

**CINAHL
(EBSCO)**

T1 ("developing country" or "developing countries" or "developing nation" or "developing nations" or less* W1 "developed country" or less* W1 "developed countries" or less* W1 "developed nation" or less* W1 "developed nations" or "third world" or "under developed" or "middle income" or "low income" or "underserved country" or "underserved countries" or "underserved nation" or "underserved nations" or "under served country" or "under served countries" or "under served nation" or "under served nations" or "underserved population" or "underserved populations" or "under served population" or "under served populations" or "deprived country" or "deprived countries" or "deprived nation" or "deprived nations" or poor* W1 country or poor* W1 countries or poor* W1 nation* or poor* W1 population* or Imic or Imics)

AB ("developing country" or "developing countries" or "developing nation" or "developing nations" or less* W1 "developed country" or less* W1 "developed countries" or less* W1 "developed nation" or less* W1 "developed nations" or "third world" or "under developed" or "middle income" or "low income" or "underserved country" or "underserved countries" or "underserved nation" or "underserved nations" or "under served country" or "under served countries" or "under served nation" or "under served nations" or "underserved population" or "underserved populations" or "under served population" or "under served populations" or "deprived country" or "deprived countries" or "deprived nation" or "deprived nations" or poor* W1 country or poor* W1 countries or poor* W1 nation* or poor* W1 population* or Imic or Imics)

MW (Afghanistan or Bangladesh or Benin or "Burkina Faso" or Burundi or Cambodia or "Central African Republic" or Chad or Comoros or Congo or "Cote d'Ivoire" or Eritrea or Ethiopia or Gambia or Ghana or Guinea or Haiti or India or Kenya or Korea or Kyrgyz or Kyrgyzstan or Lao or Laos or Liberia or Madagascar or Malawi or Mali or Mauritania or Melanesia or Mongolia or Mozambique or Burma or Myanmar or Nepal or Niger or Nigeria or Pakistan or Rwanda or "Salomon Islands" or "Sao Tome" or Senegal or "Sierra Leone" or Somalia or Sudan or Tajikistan or Tanzania or Timor or Togo or Uganda or Uzbekistan or Vietnam or "Viet Nam" or Yemen or Zambia or Zimbabwe)

TI (Afghanistan or Bangladesh or Benin or "Burkina Faso" or Burundi or Cambodia or "Central African Republic" or Chad or Comoros or Congo or "Cote d'Ivoire" or Eritrea or Ethiopia or Gambia or Ghana or Guinea or Haiti or India or Kenya or Korea or Kyrgyz or Kyrgyzstan or Lao or Laos or Liberia or Madagascar or Malawi or Mali or Mauritania or Melanesia or Mongolia or Mozambique or Burma or Myanmar or Nepal or Niger or Nigeria or Pakistan or Rwanda or "Salomon Islands" or "Sao Tome" or Senegal or "Sierra Leone" or Somalia or Sudan or Tajikistan or Tanzania or Timor or Togo or Uganda or Uzbekistan or Vietnam or "Viet Nam" or Yemen or Zambia or Zimbabwe)

AB (Afghanistan or Bangladesh or Benin or "Burkina Faso" or Burundi or Cambodia or "Central African Republic" or Chad or Comoros or Congo or "Cote d'Ivoire" or Eritrea or Ethiopia or Gambia or Ghana or Guinea or Haiti or India or Kenya or Korea or Kyrgyz or Kyrgyzstan or Lao or Laos or Liberia or Madagascar or Malawi or Mali or Mauritania or Melanesia or Mongolia or Mozambique or Burma or Myanmar or Nepal or Niger or Nigeria or Pakistan or Rwanda or "Salomon Islands" or "Sao Tome" or Senegal or "Sierra Leone" or Somalia or Sudan or Tajikistan or Tanzania or Timor or Togo or Uganda or Uzbekistan or Vietnam or "Viet Nam" or Yemen or Zambia or Zimbabwe)

MW (Albania or Algeria or Angola or Armenia or Azerbaijan or Belarus or Bhutan or Bolivia or Bosnia or Herzegovina or "Cape Verde" or Cameroon or China or Colombia or Congo or Cuba or Djibouti or "Dominican Republic" or Ecuador or Egypt or "El Salvador" or Fiji or Gaza or Georgia or Guam or Guatemala or Guyana or Honduras or "Indian Ocean Islands" or Indonesia or Iran or Iraq or Jamaica or Jordan or Kiribati or Lesotho or Macedonia or Maldives or "Marshall Islands" or Micronesia or "Middle East" or Moldova or Morocco or Namibia or Nicaragua or Palestin* or Paraguay or Peru or Philippines or Samoa or "Sri Lanka" or Suriname or Swaziland or Syria or "Syrian Arab Republic" or Thailand or Tonga or Tunisia or Turkmenistan or Ukraine or Vanuatu or "West Bank") or TI (Albania or Algeria or Angola or Armenia or Azerbaijan or Belarus or Bhutan or Bolivia or Bosnia or Herzegovina or "Cape Verde" or Cameroon or China or Colombia or Congo or Cuba or Djibouti or "Dominican Republic" or Ecuador or Egypt or "El Salvador" or Fiji or Gaza or Georgia or Guam or Guatemala or Guyana or Honduras or "Indian Ocean Islands" or Indonesia or Iran or Iraq or Jamaica or Jordan or Kiribati or Lesotho or Macedonia or Maldives or "Marshall Islands" or Micronesia or "Middle East" or Moldova or Morocco or Namibia or Nicaragua or Palestin* or Paraguay or Peru or Philippines or Samoa or "Sri Lanka" or Suriname or Swaziland or Syria or "Syrian Arab Republic" or Thailand or Tonga or Tunisia or Turkmenistan or Ukraine or Vanuatu or "West Bank")

AB (Albania or Algeria or Angola or Armenia or Azerbaijan or Belarus or Bhutan or Bolivia or Bosnia or Herzegovina or "Cape Verde" or Cameroon or China or Colombia or Congo or Cuba or Djibouti or "Dominican Republic" or Ecuador or Egypt or "El Salvador" or Fiji or Gaza or Georgia or Guam or Guatemala or Guyana or Honduras or "Indian Ocean Islands" or Indonesia or Iran or Iraq or Jamaica or Jordan or Kiribati or Lesotho or Macedonia or Maldives or "Marshall Islands" or Micronesia or "Middle East" or Moldova or Morocco or Namibia or Nicaragua or Palestin* or Paraguay or Peru or Philippines or Samoa or "Sri Lanka" or Suriname or Swaziland or Syria or "Syrian Arab Republic" or Thailand or Tonga or Tunisia or Turkmenistan or Ukraine or Vanuatu or "West Bank")

MW ("American Samoa" or Argentina or Belize or Botswana or Brazil or Bulgaria or Chile or Comoros or "Costa Rica" or Croatia or Dominica or Guinea or Gabon or Grenada or Grenadines or Hungary or Kazakhstan or Latvia or Lebanon or Libia or libyan or Libya or Lithuania or Malaysia or Mauritius or Mayotte or Mexico or Micronesia or Montenegro or Nevis or "Northern Mariana Islands" or Oman or Palau or Panama or Poland or Romania or Russia or "Russian Federation" or Samoa or "Saint Lucia" or "St Lucia" or "Saint Kitts" or "St Kitts" or "Saint Vincent" or "St Vincent" or Serbia or Seychelles or Slovakia or "Slovak Republic" or "South Africa" or Turkey or Uruguay or Venezuela or Yugoslavia)

TI ("American Samoa" or Argentina or Belize or Botswana or Brazil or Bulgaria or Chile or Comoros or "Costa Rica" or Croatia or Dominica or Guinea or Gabon or Grenada or Grenadines or Hungary or Kazakhstan or Latvia or Lebanon or Libia or libyan or Libya or Lithuania or Malaysia or Mauritius or

Mayotte or Mexico or Micronesia or Montenegro or Nevis or "Northern Mariana Islands" or Oman or Palau or Panama or Poland or Romania or Russia or "Russian Federation" or Samoa or "Saint Lucia" or "St Lucia" or "Saint Kitts" or "St Kitts" or "Saint Vincent" or "St Vincent" or Serbia or Seychelles or Slovakia or "Slovak Republic" or "South Africa" or Turkey or Uruguay or Venezuela or Yugoslavia)

AB ("American Samoa" or Argentina or Belize or Botswana or Brazil or Bulgaria or Chile or Comoros or "Costa Rica" or Croatia or Dominica or Guinea or Gabon or Grenada or Grenadines or Hungary or Kazakhstan or Latvia or Lebanon or Libia or libyan or Libya or Lithuania or Malaysia or Mauritius or Mayotte or Mexico or Micronesia or Montenegro or Nevis or "Northern Mariana Islands" or Oman or Palau or Panama or Poland or Romania or Russia or "Russian Federation" or Samoa or "Saint Lucia" or "St Lucia" or "Saint Kitts" or "St Kitts" or "Saint Vincent" or "St Vincent" or Serbia or Seychelles or Slovakia or "Slovak Republic" or "South Africa" or Turkey or Uruguay or Venezuela or Yugoslavia)

T1 (Africa or Asia or "South America" or "Latin America" or "Central America")

AB (Africa or Asia or "South America" or "Latin America" or "Central America")

(MH "Asia+")
(MH "West Indies+")
(MH "South America+")
(MH "Latin America")
(MH "Central America+")
(MH "Africa+")
(MH "Developing Countries")

or/

(MH "Juvenile Delinquency")
AB (juvenile N1 delinquen*)
AB (school N1 violence)
(MH "Juvenile Offenders+")
(MH "[Child Behavior Disorders](#)")

or/

(MH "Aggression")
(MH "Social Behavior Disorders")
(MH "Crime")
(MH "Violence")
(MH "Homicide")
(MH "Assault and Battery")
(MH "Aggression+")
AB (conduct N1 problem*)
AB (behavio#r N1 problem*)
AB (antisocial N1 behavio#r)
AB (disruptive N1 behavio#r)
AB (conduct N1 disorder*)
AB (behavio#r N1 disorder*)
AB (aggressive N1 behavio#r)
AB (aggression)
AB (aggressive)
AB (antisocial N1 behavio#r)
AB (anti-social N1 behavio#r)
AB (gang)
AB (gangs)
AB (criminal N1 behavio#r)
AB (violent N1 crime)
AB (homicid*)
AB (violence)
AB (violent)
AB (crime)

AB (crimes)
AB (criminal*)
AB (bully)
AB (bullying)
AB (delinquent*)

AB (delinquenc*)
TX (oppositional N1 defiant N1 disorder*)
TX (disruptive N1 behavio#r N1 disorder*)
AB (externalizing N1 behavio#r N1 problem*)
AB (externalizing)
AB (externalising)
AB (externalized)
AB (externalised)
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AB (externalis*)
AB (externalizing N1 behavio#r)
AB (externalising N1 behavio#r)
or /...

S21 AND S68

(MH " Child+")
(MH "Adolescence")
AB (Adolescen*)
AB (Adolescence)
AB (Adolescent)
AB (adolescents)
AB (Child*)
AB (child)
AB (children)
AB (childhood)
AB (youth*)
AB (youth)
AB (youths)
AB (student*)
AB (Students)
AB (Student)
AB (teen*)
AB (teenager)
AB (teenagers)
AB (boy*)
AB (boy)
AB (boys)
AB (girl*)
AB (girl)
AB (girls)
AB (pupil)
AB (pupils)
AB (pupil*)
AB (youngster*)
AB (youngster)
AB (youngsters)
AB (juvenile*)
AB (juvenile)
AB (juveniles)
AB (young N1 adult*)
AB (infant*)
AB (infants)
AB (infant)
AB (baby*)

AB (baby)
AB (babies)
AB (toddler)
AB (toddler*)
AB (toddlers)

or/

22 and 38

**Criminal Justice
Abstracts
(EBSCOHost)**

TI ("developing country" or "developing countries" or "developing nation" or "developing nations" or less* W1 "developed country" or less* W1 "developed countries" or less* W1 "developed nation" or less* W1 "developed nations" or "third world" or "under developed" or "middle income" or "low income" or "underserved country" or "underserved countries" or "underserved nation" or "underserved nations" or "under served country" or "under served countries" or "under served nation" or "under served nations" or "underserved population" or "underserved populations" or "under served population" or "under served populations" or "deprived country" or "deprived countries" or "deprived nation" or "deprived nations" or poor* W1 country or poor* W1 countries or poor* W1 nation* or poor* W1 population* or Imic or Imics)

AB ("developing country" or "developing countries" or "developing nation" or "developing nations" or less* W1 "developed country" or less* W1 "developed countries" or less* W1 "developed nation" or less* W1 "developed nations" or "third world" or "under developed" or "middle income" or "low income" or "underserved country" or "underserved countries" or "underserved nation" or "underserved nations" or "under served country" or "under served countries" or "under served nation" or "under served nations" or "underserved population" or "underserved populations" or "under served population" or "under served populations" or "deprived country" or "deprived countries" or "deprived nation" or "deprived nations" or poor* W1 country or poor* W1 countries or poor* W1 nation* or poor* W1 population* or Imic or Imics)

MW (Afghanistan or Bangladesh or Benin or "Burkina Faso" or Burundi or Cambodia or "Central African Republic" or Chad or Comoros or Congo or "Cote d'Ivoire" or Eritrea or Ethiopia or Gambia or Ghana or Guinea or Haiti or India or Kenya or Korea or Kyrgyz or Kyrgyzstan or Lao or Laos or Liberia or Madagascar or Malawi or Mali or Mauritania or Melanesia or Mongolia or Mozambique or Burma or Myanmar or Nepal or Niger or Nigeria or Pakistan or Rwanda or "Salomon Islands" or "Sao Tome" or Senegal or "Sierra Leone" or Somalia or Sudan or Tajikistan or Tanzania or Timor or Togo or Uganda or Uzbekistan or Vietnam or "Viet Nam" or Yemen or Zambia or Zimbabwe)

TI (Afghanistan or Bangladesh or Benin or "Burkina Faso" or Burundi or Cambodia or "Central African Republic" or Chad or Comoros or Congo or "Cote d'Ivoire" or Eritrea or Ethiopia or Gambia or Ghana or Guinea or Haiti or India or Kenya or Korea or Kyrgyz or Kyrgyzstan or Lao or Laos or Liberia or Madagascar or Malawi or Mali or Mauritania or Melanesia or Mongolia or Mozambique or Burma or Myanmar or Nepal or Niger or Nigeria or Pakistan or Rwanda or "Salomon Islands" or "Sao Tome" or Senegal or "Sierra Leone" or Somalia or Sudan or Tajikistan or Tanzania or Timor or Togo or Uganda or Uzbekistan or Vietnam or "Viet Nam" or Yemen or Zambia or Zimbabwe)

AB (Afghanistan or Bangladesh or Benin or "Burkina Faso" or Burundi or Cambodia or "Central African Republic" or Chad or Comoros or Congo or "Cote d'Ivoire" or Eritrea or Ethiopia or Gambia or Ghana or Guinea or Haiti or India or Kenya or Korea or Kyrgyz or Kyrgyzstan or Lao or Laos or Liberia or Madagascar or Malawi or Mali or Mauritania or Melanesia or Mongolia or Mozambique or Burma or Myanmar or Nepal or Niger or Nigeria or Pakistan or Rwanda or "Salomon Islands" or "Sao Tome" or Senegal or "Sierra Leone" or Somalia or Sudan or Tajikistan or Tanzania or Timor or Togo or Uganda or Uzbekistan or Vietnam or "Viet Nam" or Yemen or Zambia or Zimbabwe)

MW (Albania or Algeria or Angola or Armenia or Azerbaijan or Belarus or Bhutan or Bolivia or Bosnia or Herzegovina or "Cape Verde" or Cameroon or China or Colombia or Congo or Cuba or Djibouti or "Dominican Republic" or Ecuador or Egypt or "El Salvador" or Fiji or Gaza or Georgia or Guam or Guatemala or Guyana or Honduras or "Indian Ocean Islands" or Indonesia or Iran or Iraq or Jamaica or Jordan or Kiribati or Lesotho or Macedonia or Maldives or "Marshall Islands" or Micronesia or "Middle East" or Moldova or Morocco or Namibia or Nicaragua or Palestin* or Paraguay or Peru or Philippines or Samoa or "Sri Lanka" or Suriname or Swaziland or Syria or "Syrian Arab Republic" or Thailand or Tonga or Tunisia or Turkmenistan or Ukraine or Vanuatu or "West Bank") or TI (Albania

or Algeria or Angola or Armenia or Azerbaijan or Belarus or Bhutan or Bolivia or Bosnia or Herzegovina or "Cape Verde" or Cameroon or China or Colombia or Congo or Cuba or Djibouti or "Dominican Republic" or Ecuador or Egypt or "El Salvador" or Fiji or Gaza or Georgia or Guam or Guatemala or Guyana or Honduras or "Indian Ocean Islands" or Indonesia or Iran or Iraq or Jamaica or Jordan or Kiribati or Lesotho or Macedonia or Maldives or "Marshall Islands" or Micronesia or "Middle East" or Moldova or Morocco or Namibia or Nicaragua or Palestin* or Paraguay or Peru or Philippines or Samoa or "Sri Lanka" or Suriname or Swaziland or Syria or "Syrian Arab Republic" or Thailand or Tonga or Tunisia or Turkmenistan or Ukraine or Vanuatu or "West Bank" Albania or Algeria or Angola or Armenia or Azerbaijan or Belarus or Bhutan or Bolivia or Bosnia or Herzegovina or "Cape Verde" or Cameroon or China or Colombia or Congo or Cuba or Djibouti or "Dominican Republic" or Ecuador or Egypt or "El Salvador" or Fiji or Gaza or Georgia or Guam or Guatemala or Guyana or Honduras or "Indian Ocean Islands" or Indonesia or Iran or Iraq or Jamaica or Jordan or Kiribati or Lesotho or Macedonia or Maldives or "Marshall Islands" or Micronesia or "Middle East" or Moldova or Morocco or Namibia or Nicaragua or Palestin* or Paraguay or Peru or Philippines or Samoa or "Sri Lanka" or Suriname or Swaziland or Syria or "Syrian Arab Republic" or Thailand or Tonga or Tunisia or Turkmenistan or Ukraine or Vanuatu or "West Bank")

AB (Albania or Algeria or Angola or Armenia or Azerbaijan or Belarus or Bhutan or Bolivia or Bosnia or Herzegovina or "Cape Verde" or Cameroon or China or Colombia or Congo or Cuba or Djibouti or "Dominican Republic" or Ecuador or Egypt or "El Salvador" or Fiji or Gaza or Georgia or Guam or Guatemala or Guyana or Honduras or "Indian Ocean Islands" or Indonesia or Iran or Iraq or Jamaica or Jordan or Kiribati or Lesotho or Macedonia or Maldives or "Marshall Islands" or Micronesia or "Middle East" or Moldova or Morocco or Namibia or Nicaragua or Palestin* or Paraguay or Peru or Philippines or Samoa or "Sri Lanka" or Suriname or Swaziland or Syria or "Syrian Arab Republic" or Thailand or Tonga or Tunisia or Turkmenistan or Ukraine or Vanuatu or "West Bank")

MW ("American Samoa" or Argentina or Belize or Botswana or Brazil or Bulgaria or Chile or Comoros or "Costa Rica" or Croatia or Dominica or Guinea or Gabon or Grenada or Grenadines or Hungary or Kazakhstan or Latvia or Lebanon or Libia or libyan or Libya or Lithuania or Malaysia or Mauritius or Mayotte or Mexico or Micronesia or Montenegro or Nevis or "Northern Mariana Islands" or Oman or Palau or Panama or Poland or Romania or Russia or "Russian Federation" or Samoa or "Saint Lucia" or "St Lucia" or "Saint Kitts" or "St Kitts" or "Saint Vincent" or "St Vincent" or Serbia or Seychelles or Slovakia or "Slovak Republic" or "South Africa" or Turkey or Uruguay or Venezuela or Yugoslavia)

TI ("American Samoa" or Argentina or Belize or Botswana or Brazil or Bulgaria or Chile or Comoros or "Costa Rica" or Croatia or Dominica or Guinea or Gabon or Grenada or Grenadines or Hungary or Kazakhstan or Latvia or Lebanon or Libia or libyan or Libya or Lithuania or Malaysia or Mauritius or Mayotte or Mexico or Micronesia or Montenegro or Nevis or "Northern Mariana Islands" or Oman or Palau or Panama or Poland or Romania or Russia or "Russian Federation" or Samoa or "Saint Lucia" or "St Lucia" or "Saint Kitts" or "St Kitts" or "Saint Vincent" or "St Vincent" or Serbia or Seychelles or Slovakia or "Slovak Republic" or "South Africa" or Turkey or Uruguay or Venezuela or Yugoslavia)

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TI (Africa or Asia or "South America" or "Latin America" or "Central America")

AB (Africa or Asia or "South America" or "Latin America" or "Central America")

(MH "Asia+")

(MH "West Indies+")

(MH "South America+")

(MH "Latin America")

(MH "Central America+")

(MH "Africa+")

(MH "Developing Countries")

or/

(MH "Juvenile Delinquency")
AB (juvenile N1 delinquen*)
AB (school N1 violence)
(MH "Juvenile Offenders+")
(MH "[Child Behavior Disorders](#)")

or/

(MH "Aggression")
(MH "Social Behavior Disorders")
(MH "Crime")
(MH "Violence")
(MH "Homicide")
(MH "Assault and Battery")
(MH "Aggression+")
AB (conduct N1 problem*)
AB (behavio#r N1 problem*)
AB (disruptive N1 behavio#r)
AB (conduct N1 disorder*)
AB (behavio#r N1 disorder*)
AB (aggressive N1 behavio#r)
AB (aggression)
AB (aggressive)
AB (antisocial N1 behavio#r)
AB (anti-social N1 behavio#r)
AB (gang)
AB (gangs)
AB (criminal N1 behavio#r)
AB (violent N1 crime)
AB (homicid*)
AB (violence)
AB (violent)
AB (crime)
AB (crimes)
AB (criminal*)
AB (bully)
AB (bullying)
AB (delinquent*)
AB (delinquenc*)
TX (oppositional N1 defiant N1 disorder*)
TX (disruptive N1 behavio#r N1 disorder*)
AB (externalizing N1 behavio#r N1 problem*)
AB (externalizing)
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AB (externalized)
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AB (externalis*)
AB (externalizing N1 behavio#r)
AB (externalising N1 behavio#r)
or /...

S21 AND S68

(MH " Child+")
(MH "Adolescence")
AB (Adolescen*)
AB (Adolescence)
AB (Adolescent)
AB (adolescents)
AB (Child*)
AB (child)
AB (children)
AB (childhood)
AB (youth*)
AB (youth)
AB (youths)
AB (student*)
AB (Students)
AB (Student)
AB (teen*)
AB (teenager)
AB (teenagers)
AB (boy*)
AB (boy)
AB (boys)
AB (girl*)
AB (girl)
AB (girls)
AB (pupil)
AB (pupils)
AB (pupil*)
AB (youngster*)
AB (youngster)
AB (youngsters)
AB (juvenile*)
AB (juvenile)
AB (juveniles)
AB (young N1 adult*)
AB (infant*)
AB (infants)
AB (infant)
AB (baby*)
AB (baby)
AB (babies)
AB (toddler)
AB (toddler*)
AB (toddlers)

or/

22 and 38

[Russian Academy of Sciences Bibliographies](#)
(EBSCOHost)

Same as EconLit

EconLit
(EBSCOHost)

T1 ("developing country" or "developing countries" or "developing nation" or "developing nations" or less* W1 "developed country" or less* W1 "developed countries" or less* W1 "developed nation" or less* W1 "developed nations" or "third world" or "under developed" or "middle income" or "low income" or "underserved country" or "underserved countries" or "underserved nation" or "underserved nations" or "under served country" or "under served countries" or "under served nation" or "under served nations" or "underserved population" or "underserved populations" or "under served population" or

"under served populations" or "deprived country" or "deprived countries" or "deprived nation" or "deprived nations" or poor* W1 country or poor* W1 countries or poor* W1 nation* or poor* W1 population* or Imic or Imics)

AB ("developing country" or "developing countries" or "developing nation" or "developing nations" or less* W1 "developed country" or less* W1 "developed countries" or less* W1 "developed nation" or less* W1 "developed nations" or "third world" or "under developed" or "middle income" or "low income" or "underserved country" or "underserved countries" or "underserved nation" or "underserved nations" or "under served country" or "under served countries" or "under served nation" or "under served nations" or "underserved population" or "underserved populations" or "under served population" or "under served populations" or "deprived country" or "deprived countries" or "deprived nation" or "deprived nations" or poor* W1 country or poor* W1 countries or poor* W1 nation* or poor* W1 population* or Imic or Imics)

MW (Afghanistan or Bangladesh or Benin or "Burkina Faso" or Burundi or Cambodia or "Central African Republic" or Chad or Comoros or Congo or "Cote d'Ivoire" or Eritrea or Ethiopia or Gambia or Ghana or Guinea or Haiti or India or Kenya or Korea or Kyrgyz or Kyrgyzstan or Lao or Laos or Liberia or Madagascar or Malawi or Mali or Mauritania or Melanesia or Mongolia or Mozambique or Burma or Myanmar or Nepal or Niger or Nigeria or Pakistan or Rwanda or "Salomon Islands" or "Sao Tome" or Senegal or "Sierra Leone" or Somalia or Sudan or Tajikistan or Tanzania or Timor or Togo or Uganda or Uzbekistan or Vietnam or "Viet Nam" or Yemen or Zambia or Zimbabwe)

TI (Afghanistan or Bangladesh or Benin or "Burkina Faso" or Burundi or Cambodia or "Central African Republic" or Chad or Comoros or Congo or "Cote d'Ivoire" or Eritrea or Ethiopia or Gambia or Ghana or Guinea or Haiti or India or Kenya or Korea or Kyrgyz or Kyrgyzstan or Lao or Laos or Liberia or Madagascar or Malawi or Mali or Mauritania or Melanesia or Mongolia or Mozambique or Burma or Myanmar or Nepal or Niger or Nigeria or Pakistan or Rwanda or "Salomon Islands" or "Sao Tome" or Senegal or "Sierra Leone" or Somalia or Sudan or Tajikistan or Tanzania or Timor or Togo or Uganda or Uzbekistan or Vietnam or "Viet Nam" or Yemen or Zambia or Zimbabwe)

AB (Afghanistan or Bangladesh or Benin or "Burkina Faso" or Burundi or Cambodia or "Central African Republic" or Chad or Comoros or Congo or "Cote d'Ivoire" or Eritrea or Ethiopia or Gambia or Ghana or Guinea or Haiti or India or Kenya or Korea or Kyrgyz or Kyrgyzstan or Lao or Laos or Liberia or Madagascar or Malawi or Mali or Mauritania or Melanesia or Mongolia or Mozambique or Burma or Myanmar or Nepal or Niger or Nigeria or Pakistan or Rwanda or "Salomon Islands" or "Sao Tome" or Senegal or "Sierra Leone" or Somalia or Sudan or Tajikistan or Tanzania or Timor or Togo or Uganda or Uzbekistan or Vietnam or "Viet Nam" or Yemen or Zambia or Zimbabwe)

MW (Albania or Algeria or Angola or Armenia or Azerbaijan or Belarus or Bhutan or Bolivia or Bosnia or Herzegovina or "Cape Verde" or Cameroon or China or Colombia or Congo or Cuba or Djibouti or "Dominican Republic" or Ecuador or Egypt or "El Salvador" or Fiji or Gaza or Georgia or Guam or Guatemala or Guyana or Honduras or "Indian Ocean Islands" or Indonesia or Iran or Iraq or Jamaica or Jordan or Kiribati or Lesotho or Macedonia or Maldives or "Marshall Islands" or Micronesia or "Middle East" or Moldova or Morocco or Namibia or Nicaragua or Palestin* or Paraguay or Peru or Philippines or Samoa or "Sri Lanka" or Suriname or Swaziland or Syria or "Syrian Arab Republic" or Thailand or Tonga or Tunisia or Turkmenistan or Ukraine or Vanuatu or "West Bank") or TI (Albania or Algeria or Angola or Armenia or Azerbaijan or Belarus or Bhutan or Bolivia or Bosnia or Herzegovina or "Cape Verde" or Cameroon or China or Colombia or Congo or Cuba or Djibouti or "Dominican Republic" or Ecuador or Egypt or "El Salvador" or Fiji or Gaza or Georgia or Guam or Guatemala or Guyana or Honduras or "Indian Ocean Islands" or Indonesia or Iran or Iraq or Jamaica or Jordan or Kiribati or Lesotho or Macedonia or Maldives or "Marshall Islands" or Micronesia or "Middle East" or Moldova or Morocco or Namibia or Nicaragua or Palestin* or Paraguay or Peru or Philippines or Samoa or "Sri Lanka" or Suriname or Swaziland or Syria or "Syrian Arab Republic" or Thailand or

Tonga or Tunisia or Turkmenistan or Ukraine or Vanuatu or "West Bank")

AB (Albania or Algeria or Angola or Armenia or Azerbaijan or Belarus or Bhutan or Bolivia or Bosnia or Herzegovina or "Cape Verde" or Cameroon or China or Colombia or Congo or Cuba or Djibouti or "Dominican Republic" or Ecuador or Egypt or "El Salvador" or Fiji or Gaza or Georgia or Guam or Guatemala or Guyana or Honduras or "Indian Ocean Islands" or Indonesia or Iran or Iraq or Jamaica or Jordan or Kiribati or Lesotho or Macedonia or Maldives or "Marshall Islands" or Micronesia or "Middle East" or Moldova or Morocco or Namibia or Nicaragua or Palestin* or Paraguay or Peru or Philippines or Samoa or "Sri Lanka" or Suriname or Swaziland or Syria or "Syrian Arab Republic" or Thailand or Tonga or Tunisia or Turkmenistan or Ukraine or Vanuatu or "West Bank")

MW ("American Samoa" or Argentina or Belize or Botswana or Brazil or Bulgaria or Chile or Comoros or "Costa Rica" or Croatia or Dominica or Guinea or Gabon or Grenada or Grenadines or Hungary or Kazakhstan or Latvia or Lebanon or Libia or libyan or Libya or Lithuania or Malaysia or Mauritius or Mayotte or Mexico or Micronesia or Montenegro or Nevis or "Northern Mariana Islands" or Oman or Palau or Panama or Poland or Romania or Russia or "Russian Federation" or Samoa or "Saint Lucia" or "St Lucia" or "Saint Kitts" or "St Kitts" or "Saint Vincent" or "St Vincent" or Serbia or Seychelles or Slovakia or "Slovak Republic" or "South Africa" or Turkey or Uruguay or Venezuela or Yugoslavia)

TI ("American Samoa" or Argentina or Belize or Botswana or Brazil or Bulgaria or Chile or Comoros or "Costa Rica" or Croatia or Dominica or Guinea or Gabon or Grenada or Grenadines or Hungary or Kazakhstan or Latvia or Lebanon or Libia or libyan or Libya or Lithuania or Malaysia or Mauritius or Mayotte or Mexico or Micronesia or Montenegro or Nevis or "Northern Mariana Islands" or Oman or Palau or Panama or Poland or Romania or Russia or "Russian Federation" or Samoa or "Saint Lucia" or "St Lucia" or "Saint Kitts" or "St Kitts" or "Saint Vincent" or "St Vincent" or Serbia or Seychelles or Slovakia or "Slovak Republic" or "South Africa" or Turkey or Uruguay or Venezuela or Yugoslavia)

AB ("American Samoa" or Argentina or Belize or Botswana or Brazil or Bulgaria or Chile or Comoros or "Costa Rica" or Croatia or Dominica or Guinea or Gabon or Grenada or Grenadines or Hungary or Kazakhstan or Latvia or Lebanon or Libia or libyan or Libya or Lithuania or Malaysia or Mauritius or Mayotte or Mexico or Micronesia or Montenegro or Nevis or "Northern Mariana Islands" or Oman or Palau or Panama or Poland or Romania or Russia or "Russian Federation" or Samoa or "Saint Lucia" or "St Lucia" or "Saint Kitts" or "St Kitts" or "Saint Vincent" or "St Vincent" or Serbia or Seychelles or Slovakia or "Slovak Republic" or "South Africa" or Turkey or Uruguay or Venezuela or Yugoslavia)

TI (Africa or Asia or "South America" or "Latin America" or "Central America")

AB (Africa or Asia or "South America" or "Latin America" or "Central America")

(SU "Asia+")

(SU "West Indies+")

(SU "South America+")

(SU "Latin America")

(SU "Central America+")

(SU "Africa+")

(SU "Developing Countries")

or/

(SU "Juvenile Delinquency")

AB (juvenile N1 delinquen*)

AB (school N1 violence)

(SU "Juvenile Offenders+")

(SU "[Child Behavior Disorders](#)")

or/

SU ("Crime")
SU ("Aggression")
SU ("Bullying")
SU ("Violence")
(SU "Violence")
(SU "Homicide")
AB (conduct N1 problem*)
AB (behavio#r N1 problem*)
AB (disruptive N1 behavio#r)
AB (conduct N1 disorder*)
AB (behavio#r N1 disorder*)
AB (aggressive N1 behavio#r)
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AB (antisocial N1 behavio#r)
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AB (criminal N1 behavio#r)
AB (violent N1 crime)
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TX (oppositional N1 defiant N1 disorder*)
TX (disruptive N1 behavio#r N1 disorder*)
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Ruanda or Saint Kitts or St Kitts or Nevis or Saint Lucia or St Lucia or Saint Vincent or St Vincent or Grenadines or Samoa or Samoan Islands or Navigator Island or Navigator Islands or Sao Tome or Saudi Arabia or Senegal or Serbia or Montenegro or Seychelles or Sierra Leone or Slovenia or Sri Lanka or Ceylon or Solomon Islands or Somalia or South Africa or Sudan or Suriname or Surinam or Swaziland or Syria or Tajikistan or Tadjikistan or Tadjikistan or Tadjik or Tanzania or Thailand or Togo or Togolese Republic or Tonga or Trinidad or Tobago or Tunisia or Turkey or Turkmenistan or Turkmen or Uganda or Ukraine or Uruguay or USSR or Soviet Union or Union of Soviet Socialist Republics or Uzbekistan or Uzbek or Vanuatu or New Hebrides or Venezuela or Vietnam or Viet Nam or West Bank or Yemen or Yugoslavia or Zambia or Zimbabwe or Rhodesia)) OR (AB "Developing Countries") OR (ab(developing NEAR/1 world)) OR (ab(poor* NEAR/1 nation*)) OR (ab(developing NEAR/1 countr*)) OR (ab(developing NEAR/1 region*)) OR (ab(third NEAR/1 world)) OR SU.EXACT.EXPLODE("Developing Countries")

(SU.EXACT.EXPLODE("Crime")) OR (SU.EXACT.EXPLODE("Aggression")) OR (SU.EXACT.EXPLODE("Behavior Problems")) OR (SU.EXACT.EXPLODE("Violence")) OR (SU.EXACT.EXPLODE("Gangs")) OR (ab(gang*)) OR (ab(conduct NEAR/1 problem*)) OR (ab(behavio*r NEAR/1 problem*)) OR (ab(conduct NEAR/1 disorder*)) OR (ab(antisocial NEAR/1 behavio*r*)) OR (ab(oppositional NEAR/1 defiant NEAR/1 disorder*)) OR (AB "Aggression") OR (AB "Social Behavior Disorders") OR (AB "Crime") OR (AB "Violence") OR (AB "Homicide") OR (AB "Assault and Battery") OR (AB "Aggression") OR (AB(conduct NEAR/1 problem*)) OR (AB(behavio#r NEAR/1 problem*)) OR (AB(disruptive NEAR/1 behavio#r)) OR (AB(conduct NEAR/1 disorder*)) OR (AB(behavio#r NEAR/1 disorder*)) OR (AB(aggressive NEAR/1 behavio#r)) OR (AB(aggression) OR AB(aggressive)) OR (AB(antisocial NEAR/1 behavio#r)) OR (AB(anti-social NEAR/1 behavio#r)) OR (AB(gang)) OR (AB(gangs)) OR (AB(criminal N1 behavio#r)) OR (AB(violent NEAR/1 crime)) OR (AB(homicid*)) OR (AB(violence)) OR (AB(violent)) OR (AB(crime)) OR (AB(crimes)) OR (AB(criminal*)) OR (AB(bully)) OR (AB(bullying)) OR TX (oppositional N1 defiant N1 disorder*) OR TX (disruptive N1 behavio#r N1 disorder*)

AB(delinquent*) OR AB(delinquenc*) OR AB(school NEAR/1 violence) OR AB(juvenile NEAR/1 delinquency) OR AB(juvenile NEAR/1 delinquent) OR AB(juvenile NEAR/1 delinquents) OR SU.exact("JUVENILE DELINQUENCY") OR SU.exact("DELINQUENCY") OR SU.exact("JUVENILE OFFENDERS")

(SU.EXACT.EXPLODE("Adolescents")) OR (SU.EXACT.EXPLODE("Infants")) OR (SU.EXACT.EXPLODE("Children")) OR (AB "Adolescence") OR AB(Adolescen*) OR AB(Adolescence) OR AB(Adolescent) OR AB(adolescents) OR AB(Child*) OR AB(child) OR AB(children) OR AB(childhood) OR AB(youth*) OR AB(youth) OR AB(youths) OR AB(student*) OR AB(Students) OR AB(Student) OR AB(teen*) OR AB(teenager) OR AB(teenagers) OR AB(boy*) OR AB(boy) OR AB(boys) OR AB(girl*) OR AB(girl) OR AB(girls) OR AB(pupil) OR AB(pupils) OR AB(pupil*) OR AB(youngster*) OR AB(youngster) OR AB(youngsters) OR AB(juvenile*) OR AB(juvenile) OR AB(juveniles) OR AB(young NEAR/1 adult*) OR AB(infant*) OR AB(infants) OR AB(infant) OR AB(baby*) OR AB(baby) OR AB(babies) OR AB(toddler) OR AB(toddler*) OR AB(toddlers)

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Libya or Lithuania or Macedonia or Madagascar or Malagasy Republic or Malaysia or Malaya or Malay or Sabah or Sarawak or Malawi or Nyasaland or Mali or Malta or Marshall Islands or Mauritania or Mauritius or Agalega Islands or Mexico or Micronesia or Middle East or Moldova or Moldavia or Moldovan or Mongolia or Montenegro or Morocco or Ifni or Mozambique or Myanmar or Myanma or Burma or Namibia or Nepal or Netherlands Antilles or New Caledonia or Nicaragua or Niger or Nigeria or Northern Mariana Islands or Oman or Muscat or Pakistan or Palau or Palestine or Panama or Paraguay or Peru or Philippines or Philipines or Phillipines or Phillippines or Poland or Portugal or Puerto Rico or Romania or Rumania or Roumania or Russia or Russian or Rwanda or Ruanda or Saint Kitts or St Kitts or Nevis or Saint Lucia or St Lucia or Saint Vincent or St Vincent or Grenadines or Samoa or Samoan Islands or Navigator Island or Navigator Islands or Sao Tome or Saudi Arabia or Senegal or Serbia or Montenegro or Seychelles or Sierra Leone or Slovenia or Sri Lanka or Ceylon or Solomon Islands or Somalia or South Africa or Sudan or Suriname or Surinam or Swaziland or Syria or Tajikistan or Tadhikistan or Tadjikistan or Tadhik or Tanzania or Thailand or Togo or Togolese Republic or Tonga or Trinidad or Tobago or Tunisia or Turkey or Turkmenistan or Turkmen or Uganda or Ukraine or Uruguay or USSR or Soviet Union or Union of Soviet Socialist Republics or Uzbekistan or Uzbek or Vanuatu or New Hebrides or Venezuela or Vietnam or Viet Nam or West Bank or Yemen or Yugoslavia or Zambia or Zimbabwe or Rhodesia)) OR (AB "Developing Countries") OR (ab(developing NEAR/1 world)) OR (ab(poor* NEAR/1 nation*)) OR (ab(developing NEAR/1 countr*)) OR (ab(developing NEAR/1 region*)) OR (ab(third NEAR/1 world)) OR (SU.EXACT.EXPLODE"[Developing Countries](#)")

(SU.EXACT.EXPLODE("Crime")) OR (SU.EXACT.EXPLODE("Aggression")) OR (SU.EXACT("Bullying")) OR (SU.EXACT.EXPLODE("Violence")) OR (SU.EXACT ("Criminal behaviour")) OR (SU.EXACT ("Oppositional defiant disorder")) OR SU.exact("CONDUCT DISORDERS") OR (ab(gang*)) OR (ab(conduct NEAR/1 problem*)) OR (ab(behavio*r NEAR/1 problem*)) OR (ab(conduct NEAR/1 disorder*)) OR (ab(antisocial NEAR/1 behavio*r*)) OR (ab(oppositional NEAR/1 defiant NEAR/1 disorder*)) OR (AB "Aggression") OR (AB "Social Behavior Disorders") OR (AB "Crime") OR (AB "Violence") OR (AB "Homicide") OR (AB "Assault and Battery") OR (AB "Aggression") OR (AB(conduct NEAR/1 problem*)) OR (AB(behavio#r NEAR/1 problem*)) OR (AB(disruptive NEAR/1 behavio#r)) OR (AB(conduct NEAR/1 disorder*)) OR (AB(behavio#r NEAR/1 disorder*)) OR (AB(aggressive NEAR/1 behavio#r)) OR (AB(aggression) OR AB(aggressive)) OR (AB(antisocial NEAR/1 behavio#r)) OR (AB(anti-social NEAR/1 behavio#r)) OR (AB(gang)) OR (AB(gangs)) OR (AB(criminal N1 behavio#r)) OR (AB(violent NEAR/1 crime)) OR (AB(homicid*)) OR (AB(violence)) OR (AB(violent)) OR (AB(crime)) OR (AB(crimes)) OR (AB(criminal*)) OR (AB(bully)) OR (AB(bullying)) OR TX (oppositional N1 defiant N1 disorder*) OR TX (disruptive N1 behavio#r N1 disorder*)

AB(delinquent*) OR AB(delinquenc*) OR AB(school NEAR/1 violence) OR AB(juvenile NEAR/1 delinquency) OR AB(juvenile NEAR/1 delinquent) OR AB(juvenile NEAR/1 delinquents) OR SU.exact("JUVENILE DELINQUENCY") OR SU.exact("DELINQUENCY") OR SU.exact("JUVENILE OFFENDERS")

(SU.EXACT.EXPLODE"Children") OR (SU.EXACT.EXPLODE("Adolescence")) OR (SU.EXACT.EXPLODE("Youth")) OR (AB "Adolescence") OR AB(Adolescen*) OR AB(Adolescence) OR AB(Adolescent) OR AB(adolescents) OR AB(Child*) OR AB(child) OR AB(children) OR AB(childhood) OR AB(youth*) OR AB(youth) OR AB(youths) OR AB(student*) OR AB(Students) OR AB(Student) OR AB(teen*) OR AB(teenager) OR AB(teenagers) OR AB(boy*) OR AB(boy) OR AB(boys) OR AB(girl*) OR AB(girl) OR AB(girls) OR AB(pupil) OR AB(pupils) OR AB(pupil*) OR AB(youngster*) OR AB(youngster) OR AB(youngsters) OR AB(juvenile*) OR AB(juvenile) OR AB(juveniles) OR AB(young NEAR/1 adult*) OR AB(infant*) OR AB(infants) OR AB(infant) OR AB(baby*) OR AB(baby) OR AB(babies) OR AB(toddler) OR AB(toddler*) OR AB(toddlers)

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Czechoslovakia or Czech Republic or Slovakia or Slovak Republic or Djibouti or French Somaliland or Dominica or Dominican Republic or East Timor or East Timor or Timor Leste or Ecuador or Egypt or United Arab Republic or El Salvador or Eritrea or Estonia or Ethiopia or Fiji or Gabon or Gabonese Republic or Gambia or Gaza or Georgia Republic or Georgian Republic or Ghana or Gold Coast or Greece or Grenada or Guatemala or Guinea or Guam or Guiana or Guyana or Haiti or Honduras or Hungary or India or Maldives or Indonesia or Iran or Iraq or Isle of Man or Jamaica or Jordan or Kazakhstan or Kazakh or Kenya or Kiribati or Korea or Kosovo or Kyrgyzstan or Kirghizia or Kyrgyz Republic or Kirghiz or Kirgizstan or Lao PDR or Laos or Latvia or Lebanon or Lesotho or Basutoland or Liberia or Libya or Lithuania or Macedonia or Madagascar or Malagasy Republic or Malaysia or Malaya or Malay or Sabah or Sarawak or Malawi or Nyasaland or Mali or Malta or Marshall Islands or Mauritania or Mauritius or Agalega Islands or Mexico or Micronesia or Middle East or Moldova or Moldavia or Moldovan or Mongolia or Montenegro or Morocco or Ifni or Mozambique or Myanmar or Myanma or Burma or Namibia or Nepal or Netherlands Antilles or New Caledonia or Nicaragua or Niger or Nigeria or Northern Mariana Islands or Oman or Muscat or Pakistan or Palau or Palestine or Panama or Paraguay or Peru or Philippines or Philipines or Phillipines or Phillippines or Poland or Portugal or Puerto Rico or Romania or Rumania or Roumania or Russia or Russian or Rwanda or Ruanda or Saint Kitts or St Kitts or Nevis or Saint Lucia or St Lucia or Saint Vincent or St Vincent or Grenadines or Samoa or Samoan Islands or Navigator Island or Navigator Islands or Sao Tome or Saudi Arabia or Senegal or Serbia or Montenegro or Seychelles or Sierra Leone or Slovenia or Sri Lanka or Ceylon or Solomon Islands or Somalia or South Africa or Sudan or Suriname or Surinam or Swaziland or Syria or Tajikistan or Tadjikistan or Tadjikistan or Tadjhik or Tanzania or Thailand or Togo or Togolese Republic or Tonga or Trinidad or Tobago or Tunisia or Turkey or Turkmenistan or Turkmen or Uganda or Ukraine or Uruguay or USSR or Soviet Union or Union of Soviet Socialist Republics or Uzbekistan or Uzbek or Vanuatu or New Hebrides or Venezuela or Vietnam or Viet Nam or West Bank or Yemen or Yugoslavia or Zambia or Zimbabwe or Rhodesia)) OR (AB "Developing Countries") OR (ab(developing NEAR/1 world)) OR (ab(poor* NEAR/1 nation*)) OR (ab(developing NEAR/1 countr*)) OR (ab(developing NEAR/1 region*)) OR (ab(third NEAR/1 world)) OR (SU.EXACT.EXPLODE("Developing Countries"))

(SU.EXACT.EXPLODE("Crime")) OR (SU.EXACT.EXPLODE("Aggression")) OR (SU.EXACT.EXPLODE("Bullying")) OR (SU.EXACT ("Violence")) OR (SU.EXACT.EXPLODE("Gang")) OR (SU.EXACT.EXPLODE("Crime")) OR (SU.EXACT.EXPLODE("Aggression")) OR (SU.EXACT.EXPLODE("Bullying")) OR (SU.EXACT.EXPLODE("Violence")) OR (ab(gang*)) OR (ab(conduct NEAR/1 problem*)) OR (ab(behavio*r NEAR/1 problem*)) OR (ab(conduct NEAR/1 disorder*)) OR (ab(antisocial NEAR/1 behavio*r*)) OR (ab(oppositional NEAR/1 defiant NEAR/1 disorder*)) OR (AB "Aggression") OR (AB "Social Behavior Disorders") OR (AB "Crime") OR (AB "Violence") OR (AB "Homicide") OR (AB "Assault and Battery") OR (AB "Aggression") OR (AB(conduct NEAR/1 problem*)) OR (AB(behavio#r NEAR/1 problem*)) OR (AB(disruptive NEAR/1 behavio#r)) OR (AB(conduct NEAR/1 disorder*)) OR (AB(behavio#r NEAR/1 disorder*)) OR (AB(aggressive NEAR/1 behavio#r)) OR (AB(aggression) OR AB(aggressive)) OR (AB(antisocial NEAR/1 behavio#r)) OR (AB(anti-social NEAR/1 behavio#r)) OR (AB(gang)) OR (AB(gangs)) OR (AB(criminal N1 behavio#r)) OR (AB(violent NEAR/1 crime)) OR (AB(homicid*)) OR (AB(violence)) OR (AB(violent)) OR (AB(crime)) OR (AB(crimes)) OR (AB(criminal*)) OR (AB(bully)) OR (AB(bullying))

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(SU.EXACT.EXPLODE("Children")) OR (SU.EXACT.EXPLODE("Adolescence")) OR (SU.EXACT.EXPLODE("Youth")) OR (AB "Adolescence") OR AB(Adolescen*) OR AB(Adolescence) OR AB(Adolescent) OR AB(adolescents) OR AB(Child*) OR AB(child) OR AB(children) OR AB(childhood) OR AB(youth*) OR AB(youth) OR AB(youths) OR AB(student*) OR AB(Students) OR AB(Student) OR AB(teen*) OR AB(teenager) OR AB(teenagers) OR AB(boy*) OR AB(boy) OR AB(boys) OR AB(girl*) OR AB(girl) OR AB(girls) OR AB(pupil) OR AB(pupils) OR AB(pupil*) OR AB(youngster*) OR AB(youngster) OR AB(youngsters) OR AB(juvenile*) OR AB(juvenile) OR AB(juveniles) OR AB(young NEAR/1 adult*) OR AB(infant*) OR AB(infants) OR AB(infant) OR AB(baby*) OR AB(baby) OR AB(babies) OR AB(toddler) OR AB(toddler*) OR AB(toddlers)

ERIC (ProQuest) (ab(Africa or Asia or "Latin America" or "South America" or Caribbean or "West Indies" or "Eastern Europe" or Soviet or Arab or "Middle East" or "Latin America" or "Central America")) OR (ab(Afghanistan or Albania or Algeria or Angola or Antigua or Barbuda or Argentina or Armenia or

Armenian or Aruba or Azerbaijan or Bahrain or Bangladesh or Barbados or Benin or Byelarus or Byelorussian or Belarus or Belorussian or Belorussia or Belize or Bhutan or Bolivia or Bosnia or Herzegovina or Hercegovina or Botswana or Brasil or Brazil or Bulgaria or Burkina Faso or Burkina Fasso or Upper Volta or Burundi or Urundi or Cambodia or Khmer Republic or Kampuchea or Cameroon or Cameroons or Cameron or Camerons or Cape Verde or Central African Republic or Chad or Chile or China or Colombia or Comoros or Comoro Islands or Comores or Mayotte or Congo or Zaire or Costa Rica or Cote d'Ivoire or Ivory Coast or Croatia or Cuba or Cyprus or Czechoslovakia or Czech Republic or Slovakia or Slovak Republic or Djibouti or French Somaliland or Dominica or Dominican Republic or East Timor or East Timur or Timor Leste or Ecuador or Egypt or United Arab Republic or El Salvador or Eritrea or Estonia or Ethiopia or Fiji or Gabon or Gabonese Republic or Gambia or Gaza or Georgia Republic or Georgian Republic or Ghana or Gold Coast or Greece or Grenada or Guatemala or Guinea or Guam or Guiana or Guyana or Haiti or Honduras or Hungary or India or Maldives or Indonesia or Iran or Iraq or Isle of Man or Jamaica or Jordan or Kazakhstan or Kazakh or Kenya or Kiribati or Korea or Kosovo or Kyrgyzstan or Kirghizia or Kyrgyz Republic or Kirghiz or Kirgizstan or Lao PDR or Laos or Latvia or Lebanon or Lesotho or Basutoland or Liberia or Libya or Lithuania or Macedonia or Madagascar or Malagasy Republic or Malaysia or Malaya or Malay or Sabah or Sarawak or Malawi or Nyasaland or Mali or Malta or Marshall Islands or Mauritania or Mauritius or Agalega Islands or Mexico or Micronesia or Middle East or Moldova or Moldavia or Moldovan or Mongolia or Montenegro or Morocco or Ifni or Mozambique or Myanmar or Myanma or Burma or Namibia or Nepal or Netherlands Antilles or New Caledonia or Nicaragua or Niger or Nigeria or Northern Mariana Islands or Oman or Muscat or Pakistan or Palau or Palestine or Panama or Paraguay or Peru or Philippines or Philipines or Phillipines or Phillipines or Poland or Portugal or Puerto Rico or Romania or Rumania or Roumania or Russia or Russian or Rwanda or Ruanda or Saint Kitts or St Kitts or Nevis or Saint Lucia or St Lucia or Saint Vincent or St Vincent or Grenadines or Samoa or Samoan Islands or Navigator Island or Navigator Islands or Sao Tome or Saudi Arabia or Senegal or Serbia or Montenegro or Seychelles or Sierra Leone or Slovenia or Sri Lanka or Ceylon or Solomon Islands or Somalia or South Africa or Sudan or Suriname or Surinam or Swaziland or Syria or Tajikistan or Tadjhikistan or Tadjikistan or Tadjhik or Tanzania or Thailand or Togo or Togolese Republic or Tonga or Trinidad or Tobago or Tunisia or Turkey or Turkmenistan or Turkmen or Uganda or Ukraine or Uruguay or USSR or Soviet Union or Union of Soviet Socialist Republics or Uzbekistan or Uzbek or Vanuatu or New Hebrides or Venezuela or Vietnam or Viet Nam or West Bank or Yemen or Yugoslavia or Zambia or Zimbabwe or Rhodesia)) OR (AB "Developing Countries") OR (SU.EXACT.EXPLODE("Developing Countries")) OR (ab(developing NEAR/1 world)) OR (ab(poor* NEAR/1 nation*)) OR (ab(developing NEAR/1 countr*)) OR (ab(developing NEAR/1 region*)) OR (ab(third NEAR/1 world)) OR (SU.EXACT.EXPLODE("Foreign Countries")) OR (SU.EXACT.EXPLODE("Developing Nations"))

(SU.EXACT.EXPLODE("Crime")) OR (SU.EXACT.EXPLODE("Aggression")) OR (SU.EXACT.EXPLODE("Bullying")) OR (SU.EXACT.EXPLODE("Violence")) OR (ab(gang*)) OR (ab(conduct NEAR/1 problem*)) OR (ab(behavio*r NEAR/1 problem*)) OR (ab(conduct NEAR/1 disorder*)) OR (ab(antisocial NEAR/1 behavio*r*)) OR (ab(oppositional NEAR/1 defiant NEAR/1 disorder*)) OR (AB "Aggression") OR (AB "Social Behavior Disorders") OR (AB "Crime") OR (AB "Violence") OR (AB "Homicide") OR (AB "Assault and Battery") OR (AB "Aggression") OR (AB(conduct NEAR/1 problem*)) OR (AB(behavio#r NEAR/1 problem*)) OR (AB(disruptive NEAR/1 behavio#r)) OR (AB(conduct NEAR/1 disorder*)) OR (AB(behavio#r NEAR/1 disorder*)) OR (AB(antisocial NEAR/1 behavio#r)) OR (AB(anti-social NEAR/1 behavio#r)) OR (AB(gang)) OR (AB(gangs)) OR (AB(criminal N1 behavio#r)) OR (AB(violent NEAR/1 crime)) OR (AB(homicid*)) OR (AB(violence)) OR (AB(violent)) OR (AB(crime)) OR (AB(crimes)) OR (AB(criminal*)) OR (AB(bully)) OR (AB(bullying))

AB(delinquent*) OR AB(delinquenc*) OR TX (oppositional N1 defiant N1 disorder*) OR TX (disruptive N1 behavio#r N1 disorder*) OR AB(school NEAR/1 violence) OR AB(juvenile NEAR/1 delinquency) OR AB(juvenile NEAR/1 delinquent) OR AB(juvenile NEAR/1 delinquents)

(SU.EXACT.EXPLODE("Adolescents")) OR (SU.EXACT.EXPLODE("Early Adolescents")) OR (SU.EXACT.EXPLODE("Children")) OR (SU.EXACT.EXPLODE("Youth")) OR (SU.EXACT.EXPLODE("Late Adolescents")) OR (AB "Adolescence") OR AB(Adolescen*) OR AB(Adolescence) OR AB(Adolescent) OR AB(adolescents) OR AB(Child*) OR AB(child) OR AB(children) OR AB(childhood) OR AB(youth*) OR AB(youth) OR AB(youths) OR AB(student*) OR AB(Students) OR AB(Student) OR AB(teen*) OR AB(teenager) OR AB(teenagers) OR AB(boy*) OR AB(boy) OR AB(boys) OR AB(girl*) OR AB(girl) OR AB(girls) OR AB(pupil) OR AB(pupils) OR

AB(pupil*) OR AB(youngster*) OR AB(youngster) OR AB(youngsters) OR AB(juvenile*) OR AB(juvenile) OR AB(juveniles) OR AB(young NEAR/1 adult*) OR AB(infant*) OR AB(infants) OR AB(infant) OR AB(baby*) OR AB(baby) OR AB(babies) OR AB(toddler) OR AB(toddler*) OR AB(toddlers)

[National Criminal Justice Reference Service Abstracts Database](#)

"Developing Countries"

Web of Science

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Topic=(violent)

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Topic=(("less developed") NEAR/1 (country* OR nation*))
Topic=(("under developed") NEAR/1 (country* OR nation*))
Topic=(("low income") NEAR/1 (economy or economies))
Topic=(("under developed") NEAR/1 (economy or economies))
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Topic=(("under developed") NEAR/1 (economy or economies))
Topic=(underdeveloped NEAR/1 (economy or economies))
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Topic=((developing NEAR/1 nation*))
Topic=((developing NEAR/1 region*))
Topic=((developing NEAR/1 country*))
Topic=((developing NEAR/1 world))
Topic=((developing) NEAR/1 (economy or economies))
Topic=(third NEAR/1 world)

Topic=(Afghanistan or Albania or Algeria or Angola or Antigua or Barbuda or Argentina or Armenia or Armenian or Aruba or Azerbaijan or Bahrain or Bangladesh or Barbados or Benin or Belarus or Byelorussian or Belarus or Belorussian or Belorussia or Belize or Bhutan or Bolivia or Bosnia or Herzegovina or Hercegovina or Botswana or Brasil or Brazil or Bulgaria or Burkina Faso or Burkina Fasso or Upper Volta or Burundi or Urundi or Cambodia or Khmer Republic or Kampuchea or Cameroon or Camerons or Cameron or Camerons or Cape Verde or Central African Republic or Chad or Chile or China or Colombia or Comoros or Comoro Islands or Comores or Mayotte or Congo or Zaire or Costa Rica or Cote d'Ivoire or Ivory Coast or Croatia or Cuba or Cyprus or Czechoslovakia or Czech Republic or Slovakia or Slovak Republic or Djibouti or French Somaliland or Dominica or Dominican Republic or East Timor or East Timur or Timor Leste or Ecuador or Egypt or United Arab Republic or El Salvador or Eritrea or Estonia or Ethiopia or Fiji or Gabon or Gabonese Republic or Gambia or Gaza or Georgia Republic or Georgian Republic or Ghana or Gold Coast or Greece or Grenada or Guatemala or Guinea or Guam or Guiana or Guyana or Haiti or Honduras or Hungary or India or Maldives or Indonesia or Iran or Iraq or Isle of Man or Jamaica or Jordan or Kazakhstan or Kazakh or Kenya or Kiribati or Korea or Kosovo or Kyrgyzstan or Kirghizia or Kyrgyz Republic or Kirghiz or Kirgizstan or Lao PDR or Laos or Latvia or Lebanon or Lesotho or Basutoland or Liberia or Libya or Lithuania or Macedonia or Madagascar or Malagasy Republic or Malaysia or Malaya or Malay

or Sabah or Sarawak or Malawi or Nyasaland or Mali or Malta or Marshall Islands or Mauritania or Mauritius or Agalega Islands or Mexico or Micronesia or Middle East or Moldova or Moldavia or Moldovan or Mongolia or Montenegro or Morocco or Ifni or Mozambique or Myanmar or Myanma or Burma or Namibia or Nepal or Netherlands Antilles or New Caledonia or Nicaragua or Niger or Nigeria or Northern Mariana Islands or Oman or Muscat or Pakistan or Palau or Palestine or Panama or Paraguay or Peru or Philippines or Philipines or Phillipines or Phillippines or Poland or Portugal or Puerto Rico or Romania or Rumania or Roumania or Russia or Russian or Rwanda or Ruanda or Saint Kitts or St Kitts or Nevis or Saint Lucia or St Lucia or Saint Vincent or St Vincent or Grenadines or Samoa or Samoan Islands or Navigator Island or Navigator Islands or Sao Tome or Saudi Arabia or Senegal or Serbia or Montenegro or Seychelles or Sierra Leone or Slovenia or Sri Lanka or Ceylon or Solomon Islands or Somalia or South Africa or Sudan or Suriname or Surinam or Swaziland or Syria or Tajikistan or Tadhikistan or Tadjikistan or Tadhik or Tanzania or Thailand or Togo or Togoese Republic or Tonga or Trinidad or Tobago or Tunisia or Turkey or Turkmenistan or Turkmen or Uganda or Ukraine or Uruguay or USSR or Soviet Union or Union of Soviet Socialist Republics or Uzbekistan or Uzbek or Vanuatu or New Hebrides or Venezuela or Vietnam or Viet Nam or West Bank or Yemen or Yugoslavia or Zambia or Zimbabwe or Rhodesia)
 Topic=(Africa or "Latin America" or "South America" or Caribbean or "West Indies" or "Eastern Europe" or Soviet or Arab or "Middle East" or "Latin America" or "Central America")

JOLIS (IMF, World Bank and International Finance Corporation)

<http://external.worldbankimflib.org/uhtbin/cgisirsi/?ps=Uvm3MkrFSe/JL/0/49>

(aggression OR violence OR homicide OR gang OR bully OR crime OR "juvenile delinquency" OR "conduct problem" OR "conduct disorder" OR "behavior problem" OR "behavior disorder")

AND

(adolescent OR child OR youth OR student OR teen OR boy OR girl OR pupil OR youngster OR juvenile OR infant)

World Bank

<https://openknowledge.worldbank.org/discover?scope=%2F&query=%28aggression+OR+violence+OR+homicide+OR+gang+OR+bully+OR+crime+OR+%E2%80%9Cjuvenile+delinquency%E2%80%9D+OR+%E2%80%9Cconduct+problem%E2%80%9D+OR+%E2%80%9Cconduct+disorder%E2%80%9D+OR+%E2%80%9Cbehavior+problem%E2%80%9D+OR+%E2%80%9Cbehavior+disorder%E2%80%9D%29+AND+%28adolescent+OR+child+OR+youth+OR+student+OR+teen+OR+boy+OR+girl+OR+pupil+OR+youngster+OR+juvenile+OR+infant%29&submit=Go>

(aggression OR violence OR homicide OR gang OR bully OR crime OR "juvenile delinquency" OR "conduct problem" OR "conduct disorder" OR "behavior problem" OR "behavior disorder") AND (adolescent OR child OR youth OR student OR teen OR boy OR girl OR pupil OR youngster OR juvenile OR infant)

LILACS

RUN 1

child OR niño OR criança OR infant OR lactante OR lactente OR Adolescent OR Adolescente OR "Child Psychiatry" OR "Psiquiatria Infantil" OR "Psiquiatria Infantil" OR "Child Behavior" OR "Conducta Infantil" OR "Comportamento Infantil" OR "Adolescent Behavior" OR "Conducta del Adolescente" OR "Comportamento do Adolescente" OR Adolescent Development" OR "Desarrollo del Adolescente" OR "Desenvolvimento do Adolescente" OR "Adolescent Behavior" OR "Conducta del Adolescente" OR "Comportamento do Adolescente"

[Subject descriptor]

AND

gang OR gangs OR pandilla OR quadrilha OR crimes OR criminal OR Crimen OR Crime OR (antisocial AND behavior\$) OR antisocial OR anti-social OR "antisocial behavior\$" OR "anti-social behavior" OR "comportamento anti-social" OR "conducta anti-social" OR violen\$ OR Violencia OR Violência OR violence OR violent OR violen\$ OR bully\$ OR "Acoso Escolar" OR Bullying OR aggress\$ OR aggression OR Agresión OR Agressão OR Homicidio OR Homicídio OR Acoso Escolar OR bullying OR domestic violence OR Violencia Doméstica OR Violência Doméstica OR conducta antisocial

[Words]

RUN 2

child OR children OR adolescent OR Adolescente OR child\$ OR adolescen\$ OR youth\$ OR student\$ OR teen\$ OR boy\$ OR girl\$ OR pupil\$ OR youngster\$ OR juvenile\$ OR infant\$ OR infan\$ OR baby OR babies OR preschool OR preschool\$ OR criança OR infant OR infants OR lactante OR lactente OR neonat\$ OR baby OR babies OR kid OR kids OR toddler\$ OR jóvenes OR niña OR niño OR criança OR newborn

[Words]

AND

"Domestic Violence" OR "Violencia Doméstica" OR "Violência Doméstica" OR "Social Behavior Disorders" OR "Trastorno de la Conducta Social" OR "Transtornos do Comportamento Social" OR aggression OR Agresión OR Agressão OR Homicide OR Homicidio OR Homicídio OR bully OR "Acoso Escolar" OR Bullying OR "oppositional defiant disorder" OR "trastorno desafiante por oposición" OR "transtorno desafiador de oposição" OR "conduct disorder" OR "Trastorno del Comportamiento" OR "Transtorno da Conduta" OR "transtorno desafiador-opositivo" OR "conducta antisocial" or "transtorno da conduta" OR "transtorno da personalidade anti-social" OR "Transtornos do

Comportamento"

[Subject descriptor]

RUN 3

child OR niño OR criança OR infant OR lactante OR lactente OR Adolescent OR Adolescente OR "Child Psychiatry" OR "Psiquiatria Infantil" OR "Psiquiatria Infantil" OR "Child Behavior" OR "Conducta Infantil" OR "Comportamento Infantil" OR "Adolescent Behavior" OR "Conducta del Adolescente" OR "Comportamento do Adolescente" OR Adolescent Development" OR "Desarrollo del Adolescente" OR "Desenvolvimento do Adolescente" OR "Adolescent Behavior" OR "Conducta del Adolescente" OR "Comportamento do Adolescente" OR "Adolescent Psychiatry" OR "Psiquiatria del Adolescente" OR "Psiquiatria do Adolescente"

[Subject descriptor]

AND

"Domestic Violence" OR "Violencia Doméstica" OR "Violência Doméstica" OR "Social Behavior Disorders" OR "Trastorno de la Conducta Social" OR "Transtornos do Comportamento Social" OR aggression OR Agresión OR Agressão OR Homicide OR Homicidio OR Homicídio OR bully OR "Acoso Escolar" OR Bullying OR "oppositional defiant disorder" OR "trastorno desafiante por oposición" OR "transtorno desafiador de oposição" OR "conduct disorder" OR "Trastorno del Comportamiento" OR "Transtorno da Conduta" OR "transtorno desafiador-opositivo" OR "conducta antisocial" or "transtorno da conduta" OR "transtorno da personalidade anti-social" OR "Transtornos do

Comportamento"

[Subject descriptor]

RUN 4

child OR children OR adolescent OR Adolescente OR child\$ OR adolescen\$ OR youth\$ OR student\$ OR teen\$ OR boy\$ OR girl\$ OR pupil\$ OR youngster\$ OR juvenile\$ OR infant\$ OR infan\$ OR baby OR babies OR preschool OR preschool\$ OR criança OR infant OR infants OR lactante OR lactente OR neonat\$ OR baby OR babies OR kid OR kids OR toddler\$ OR jóvenes OR niña OR niño OR criança OR newborn

[Words]

AND

gang OR gangs OR pandilla OR quadrilha OR crimes OR criminal OR Crimen OR Crime OR antisocial OR anti-social OR "antisocial behavior\$" OR "anti-social behavior" OR "comportamento anti-social" OR "conducta anti-social" OR "conducta antisocial" OR violen\$ OR Violencia OR Violência OR violence OR violent OR bully\$ OR "Acoso Escolar" OR Bullying OR aggress\$ OR aggression OR Agresión OR Agressão OR Homicidio OR Homicídio OR Acoso Escolar OR "domestic violence" OR "Violencia Doméstica" OR "Violência Doméstica"

[Words]

NOT

liposarcoma

RUN 5

"Child Behavior Disorders" OR "delinquencia" OR "delinquencia femenina" OR "delinquencia juvenil" or delincuencial or delincuenciales or delincuente or delinquentes OR "juvenile delinquency" OR delincuen\$ OR "Delincuencia Juvenil" OR "Delinquência Juvenil" OR "Transtornos do Comportamento Infantil" OR Delinquencia or Delinquen\$ or "Transtornos de la Conducta Infantil" or Transtornos do "Comportamento Infantil"

RUN 1

child OR niño OR criança OR infant OR lactante OR lactente OR Adolescent OR Adolescente OR child OR children OR adolescent OR child\$ OR adolescen\$ OR youth\$ OR student\$ OR teen\$ OR boy\$ OR girl\$ OR pupil\$ OR youngster\$ OR juvenile\$ OR infant\$ OR infan\$ OR baby OR babies OR preschool OR preschool\$ OR criança OR infant OR infants OR lactante OR lactente OR neonat\$ OR baby OR babies OR kid OR kids OR toddler\$ OR jóvenes OR niña OR niño OR criança OR newborn
[All indexes]

AND

"Acoso Escolar" OR "Violência Doméstica" OR Transtornos do Comportamento OR "Transtornos do Comportamento Social" OR Agressão OR Homicídio OR Bullying OR "transtorno desafiador-opositivo" OR "Transtorno da Conduta" OR "conducta antisocial" or "transtorno da conduta" OR "transtorno da personalidade anti-social"

[Subject descriptor]

RUN 2

child OR niño OR criança OR infant OR lactante OR lactente OR Adolescent OR Adolescente OR child OR children OR adolescent OR child\$ OR adolescen\$ OR youth\$ OR student\$ OR teen\$ OR boy\$ OR girl\$ OR pupil\$ OR youngster\$ OR juvenile\$ OR infant\$ OR infan\$ OR baby OR babies OR preschool OR preschool\$ OR criança OR infant OR infants OR lactante OR lactente OR neonat\$ OR baby OR babies OR kid OR kids OR toddler\$ OR jóvenes OR niña OR niño OR criança OR newborn
[All indexes]

AND

gang OR gangs OR pandilla OR quadrilha OR crimes OR criminal OR crimen OR crime OR "comportamento anti-social" OR "conducta anti-social" OR violence OR violen\$ OR Violencia OR Violência OR violent OR bully\$ OR aggress\$ OR aggression OR Agresión OR Agressão OR Homicídio OR Homicidio OR Acoso Escolar OR bullying OR domestic violence OR Violencia Doméstica OR Violência Doméstica OR conducta antisocial OR "Transtorno da Conduta" OR "transtorno desafiador de oposição" OR "transtorno da personalidade anti-social" OR "Transtornos do Comportamento"

[All indexes]

RUN 3

"delinquencia" OR "delinquencia femenina" OR "delinquencia juvenil" or delincuencial or delincuenciales or delincuente or delinquentes OR "Transtornos do Comportamento Infantil"

[Subject descriptor]

RUN 4

Delinquencia or Delinquen\$ or Transtornos do Comportamento Infantil

[All indexes]

APPENDIX B: DOCUMENT CODING PROTOCOL

Reference information

1. Document ID
2. Study author/s
3. Study title
4. Publication year
5. Full APA-style reference
6. Reference type:
 - a. Book
 - b. Journal article (peer reviewed)
 - c. Dissertation or thesis
 - d. Government report
 - e. Police report
 - f. Technical report
 - g. Conference paper
 - h. Other (specify) _____
7. Coder's name; date coded

Study details

8. Country of intervention _____
9. Document language _____
10. Date of research
 - a. Start: _____
 - b. Finish: _____
11. Source of funding for study
 - a. Government
 - b. Foreign government
 - c. Local university/research body
 - d. Foreign university/research body
 - e. Other _____
12. Term/s used by author to describe gang
 - a. Gang
 - b. Pandilla
 - c. Maras

- d. Street children
 - e. Other _____
13. Author definition of gang
- a. Eurogang definition
 - b. Not specified
 - c. Other _____
14. Sample age _____
15. Intervention name _____
16. Intervention strategy _____
17. Intervention design _____
18. Level of intervention
- a. Primary
 - b. Secondary
 - c. Tertiary
 - d. Combination of above categories
19. Bodies involved in implementation (tick all applicable)
- a. Police/ Justice system
 - b. Health Service
 - c. Other government departments
 - d. University/research agency
 - e. Other _____
20. Evaluated by _____
21. Conflict context?
- a. Yes
 - b. No
22. Other relevant contextual information?
- a. Yes (describe) _____
 - b. No
23. Issues in implementation?
- a. Yes (describe) _____
 - b. No problems
 - c. No information included
24. Ethical issues?
- a. Yes (describe) _____

- b. No

Methodology

25. Type of study

- a. randomized experiment
- b. randomized experiment with units of analysis discrepancy or very small number of aggregate units
- c. quasi-experiment: interrupted time series
- d. quasi-experiment: regression discontinuity
- e. quasi-experiment: nonequivalent comparison group case control design
- f. Within-group comparison (i.e., pretest-posttest)

26. Randomisation to the comparison made in the effect size

- a. Participants were randomly assigned to treatment and comparison conditions
- b. participants were haphazardly assigned to treatment and comparison conditions
- c. participants were neither randomly nor haphazardly assigned to treatment and comparison conditions
- d. Based on a within-participants comparison (e.g., a pretest-posttest design following the same participants over time)
- e. Unknown

27. Comparison group present?

- a. Yes (matched by) _____
- b. No

28. Similarity of the control group

- a. Internal — Another group from the same pool of Ss —all participants started off as part of one group.
- b. External—A group from a patently different pool of participants
- c. Archival/historical—Data taken from past study (e.g., past experiment; normative data on a test)
- d. Other _____
- e. Unknown.

29. Type of Comparison condition

- a. Wait List Control Group

- b. No Treatment Control Group
- c. Placebo Control Group
- d. "Treatment as usual"
- e. An alternative treatment

30. Unit of treatment _____

31. Unit of analysis _____

32. Sample size

- a. Total sample size _____
- b. Sample size of comparison group _____
- c. Sample size of intervention group _____
- d. Sample size of treatment group for this effect size _____
- e. Sample size of treatment comparison for this effect size _____

33. Was attrition a problem?

- a. Yes (describe) _____
- b. No
- c. Not applicable

34. Initial response rate _____

Risk of Bias (Use the IDCG Risk of Bias checklist to help answer 35-42):

35. Mechanism of assignment: was the allocation or identification mechanism able to control for selection bias?

- a. Yes
- b. No
- c. Unclear

36. Group equivalence: was the method of analysis executed adequately to ensure comparability of groups throughout the study and prevent confounding?

- a. Yes
- b. No
- c. Unclear

37. Hawthorne and John Henry effects: was the process of being observed causing motivation bias?

- a. Yes
- b. No
- c. Unclear

38. Spill-overs: was the study adequately protected against performance bias?

- a. Yes
- b. No
- c. Unclear

39. Selective outcome reporting: was the study free from outcome reporting bias?

- a. Yes
- b. No
- c. Unclear

40. Selective analysis reporting: was the study free from analysis reporting bias?

- a. Yes
- b. No
- c. Unclear

41. Other: was the study free from other sources of bias?

- a. Yes
- b. No
- c. Unclear

42. Confidence intervals

- a. Yes
- b. No
- c. Unclear

43. Sample age _____

44. Sample gender

- a. Male
- b. Female
- c. Mixed

45. Sample socio-economic status

- a. Low
- b. Average
- c. High
- d. Mixed
- e. Other _____

Outcomes (complete for each outcome reported)

46. Outcome _____

47. Conceptual definition of outcome _____

48. Operation definition _____

49. Where was the outcome variable obtained?

- a. Official data (government/police)
- b. Self-reported
- c. Peer-reported
- d. Family-reported
- e. Practitioner-reported (including school)
- f. Other _____

50. Raw difference favours (i.e. shows more success for):

- a. Treatment group
- b. Control group
- c. Neither (exactly equal)
- d. Cannot tell

51. Did a test of statistical significance indicate statistically significant differences between groups/time points?

- a. Yes
- b. No
- c. Can't tell
- d. N/A (no testing completed)

52. Was a standardized effect size reported?

- a. Yes
- b. No

If Yes:

53. Effect size measure _____

54. Effect size _____

55. Standard error of effect size _____

56. Effect size reported on page number _____

If No:

57. Are data available to calculate effect size?

- a. Yes
- b. No

58. Type of data effect size can be calculated from:

- a. Means and standard deviations
- b. Frequencies or proportions (dichotomous)

- c. Frequencies or proportions (polychotomous)
- d. Unadjusted correlation coefficient
- e. Multiple regression coefficients (unstandardized)
- f. Multiple regression coefficients (standardized)
- g. t-value or F-value
- h. Chi-square ($df=1$)
- i. Other (specify) _____

Means and Standard Deviations

- 59. Treatment group mean. _____
- 60. Control group mean. _____
- 61. Treatment group standard deviation. _____
- 62. Control group standard deviation. _____

Proportions or frequencies

- 63. n of treatment group with a successful outcome. _____
- 64. n of control group with a successful outcome. _____
- 65. Proportion of treatment group with a successful outcome. _____
- 66. Proportion of treatment group with a successful outcome. _____

Regression coefficients and correlations

- 67. Unadjusted correlation coefficient _____
- 68. Standardized regression coefficient _____
- 69. Unstandardized regression coefficient _____
- 70. Standard deviation of predictor _____
- 71. Control variables _____

Significance Tests

- 72. t -value _____
- 73. F -value _____
- 74. Chi-square value ($df=1$) _____

Calculated Effect Size

- 75. Effect size _____
- 76. Standard error of effect size _____

Authors conclusion

- 77. What did the authors conclude about the relationship?
 - a. Program reduced gang membership
 - b. Program increased gang membership

- c. Program had no effect on gang membership
- d. Unclear/no conclusion stated by authors

APPENDIX C: IDCG RISK OF BIAS TOOL

Tool to assess risk of bias and internal validity of social experiments and quasi-experiments⁴

The following tool enables the consistent assessment of internal validity of social experiments and quasi-experiments including randomised control trials (RCTs), regression discontinuity designs (RDDs), non-randomised studies based on participant self-selection (panel data models, propensity score and covariate matching, and cross-sectional regression), and studies using instrumental variables estimation for causal identification. The tool consists of eight evaluation criteria to identify threats to validity arising due to the following sources: selection bias, confounding, motivation bias, performance bias, outcome reporting bias, analysis reporting bias, other sources of bias, and threats to the correct calculation of statistical significance of the effect. Application of the tool is likely to require advanced knowledge of statistics and econometrics.

1. Mechanism of assignment: was the allocation or identification mechanism able to control for selection bias?

a) For Randomised assignment (RCTs),

Score “YES” if:

- a random component in the sequence generation process is described (e.g. referring to a random number table)⁵;
- and if the unit of allocation was at group level (geographical/ social/ institutional unit) and allocation was performed on all units at the start of the study,
- or if the unit of allocation was by beneficiary or group and there was some form of centralised allocation mechanism such as an on-site computer system;
- and if the unit of allocation is based on a sufficiently large sample size to equate groups on average.

Score “UNCLEAR” if:

- the paper does not provide details on the randomisation process, or uses a quasi-randomization process for which it is not clear has generated allocations equivalent to true randomisation.

Score “NO” if:

- the sample size is not sufficient or any failure in the allocation mechanism could affect the randomisation process⁶.

4

The tool has been developed by Jorge Hombrados and Hugh Waddington, drawing on existing tools, in particular EPOC (n.d.), Higgins and Green (2011) and Coalition for Evidence-Based Policy (2010). Thanks to Richard Palmer-Jones, Maren Duvendack and Phil Davies for comments on previous drafts.

⁵ If a quasi-randomized assignment approach is used (e.g. alphabetical order), you must be sure that the process truly generates groupings equivalent to random assignment, to score “Yes” on this criteria. In order to assess the validity of the quasi-randomization process, the most important aspect is whether the assignment process might generate a correlation between participation status and other factors (e.g. gender, socio-economic status) determining outcomes; you may consider covariate balance in determining this (see question 2).

b) For discontinuity assignment (Regression Discontinuity Designs)

Score “YES” if:

- allocation is made based on a pre-determined discontinuity on a continuous variable (regression discontinuity design) and blinded to participants or,
- if not blinded, individuals reasonably cannot affect the assignment variable in response to knowledge of the participation decision rule;
- and the sample size immediately at both sides of the cut-off point is sufficiently large to equate groups on average.

Score “UNCLEAR” if:

- the assignment variable is either non-blinded or it is unclear whether participants can affect it in response to knowledge of the allocation mechanism.

Score “NO” if:

- the sample size is not sufficient or
- there is evidence that participants altered the assignment variable prior to assignment⁷.

c) For assignment based non-randomised programme placement and self-selection (studies using a matching strategy or regression analysis, excluding IV)

Score “YES” if:

- Participants and non-participants are either matched based on all relevant characteristics explaining participation and outcomes, or
- all relevant characteristics are accounted for.^{8 9}

Score “UNCLEAR” if:

- it is not clear whether all relevant characteristics (only relevant time varying characteristics in the case of panel data regressions) are controlled.

Score “NO” if:

- relevant characteristics are omitted from the analysis.

d) For identification based on an instrumental variable (IV estimation)

Score “YES” if:

⁶ If the research has serious concerns with the validity of the randomisation process or the group equivalence completely fails, we recommend to assess the risk of bias of the study using the relevant questions for the appropriate methods of analysis (cross-sectional regressions, difference-in-difference, etc) rather than the RCTs questions.

⁷ If the research has serious concerns with the validity of the assignment process or the group equivalence completely fails, we recommend to assess the risk of bias of the study using the relevant questions for the appropriate methods of analysis (cross-sectional regressions, difference-in-difference, etc) rather than the RDDs questions.

⁸ Accounting for and matching on all relevant characteristics is usually only feasible when the programme allocation rule is known and there are no errors of targeting. It is unlikely that studies not based on randomisation or regression discontinuity can score “YES” on this criterion.

⁹ There are different ways in which covariates can be taken into account. Differences across groups in observable characteristics can be taken into account as covariates in the framework of a regression analysis or can be assessed by testing equality of means between groups. Differences in unobservable characteristics can be taken into account through the use of instrumental variables (see also question 1.d) or proxy variables in the framework of a regression analysis, or using a fixed effects or difference-in-differences model if the only characteristics which are unobserved are time-invariant.

- An appropriate instrumental variable is used which is exogenously generated: e.g. due to a 'natural' experiment or random allocation.

Score "UNCLEAR" if:

- the exogeneity of the instrument is unclear (both externally as well as why the variable should not enter by itself in the outcome equation).

Score "NO" otherwise.

2. Group equivalence: was the method of analysis executed adequately to ensure comparability of groups throughout the study and prevent confounding?

a) For randomised control trials (RCTs) and quasi-RCTs,

Score "YES" if:¹⁰

- baseline characteristics of the study and control/comparisons are reported and overall¹¹ similar based on t-test or ANOVA for equality of means across groups,
- or covariate differences are controlled using multivariate analysis;
- and the attrition rates (losses to follow up) are sufficiently low and similar in treatment and control, or the study assesses that loss to follow up units are random draws from the sample (e.g. by examining correlation with determinants of outcomes, in both treatment and comparison groups);
- and problems with cross-overs and drop outs are dealt with using intention-to-treat analysis or in the case of drop outs, by assessing whether the drop outs are random draws from the population;
- and, for cluster-assignment, authors control for external cluster-level factors that might confound the impact of the programme (eg weather, infrastructure, community fixed effects, etc) through multivariate analysis.

Score "UNCLEAR" if:

- insufficient details are provided on covariate differences or methods of adjustment;
- or insufficient details are provided on cluster controls.

Score "NO" otherwise.

b) For regression discontinuity designs (RDDs),

Score "YES" if:

- the interval for selection of treatment and control group is reasonably small,
- or authors have weighted the matches on their distance to the cut-off point,
- and the mean of the covariates of the individuals immediately at both sides of the cut-off point (selected sample of participants and non-participants) are overall not statistically different based on t-test or ANOVA for equality of means,
- or significant differences have been controlled in multivariate analysis;

¹⁰ Please note that when a), b) or f) score no or large differences in baseline characteristics, we suggest assessing risk of bias considering other study design (Diff-in-Diff, cross-sectional regression, instrumental variables)

¹¹ Even in the context of RCTs, when randomisation is successful and carried out over sufficiently large assignment units, it is possible that small differences between groups remain for some covariates. In these cases, study authors should use appropriate multivariate methods to correcting for these differences.

- and, for cluster-assignment, authors control for external cluster-level factors that might confound the impact of the programme (eg weather, infrastructure, community fixed effects, etc) through multivariate analysis.

Score “UNCLEAR” if:

- there are covariate differences across individuals at both sides of the discontinuity which have not been controlled for using multivariate analysis, or if insufficient details are provided on controls,
- or if insufficient details are provided on cluster controls.

Score “NO” otherwise.

c) For non-randomised trials using difference-in-differences methods of analysis,

Score “YES” if:

- the authors use a difference-in-differences (or fixed effects) multivariate estimation method;
- the authors control for a comprehensive set of time-varying characteristics;¹²
- and the attrition rate is sufficiently low and similar in treatment and control, or the study assesses that drop-outs are random draws from the sample (e.g. by examining correlation with determinants of outcomes, in both treatment and comparison groups);
- and, for cluster-assignment, authors control for external cluster-level factors that might confound the impact of the programme (eg weather, infrastructure, community fixed effects, etc) through multivariate analysis.

Score “UNCLEAR” if:

- insufficient details are provided,
- or if insufficient details are provided on cluster controls.

Score “NO” otherwise.

d) For statistical matching studies including propensity scores (PSM) and covariate matching,¹³

Score “YES” if:

- matching is either on baseline characteristics or time-invariant characteristics which cannot be affected by participation in the programme; and the variables used to match are relevant (e.g. demographic and socio-economic factors) to explain both participation and the outcome (so that there can be no evident differences across groups in variables that might explain outcomes) (see fn. 6).
- In addition, for PSM Rosenbaum’s test suggests the results are not sensitive to the existence of hidden bias.
- and, with the exception of Kernel matching, the means of the individual covariates are equated for treatment and comparison groups after matching;

¹² Knowing allocation rules for the programme – or even whether the non-participants were individuals that refused to participate in the programme, as opposed to individuals that were not given the opportunity to participate in the programme – can help in the assessment of whether the covariates accounted for in the regression capture all the relevant characteristics that explain differences between treatment and comparison.

¹³ Matching strategies are sometimes complemented with difference-in-difference regression estimation methods. This combination approach is superior since it only uses in the estimation the common support region of the sample size, reducing the likelihood of existence of time-variant unobservables differences across groups affecting outcome of interest and removing biases arising from time-invariant unobservable characteristics.

- and, for cluster-assignment, authors control for external cluster-level factors that might confound the impact of the programme (eg weather, infrastructure, community fixed effects, etc) through multivariate or any appropriate analysis.

Score “UNCLEAR” if:

- relevant variables are not included in the matching equation, or if matching is based on characteristics collected at endline,
- or if insufficient details are provided on cluster controls.

Score “NO” otherwise.

e) For regression-based studies using cross sectional data (excluding IV)

Score “YES” if:

- the study controls for relevant confounders that may be correlated with both participation and explain outcomes (e.g. demographic and socio-economic factors at individual and community level) using multivariate methods with appropriate proxies for unobservable covariates (see fn. 6),
- and a Hausman test¹⁴ with an appropriate instrument suggests there is no evidence of endogeneity,
- and none of the covariate controls can be affected by participation;
- and either, only those observations in the region of common support for participants and non-participants in terms of covariates are used, or the distributions of covariates are balanced for the entire sample population across groups;
- and, for cluster-assignment, authors control particularly for external cluster-level factors that might confound the impact of the programme (eg weather, infrastructure, community fixed effects, etc) through multivariate analysis.

Score “UNCLEAR” if:

- relevant confounders are controlled but appropriate proxy variables or statistical tests are not reported,
- or if insufficient details are provided on cluster controls.

Score “NO” otherwise.

f) For instrumental variables approaches,

Score “YES” if:

- the instrumenting equation is significant at the level of ≥ 10 (or if an F test is not reported, the authors report and assess whether the R-squared (goodness of fit) of the participation equation is sufficient for appropriate identification);
- the identifying instruments are individually significant ($p \leq 0.01$); for Heckman models, the identifiers are reported and significant ($p \leq 0.05$);
- where at least two instruments are used, the authors report on an over-identifying test ($p \leq 0.05$ is required to reject the null hypothesis); and none of the covariate controls can be affected by

¹⁴ The Hausman test explores endogeneity in the framework of regression by comparing whether the OLS and the IV approaches yield significantly different estimations. However, it plays a different role in the different methods of analysis. While in the OLS regression framework the Hausman test mainly explores endogeneity and therefore is related with the validity of the method, in IV approaches it explores whether the author has chosen the best available strategy for addressing causal attribution (since in the absence of endogeneity OLS yields more precise estimators) and therefore is more related with analysis reporting bias.

participation and the study convincingly assesses qualitatively why the instrument only affects the outcome via participation¹⁵.

- and, for cluster-assignment, authors particularly control for external cluster-level factors that might confound the impact of the programme (eg weather, infrastructure, community fixed effects, etc) through multivariate analysis.

Score “UNCLEAR” if:

- relevant confounders are controlled but appropriate statistical tests are not reported or exogeneity¹⁶ of the instrument is not convincing,
- or if insufficient details are provided on cluster controls (see category f) below).

Score “NO” otherwise.

3. Hawthorne and John Henry effects: was the process of being observed causing motivation bias?

Score “YES” if either:

- a) For data collected in the context of a particular intervention trial (randomised or non-randomised assignment), the authors state explicitly that the process of monitoring the intervention and outcome measurement is blinded, or argue convincingly why it is not likely that being monitored in ways that could affect the performance of participants in treatment and comparison groups in different ways.
- b) The study is based on data collected in the context of a survey, and not associated with a particular intervention trial, or data are collected in the context of a retrospective (ex post) evaluation.

Score “UNCLEAR” if:

- it is not clear whether the authors use an appropriate method to prevent Hawthorne and John Henry Effects (e.g. blinding of outcomes and, or enumerators, other methods to ensure consistent monitoring across groups).

Score “NO” otherwise.

4. Spill-overs: was the study adequately protected against performance bias?

Score “YES” if:

- the intervention is unlikely to spill-over to comparisons (e.g. participants and non-participants are geographically and/or socially separated from one another and general equilibrium effects are unlikely)¹⁷.

Score “UNCLEAR” if:

- spill-overs are not addressed clearly.

¹⁵ If the instrument is the random assignment of the treatment, the reviewer should also assess the quality and success of the randomisation procedure in part a).

¹⁶ An instrument is exogenous when it only affects the outcome of interest through affecting participation in the programme. Although when more than one instrument is available, statistical tests provide guidance on exogeneity (see background document), the assessment of exogeneity should be in any case done qualitatively. Indeed, complete exogeneity of the instrument is only feasible using randomised assignment in the context of an RCT with imperfect compliance, or an instrument identified in the context of a natural experiment.

¹⁷ Contamination, that is differential receipt of other interventions affecting outcome of interest in the control or comparison group, is potentially an important threat to the correct interpretation of study results and should be addressed via PICO and study coding.

Score “NO” if:

- allocation was at individual or household level and there are likely spill-overs within households and communities which are not controlled for in the analysis;
- or if allocation at cluster level and there are likely spill-overs to comparison clusters.

5. Selective outcome reporting: was the study free from outcome reporting bias?

Score “YES” if:

- there is no evidence that outcomes were selectively reported (e.g. all relevant outcomes in the methods section are reported in the results section).

Score “NO” if:

- some important outcomes are subsequently omitted from the results or the significance and magnitude of important outcomes was not assessed.

Score “UNCLEAR” otherwise.

6. Selective analysis reporting: was the study free from analysis reporting bias?

Score “YES” if:

- authors use ‘common’ methods¹⁸ of estimation and the study does not suggest the existence of biased exploratory research methods¹⁹.

Score “NO” if:

- authors use uncommon or less rigorous estimation methods such as failure to conduct multivariate analysis for outcomes equations where it has not been established that covariates are balanced.

See also the following for particular estimation methodologies.

For PSM and covariate matching, score “YES” if:

- Where over 10% of participants fail to be matched, sensitivity analysis is used to re-estimate results using different matching methods (Kernel Matching techniques).
- For matching with replacement, no single observation in the control group is matched with a large number of observations in the treatment group.

Where not reported, score “UNCLEAR”. Otherwise, score “NO”.

For IV (including Heckman) models, score “YES” if:

- the authors test and report the results of a Hausman test for exogeneity ($p < 0.05$ is required to reject the null hypothesis of exogeneity).
- the coefficient of the selectivity correction term (ρ) is significantly different from zero ($P < 0.05$) (Heckman approach).

¹⁸ ‘Common methods’ refers to the use of the most credible method of analysis to address attribution given the data available.

¹⁹ A comprehensive assessment of the existence of ‘data mining’ is not feasible particularly in quasi-experimental designs where most studies do not have protocols and replication seems the only possible mechanism to examine rigorously the existence of data mining.

Where not reported, score “UNCLEAR”. Otherwise, score “NO”.

For studies using multivariate regression analysis, score “YES” if:

- authors conduct appropriate specification tests (e.g. reporting results of multicollinearity test, testing robustness of results to the inclusion of additional variables, etc).

Where not reported or not convincing, score “UNCLEAR”. Otherwise, Score “NO”.

7. Other: was the study free from other sources of bias?

Important additional sources of bias may include: concerns about blinding of outcome assessors or data analysts; concerns about blinding of beneficiaries so that expectations, rather than the intervention mechanisms, are driving results (detection bias or placebo effects)²⁰; concerns about courtesy bias from outcomes collected through self-reporting; concerns about coherence of results; data on the baseline collected retrospectively; information is collected using an inappropriate instrument (or a different instrument/at different time/after different follow up period in the comparison and treatment groups).

Score “YES” if:

- the reported results do not suggest any other sources of bias.

Score “UNCLEAR” if:

- other important threats to validity may be present

Score “NO” if:

- it is clear that these threats to validity are present and not controlled for.
-

8. Confidence intervals

NOTE: for full internal validity assessment – ie risk of bias in effects and precision based on true confidence intervals (Type I error, Type II error) – assessment should include the following:

a) For studies using parametric regression methods such as OLS (distribution of error term, and heteroscedasticity):

Score “YES” if:

- the authors test and fail to reject the null of homoscedasticity (e.g. through a Breusch-Pagan test for heteroscedasticity ($p > 0.05$)) and test for the assumed error distribution (e.g. Kolmogorov-Smirnov test for non-normality ($p > 0.05$))
- or if the test suggests the existence of heterogeneity or non-normality, the study corrects for them (e.g. use of log transformation in the dependent variable).

Score “UNCLEAR” if:

- the results of any test are not reported.

²⁰ All interventions may create expectations (placebo effects), which might confound causal mechanisms. In social interventions, which usually require behaviour change from participants, expectations may form an important component of the intervention, so that isolating expectation effects from other mechanisms may be less relevant.

Score “NO” otherwise²¹.

b) If, despite large effects, the study fails to find the effects significant (Power of the study),

Score “YES” if:

- the sample size is enough to detect a relevant significant effect.

Score “UNCLEAR” if:

- it is not clear whether the sample size is sufficiently large to detect medium or large significant effects.

Score “NO” if:

- the sample size is not sufficiently large to detect medium or large significant effects.

c) For clustered studies (unit of analysis error),

Score “YES” if:

- the analysis is carried out at the relevant unit of treatment assignment,
- or the study accounts for lack of independence between observations within assignment clusters.

Score “UNCLEAR” if:

- the study does not report enough information on the unit of treatment assignment.

Score “NO” if:

- the analysis is carried out at a different unit than the assignment.

²¹ Standard errors may be inflated in parametric approaches if the intervention does not have a homogeneous effect across the whole sample population, and the authors fail to conduct appropriate sub-group analyses.

APPENDIX D: CRITICAL APPRAISAL TOOL FOR QUANTITATIVE, QUALITATIVE, AND PROCESS EVALUATION STUDIES

Adapted from the Critical Appraisal Skills Programme (CASP) Qualitative Research Checklist 31.05.13

1. Is the research aim clearly stated? (Yes/No)
2. Is there a clear link to relevant literature/theoretical framework? (Yes/No)
3. Is the study context described? (Yes/No)
4. Is the research design appropriate to answer the research question? (Yes/No)
5. Is the sampling procedure clearly described? (Yes/No)
6. Was the sampling strategy appropriate to the aims of the research? (Yes/No/Can't tell)
7. Are sample characteristics clearly reported? (eg. size, location, sample demographics) (Yes/No)
8. Are data collection methods clearly reported? (eg. focus group, survey, semi-structured interview, computer assisted telephone interview) (Yes/No)
9. Are data recording methods clearly reported? (eg. video, paper survey, notes) (Yes/No)
10. Were the data collection methods appropriate to the aims of the research? (Yes/No/Can't tell)
11. Are methods of analysis explicitly stated? (Yes/No)
12. Are the analyses clearly presented? (Yes/No)
13. Were the analyses sufficiently rigorous? (Yes/No/Can't tell)
14. Was triangulation applied (data, investigator, theory or methodological)? (Yes/No/Can't tell)
15. Are the conclusions clearly presented? (Yes/No)
16. Is the relationship between researchers and participants (and any potential for conflict of interest) explicitly discussed? (Yes/No)
17. Were conflict of interest issues appropriately considered? (Yes/No/Can't tell)
18. Are ethical considerations related to the research discussed? (Yes/No)
19. Were ethical issues related to the research appropriately considered? (Yes/No/Can't tell)