

Formal Approaches to Pre-Court Diversion

Toolkit technical report

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About National Children's Bureau

This report has been produced by the National Children's Bureau on behalf of the Youth Endowment Fund. The National Children's Bureau works collaboratively across the issues affecting children to influence policy and get services working together to deliver a better childhood. They were commissioned by the Youth Endowment Fund (YEF) as their Toolkit Partner 2023–2026.

About Youth Endowment Fund

The Youth Endowment Fund's mission is to prevent children and young people becoming involved in violence. They do this by finding out what works and building a movement to put this knowledge into practice. The fund was established in March 2019 by children's charity Impetus, with a £200m endowment and ten-year mandate from the Home Office. For more information, please visit www.youthendowmentfund.org.uk.

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Abstract/Plain Language Summary

The objective of this report is to review the international evidence on the effectiveness of formal pre-court diversion programmes as a strategy to prevent violence, crime and offending involving children and young people. Formal pre-court diversion programmes typically involve a 'justice component', an assessment, and an intervention including conditions (e.g., admission of guilt). Examples of formal pre-court diversion programmes include youth cautions, youth conditional cautions, teen courts, youth drug courts, and referral panels.

Key findings:

- Formal pre-court diversion programmes are associated with a 25% reduction in violence outcomes, based on a meta-analysis of 10 outcomes across five studies. There is low confidence in this finding due to the small number of studies.
- These programmes are linked with a 14% reduction in crime and offending outcomes, based on a meta-analysis of 200 outcomes across 35 studies. There is moderate confidence in this finding and substantial variation in results.
- Children and young people in the UK tended to hold more positive views of formal pre-court diversion than those from other countries. However, this is based on 10 studies, of which five were from the UK, and only four were conducted in the last 10 years. Ethnicity moderated the effectiveness of formal pre-court diversion. It was slightly more effective in studies with some diversity (<49% Black and Global Majority children and young people) than in studies of mostly white children and young people only.
- For crime and offending outcomes specifically, formal pre-court diversion was less effective for studies with more than 50% Black and Global Majority children and young people. Structural and systemic inequities associated with implicit bias and racial stereotyping were identified in some formal pre-court diversion programmes, with Black and Global Majority children and young people being more likely than their white counterparts to receive punitive sanctions.

- After accounting for other population-level variables, such as gender and inclusion criteria, ethnicity alone does not consistently explain variation in outcomes.
- High-quality evidence is lacking on the effectiveness of formal pre-court diversion for children and young people who are neurodiverse, care experienced or at an educational disadvantage. Only limited research is available on the effectiveness of formal pre-court diversion for children and young people with special educational needs and disabilities or of low socioeconomic status.
- Gender did not significantly impact on the effectiveness of formal pre-court diversion. Although, there was a trend towards formal pre-court diversion being more effective amongst majority female programmes than majority male or mixed-gender programmes. In addition, some studies indicate that females were more likely to be diverted from court processing than males.
- Formal pre-court diversion implemented post-millennium (from 2000-2022) were more effective than older studies (from 1970-1999).
- There is a lack of high-quality evidence on the effectiveness of formal pre-court diversion internationally, with most studies conducted over 20 years ago. Given the age of the majority of studies, new research is needed to examine the effectiveness of formal pre-court diversion today.
- Formal pre-court diversion was most effective in Canada, followed by Australia and the USA. Formal pre-court diversion implemented in the UK showed small effects at reducing crime and offending and did not reach statistical significance. However, this was only based on three studies with wide confidence intervals, meaning more UK-based research is needed.
- Findings suggest that formal pre-court diversion programmes with additional services, such as targeting drug and alcohol use, family relationships and support, school engagement and self-esteem have stronger reductions in violence, crime, and associated outcomes. However, this trend must be interpreted with caution, as these are based on a small number of studies.

- Formal pre-court diversion programmes are more likely to be implemented well if they have a clear purpose, eligibility criteria and referral process, with good leadership. Staff need to be trained and have ongoing supervision/monitoring to establish programme fidelity. Effective multi-agency teams need to be established, with good information sharing, open communication, and trusting relationships.
- Findings regarding the cost of formal diversion programmes were mixed, with some studies reporting cost-savings, whilst others report that formal diversion programmes were more expensive than standard court processing. However, study findings did not account for cost-savings associated with crime prevention. Critically, all but one study providing cost information was over 10 years old, with the majority over 20 years old.
- The overall confidence in the findings on violence is Low (2 out of 5). All studies included in the meta-analysis of violence-related outcomes were moderate quality and include one randomised controlled trial (RCT) and four quasi-experimental designs (QEDs).
- The overall confidence in our findings on crime and offending is Moderate (3 out of 5). Ten RCTs provided robust causal evidence (one high quality, eight moderate quality, and one low quality), with the remaining 25 relying on QEDs (two high quality, 15 moderate quality, seven low quality, and one very low quality).

Conclusion

Formal pre-court diversion programmes are associated with a moderate reduction in violence, crime and offending outcomes. Findings indicate that formal pre-court diversion is less effective for Black and Global Majority children and young people. However, caution should be exercised in interpreting and using these findings given their quality ratings, the age of the studies and the low number of studies this is based on. Successful implementation is associated with high quality multi-agency collaboration, staff training and supervision, and clear eligibility/referral processes. More research is needed into violence outcomes specifically, with only five studies currently available for this meta-analysis.

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Preface on Terminology

This review draws on evidence spanning over half a century, during which language around personal characteristics has evolved significantly. At times, we may have to reproduce original terminology used in studies which we recognize today as being outdated and unacceptable offensive terms. This only occurs when the terminology is used in direct quotations or refers to an outcome that the author measured that remains relevant to our analysis. The wider narrative will adhere to current inclusive-language standards guided by the National Children's Bureau, Youth Endowment Fund, and Race Equality Foundation. These guiding principles include using capitalization to acknowledge shared identities (e.g., Black, Asian), whilst not capitalizing white due to its association with white supremacy. The review also avoids deficit framing and respects individuals' self-identification. Person-first language will generally be used when referring to children and young people, except for Deaf and autistic communities, who widely prefer identity-first language. The team acknowledges limitations in terminology and strives for respectful and precise representation throughout. [The full preface on terminology can be accessed here.](#)

Objective and Approach

The objective of this report is to review the evidence on the effectiveness of formal pre-court diversion programmes as a strategy for reducing and preventing violence and offending involving children and young people. Diversion refers to several different approaches, with no fixed legal meaning (HM Inspectorate of Probation, 2025). A useful typology suggests there are at least five different types of diversion approaches described across research and policy (Kelly & Armitage, 2015). These include:

1. Diversion from prosecution/court
2. Diversion from custody
3. Diversion from the youth justice system
4. Diversion into alternative services
5. Diversion from crime

The focus of this review is on **pre-court diversion only**, which are programmes or strategies that aim to prevent children and young people involved in minor offences from entering the formal youth justice system (Youth Justice Legal Centre, 2025). Universal programmes or programmes that are preventative in nature (i.e., targeted young people at risk of involvement in violence or crime, due to factors such as school absenteeism or living in high-crime areas) are excluded.

Pre-court diversion can be formal or informal in nature. Based on a comprehensive review of diversion papers in England and Wales, Keenan et al. (2023) were able to distinguish between formal and informal diversion strategies. Specifically, *“formal processing typically occurs post-arrest, involves a ‘justice component’, an assessment, and typically followed by an intervention including conditions (e.g., admission of guilt). Informal processing means the children and young people are often dealt with outside of custody (e.g., point of arrest caution), and without any formal sanctions (p.13).”* Whilst Keenan et al.’s (2023) review focused only on studies from England and Wales, the definition remains useful when considering an international context, as diversion is regularly practiced on a formal and informal basis in many legal systems (UNICEF Regional

Office for Europe and Central Asia, 2022). However, it must be acknowledged that no standardised definition of informal and formal diversion strategies exists.

Furthermore, formal pre-court diversion programmes have a structured approach, are legally binding, and are typically standardised, with official documentation and/or agreements in place (Wilson & Hoge, 2013). Formal pre-court diversion programmes are typically used for children and young people with no prior offences or for those who have committed a minor offence. They are also sometimes used for children and young people who have committed repeat, minor offences. In comparison, informal pre-court diversion strategies have flexible interventions without formal referrals or legal agreements, typically reserved for low-risk or first-time offenders (Neyroud, Neyroud, & Kumar, 2022). As the focus of this review is on **formal pre-court diversion only**, informal pre-court diversion strategies are excluded from this review.

This paper reviews the international literature on formal pre-court diversion. Formal pre-court diversion strategies included in this review are penalty notices, final warnings, teen courts, drug courts, referral panels, deferred prosecution and pretrial diversion programmes. Definitions of these terms are provided in Table 1.

For clarity, Out of Court Disposals (OoCDs) include both formal and informal strategies used by the police in England and Wales to resolve a criminal offence committed by a young person, without going to court (Youth Justice Board for England and Wales, 2022). Relevant to this review, formal strategies include youth cautions and youth conditional cautions. Whilst these are considered as pre-court diversion strategies, they are recorded on police databases and may be disclosed on enhanced disclosure and barring service (DBS) checks. This is in contradiction to UK (e.g., Centre for Justice Innovation, n.d.; Youth Justice Board, n.d.) and international guidance (e.g., UNICEF, 2022), which suggests that pre-court diversions *should not result in a criminal record* and should avoid escalation into the youth justice service.

Following a search of previous reviews into diversion strategies, discussion with YEF, and input from experts, it was decided that formal OoCDs (i.e., youth cautions and youth conditional cautions) would be included in this review. This is consistent with past literature, with cautions included in a meta-analysis of

police-initiated diversion schemes (Wilson et al., 2018), and reviews of pre-court diversion (Gaffney et al., 2021; Keenan et al., 2023).

Excluded from this review were restorative justice conferences and family group conferencing, to prevent overlap with other YEF Toolkit strands (Youth Endowment Fund, 2021). The inclusion criteria were determined through reviewing past international literature, discussion with YEF and feedback from experts in the field. The studies included in this Toolkit strand included the USA (n=28), UK (n=1), England (n=2); Australia (n=4) and Canada (n=1).

Table 1: *Definitions of included formal pre-court diversion strategies*

Formal Pre-Court Diversion	Definition
Penalty Notices	A penalty notice is a fine issued by the police or other authorised authority, often on-the-spot after a crime has been committed, used in the UK (Brown et al., 2017).
Final Warnings	A final warning is a formal notice given by the police to young people who have admitted to committing an offence. Often, this includes a referral for a multi-agency assessment and behavioural intervention and is used in England and Wales (College of Policing, 2021).
Youth Cautions	A youth caution is a form of OoCD used in England and Wales and given by the police when a young person fully admits to committing an offence, there is sufficient evidence that conviction would be a realistic prospect, but prosecution is not in the public interest. There is no statutory requirement for young people to receive assessments and interventions, although it is recommended as best practice (Youth Justice Board for England and Wales, 2022). Youth cautions are also used internationally, including Canada and Australia (e.g., Minister of Justice, 2025; Victorian Government, 2022)

Youth Conditional Cautions	Youth conditional cautions are a form of OoCD used in England and Wales are formal warnings given by the police to young people who admit to a crime. Unlike youth cautions, these include mandatory conditions, such as engaging in a behavioural intervention. If the young person does not adhere to the conditions, then this may lead to court (Youth Justice Board for England and Wales, 2022).
Teen Courts / Peer Courts	Teen courts are primarily used for first time, less serious and non-violent young people who have committed an offence, that are not expected to reoffend. In a teen court, other young people serve as the court personnel (e.g., judge, lawyer or jury). They are used in countries including the United States, Germany and the Netherlands. Outcomes of teen courts tend to be community service, apology letters, educational workshops or referral to community (College of Policing, 2020).
Drug Courts	Drug courts are for young people with alcohol or drug problems, typically used in countries such as the United States and Canada. They take a rehabilitative problem-solving approach, mandating individuals to participate in substance use treatment, monitoring and/or supervision (Tanner-Smith et al., 2016).
Referral Panels	Used in the UK, a referral order requires a young person to attend a youth offender panel, consisting of two community members and an advisor from a youth offending team. The young person will need to agree to a contract, which contains commitments they must adhere to (Sentencing Council, 2025).

Deferred Prosecution	<p>Deferred prosecution occurs when a prosecution or caution is put on hold, during which the children and young people is expected to complete diversionary activities. If the activities are successfully completed, this can prevent the case from going to court. Deferred prosecutions/cautions can be classed as formal or informal. Formal deferred prosecutions tend to be led by a prosecutor, requires an admission of guilt or acknowledgement of responsibility, involves legal documentation and monitoring, and are supervised by legal or justice professionals. Deferred prosecutions are used in countries including Scotland and some jurisdictions in the United States (Scottish Government, 2011).</p>
Pretrial Diversion Programmes	<p>Pretrial diversion programmes are typically for first-time offenders, charged with minor and non-violent offences. Young people must engage in stipulated activities, such as apologising to the victim, counselling, and education (Blankley & Jimenez, 2019). Pretrial diversion programmes are used in countries including the United States, Canada and Southern Africa.</p>
Triage Schemes	<p>Triage refers to an early intervention process designed to assess and divert young people, especially first-time offenders, away from formal youth justice proceedings. It aims to identify the most appropriate response based on each young person's needs and the nature of the offense. Triage schemes are typically run in the UK (Youth Justice Board, 2016).</p>

This report is based on a comprehensive systematic review and meta-analysis of existing international research on formal pre-court diversion. The evidence synthesis includes:

- Five studies (three from the USA and two from Canada), including 10 measured outcomes, assessing the impact of formal pre-court diversion on violence involving children and young people.¹
- 200 measured outcomes across 35 studies, assessing the impact of formal pre-court diversion on crime and offending involving children and young people.
- 216 measured outcomes across 36 studies, assessing the impact of formal pre-court diversion on all outcomes involving children and young people that feature in YEF's Outcomes Framework. As well as crime and offending, measured outcomes included community connectedness, criminal peers, drug and alcohol use, family relationships and support, school engagement, and self-esteem.
- Implementation analysis of 22 studies (7 from the UK, 14 from the USA and 1 from New Zealand), exploring how factors such as intervention acceptability, fidelity, and sustainability influence effectiveness of formal pre-court diversion approaches to reducing and preventing violence, crime and offending.

By integrating quantitative meta-analysis with qualitative insights from implementation studies, this report provides a comprehensive evaluation of the impact, effectiveness, and practical considerations of formal pre-court diversion for policymakers, practitioners, and researchers.

The remainder of this report is structured as follows: First, the **Description of the Intervention** outlines the key components of formal pre-court diversion and its intended implementation. Second, **How Effective is the Intervention?** presents findings from our meta-analysis on crime reduction and broader social outcomes. Third, **Who Does it Work For?** examines evidence on the populations that benefit most from formal pre-court diversion. Fourth, **What Factors Affect Implementation?** explores key facilitators and barriers using Proctor's Implementation Outcome Framework. Fifth, **How Much Does It Cost?** reviews available cost data. Finally, the **Conclusion and Takeaway Messages**

¹ Violence refers to incidents and/or behaviours as well as convictable offences committed by the child or young person. Violence may be of a physical, verbal, psychological, or sexual nature (YEF, 2023: p.12).

summarises key findings and recommendations, followed by **Appendices** detailing the systematic review methodology and characteristics of included research.

Description of the Intervention

In the following section details are provided on the interventions which inform this report, noting their key components, any equipment, materials, supplies or training required, the duration and intensity of interventions, who delivered the interventions, and where and how the interventions were delivered.

Key components of formal diversion

Formal pre-court diversion strategies use a range of approaches which are often tailored to the specific needs of children and young people and dependent on the local context. There are, however, similar features shared across interventions including the use of multidisciplinary teams, engagement with the parents and/or carers of the children and young people and a focus on addressing the needs of the whole child and young person.

Most formal pre-court diversion interventions started with an initial screening and eligibility assessment (Benbow, 2019; Dembo et al., 2008; Dembo et al., 2005; Dembo, Wareham, Chirikos, et al., 2005; Dembo, Wareham, & Schmeidler, 2005; Dembo, Wareham, Schmeidler, et al., 2005; Haines et al., 2012; HMIP & HMICFRS, 2018; Kuch, 2017; Searle & Spier, 2006). Interventions often followed a clear structure and outlined the expectations of the children and young people and their parents and carers. Two studies from the USA outlined contracting approaches to engaging with both of these groups. One of these studies talked about behavioural contracting as the basis for outlining the responsibilities and agreements (Emshoff et al., 1983). The other intervention required parents and carers to sign a contract to facilitate their children and young people's participation in the PAD (Post Arrest Diversion) programme (Dembo et al., 2008).

Parents/carers were expected to engage with and participate in some interventions (Curran et al., 1977; Davidson et al., 2011; DeMarco et al., 2021). Another intervention required parents to participate in a "quasi therapeutic group" to

address any family issues and to support their parent-daughter relationship (Davidson et al., 2011).

Most interventions had multidisciplinary teams who held regular meetings and discussions to review individual cases and the children and young people's progress in engaging with the programme or activities recommended by the intervention (Curran et al., 1977; Davidson et al., 2011; DeMarco et al., 2021; Dembo, 2005; HMIP & HMICFRS 2018; Gummelt et al., 2016; Hartsell & Novak, 2022).

Formal diversion interventions required children and young people to participate in planned programmes of activities. These programmes were tailored to the needs and experiences of children and young people. Interventions often included an educational element (Crofoot et al., 1987; Davidson et al., 2011; Gummelt et al., 2016), other intervention activities included career preparation (Gummelt et al., 2016), mentoring (Davidson et al., 2011; Gummelt et al., 2016), creative activities such as drama, journalling, poetry, dance and drawing as a means of self-expression (Davidson et al., 2011) and a range of other support services and engagement activities as required by the children and young people (DeMarco et al., 2021; Dembo, 2005; Gummelt et al., 2016). One study described an intervention which involved the use of civil citations to address school-based offences, whereby children and young people are assigned community service hours to complete (Sullivan et al., 2010).

Just over one-quarter of the interventions had a specific focus on supporting children and young people with substance abuse issues. Around half of these interventions require regular drug- or alcohol-screening (Dembo et al., 2005; Dembo, Wareham, Chirikos, et al., 2005; Dembo, Wareham, & Schmeidler, 2005; Dembo, Wareham, Schmeidler, et al., 2005; Dembo et al., 2008; Gummelt et al., 2016; Kuch, 2017; Miller et al., 1998; Searle & Spier, 2006). Some interventions offered drug education or counselling programmes (Patrick & Marsh, 2005; Smith et al., 1979; Stewart et al., 2005; Stewart, 2008; Wilson & Hoge, 2013).

Around one-tenth of interventions had incentives for children and young people completing all elements of the programme successfully. A common incentive was the opportunity for children and young people to have their crime removed/expunged from their record (Dembo et al., 2008; Gaby, 2023 Kuch, 2017; Patrick & Marsh, 2005). Some interventions had additional incentives for children

and young people such as fewer drug tests, opportunities for additional activities, gift certificates and moving to the next phase of a programme (Chernoff et al., 2022; Gummelt et al., 2016).

One of the interventions had sanctions in place for unsuccessful completion of the programme or for inappropriate behaviour. The sanctions included reprimands, community service and earlier curfews (Chernoff et al., 2022).

Equipment, materials or supplies

Just over one-quarter of the studies included in this Toolkit strand reported on the equipment, materials or supplies needed to carry out the intervention. Of these, c.40% highlighted the need for assessment tools to support the screening and analysis of children and young people's cases (Brown, 2019; Brownlee, 1995; Hartsell, 2022; Miller, 1998; Patrick, 2005; Wilson, 2013). The remainder of the studies mentioned a variety of equipment, materials and resources used including:

- Structured observation tools and open-ended interview guides (DeFosset et al., 2017);
- Self-report scales (Dunford et al., 1982) were highlighted as important materials for assessing eligibility to formal diversion programmes.
- Monitoring tools to ensure compliance of children and young people with assigned sanctions (Butts et al., 2002)
- Adequate meeting space to hold hearings (Brown, 2019; Butts et al., 2002), with written materials for case files, participant instructions, and consent forms needed to implement these (Butts et al., 2002).
- Letters containing information about the intervention (Patrick & Marsh, 2005).
- Administrative support for case coordination and tracking compliance was highlighted by one study as a necessity (Butts et al., 2002).
- The use of drug testing, with materials needed to enable this (Gummelt, 2016).

Who delivers formal diversion

There was a wide variability in the expertise of staff delivering the formal diversion programmes. Some formal diversion programmes were implemented by trained

police officers, neighbourhood officers, school officers, or juvenile liaison officers (Berger et al., 1977; Brown, 2019; Cunningham, 2007; DeMarco et al., 2021; Dennison et al., 2006; Dunford et al., 1982; HMIP & HMICFRS, 2018; Kraus, 1981; Kuch, 2017; Little, 2015; Nadel et al., 2018; Rose & Hamilton, 1970; Smith et al., 1979; Stewart et al., 2005; Sullivan et al., 2010). Youth justice services, including probation services, ran some formal diversion programmes (Benbow, 2019; Brown, 2019; Curran et al., 1977; Davidson et al., 2011; DeFosset et al., 2017; HMIP & HMICFRS, 2018; Robertson et al., 2021; Schneider, 1988; Smith et al., 1979; Soppitt & Irving, 2014). In some circumstances, court workers were also responsible for the delivery/decision-making of formal diversion programmes (Amdur, 1987; Chernoff et al., 2022; Gummelt & Sullivan, 2016; Searle & Spier, 2006; Severy & Whitaker, 1982).

Trained social workers (Benbow, 2019; Dunford et al., 1982; Moore, 2015; Penman, 2007; Searle & Spier, 2006; Severy & Whitaker, 1982), psychologists (Haines et al., 2012), or other mental health professionals (Davidson et al., 2011; Kuch, 2017; Robertson et al., 2021; Schneider, 1988; Searle & Spier, 2006) provided formal diversion programmes. Trained counsellors were also responsible for the delivery of a large number of formal diversion programmes (Beck et al., 2006; Bohnstedt, 1978; Crofoot, 1987; Curran et al., 1977; Dembo, Wareham, & Schmeidler, 2005; Haines et al., 2012; Kuch, 2017; Lipsey et al., 1981; Miller et al., 1998; Moore, 2015; Quay & Love, 1977; Rausch, 1983; Schneider, 1988; P. Smith et al., 1979). Some formal diversion programmes were run by community-service providers (Berger et al., 1977; Bohnstedt, 1978; Kuch, 2017; Lipsey et al., 1981; Severy & Whitaker, 1982; Wilson & Hoge, 2013). Teachers monitored students' progress at school, referred to formal diversion programmes, and supported the running of school-based Teen Courts (Kuch, 2017; McNeely et al., 2019; Smokowski et al., 2020).

In addition to qualified staff, a number of formal diversion programmes relied on volunteers. These volunteers include students providing one-to-one support to children and young people (Amdur, 1987; Dunford et al., 1982; Emshoff & Blakely, 1983; Frazier & Cochran, 1986). In addition, adult volunteers could act as referees, panel members or court co-ordinators, whilst children and young people could volunteer in Teen Courts, taking the roles of juror, attorney or clerk (Beck et al., 2006; Brown, 2019; Butts et al., 2002; Davidson et al., 2011; DeFosset et al., 2017; Gaby

& Magnus, 2023; Hartsell & Novak, 2022; Penman, 2007; Smokowski et al., 2020; Stewart et al., 2005; Stickle et al., 2008).

How was the intervention delivered

Most formal diversion programmes were delivered face-to-face, in one-to-one interactions with children and young people (Amdur, 1987; Butts et al., 2002; Chernoff et al., 2022; Curran et al., 1977; Davidson et al., 2011; DeMarco et al., 2021; Dembo, Wareham, & Schmeidler, 2005; Dunford et al., 1982; Emshoff & Blakely, 1983; Gaby & Magnus, 2023; Haines et al., 2012; Hartsell & Novak, 2022; HMIP & HMICFRS, 2018; Lipsey et al., 1981; Kraus, 1981; Kuch, 2017; McNeely et al., 2019; Miller et al., 1998; Nadel et al., 2018; Penman, 2007; Quay & Love, 1977; Rausch, 1983; Schneider, 1988; Searle & Spier, 2006; Severy & Whitaker, 1982; Seyfrit et al., 1987; Smith et al., 2004; Smokowski et al., 2020; Soppitt & Irving, 2014; Stewart, 2008; Stickle et al., 2008; Wilson & Hoge, 2013).

In the case of cautions, community resolutions and civil citations, these primarily consisted of a one-off face-to-face interaction with the children and young people. Although, some children and young people were referred on to further support (HMIP & HMICFRS, 2018; Little, 2015; Nadel et al., 2018; Petitclerc et al., 2013; Stewart et al., 2005). A minority of formal diversion programmes drew on group activities dependent on the needs of the children and young people, including group sessions with families, group counselling, and peer-based sessions in schools (Bohnstedt, 1978; Crofoot, 1987; Davidson et al., 2011; Gummelt & Sullivan, 2016; Kuch, 2017; Lipsey et al., 1981; Miller et al., 1998; Quay & Love, 1977; Rausch, 1983).

Where formal diversion is delivered

Formal diversion programmes were delivered across a variety of settings, with some studies implementing programmes in multiple locations. The majority of formal diversion programmes tended to be based in the community (Amdur, 1987; Berger et al., 1977; Brown, 2019; Crofoot, 1987; Cunningham, 2007; Davidson et al., 2011; Dembo, Wareham, & Schmeidler, 2005; Dunford et al., 1982; Gummelt & Sullivan, 2016; Moore, 2015; Seyfrit et al., 1987; Smith et al., 2004; Smith et al., 1979; Wilson & Hoge, 2013). Some programmes were based in the children and young

people's homes (Amdur, 1987; DeMarco et al., 2021; Penman, 2007) or schools (Amdur, 1987; DeFosset et al., 2017; DeMarco et al., 2021; Dembo, Wareham, & Schmeidler, 2005; McNeely et al., 2019; Penman, 2007; Smokowski et al., 2020).

OoCDs and cautions in England and Wales tended to be delivered while the children and young people were in police custody, although some, such as community resolutions, can occur at the location where the police initially come into contact with the children and young people (HMIP & HMICFRS, 2018; Kraus, 1981; Little, 2015; Stewart et al., 2005; Wang & Weatherburn, 2018). One intervention was held, or contained elements which were held, in custody or the courthouse (Patrick & Marsh, 2005). One study delivered an intervention at Youth Offending Team premises (Soppitt & Irving, 2014).

Furthermore, some formal diversion programmes occurred in 'court-like' settings, including Teen Courts and Juvenile Drug Courts (e.g., Amdur, 1987; Beck et al., 2006; Chernoff et al., 2022; Gaby & Magnus, 2023; Gummelt & Sullivan, 2016; Hartsell & Novak, 2022; Miller et al., 1998; Penman, 2007; Searle & Spier, 2006). These were much more likely to be implemented in the United States than in the other countries included in this review.

Training for the providers of formal diversion

Fifteen of the studies reported that providers received special training, with the remaining studies not providing this information.

Frontline police officers in the UK received training to develop their understanding and implementation of OoCDs, with additional guidance provided on the staff intranet (HMIP & HMICFRS, 2018). In Australia, police officers were trained in cautions, with completion of this training necessary to become authorised to give cautions to children and young people (Little, 2015; Stewart et al., 2005). Staff involved in running the Youth Justice Liaison and Diversion Pilot Scheme in the UK were provided with training on assessing the mental health of children and young people, helping to ensure appropriate services were provided (Haines et al., 2012).

Community volunteers acting as panel members on the Welsh Bureaux were provided with a period of formal training from the Youth Offending Service, ensuring they were aware of options for outcomes and how to apply these (Brown, 2019). Similar training was provided to volunteers holding positions on

Teen Courts as peer jury members, as well as to staff co-ordinating them (Butts et al., 2002; Gaby & Magnus, 2023; Seyfrit et al., 1987; Smokowski et al., 2020). Student volunteers providing support to children and young people were also provided with training, although the type was not specified (Emshoff & Blakely, 1983).

More intensive training was provided in three studies. For a diversion programme in Stockton, USA, each member of staff received over 600 hours of training in theory and practice of family therapy. However, no outline of what the training included was provided and the age of the study questions its relevance today (Bohnstedt, 1978). Family workers involved in running US-based juvenile diversion programmes funded by the Office of Criminal Justice Planning were provided with two weeks intensive training, although there also lacked any information on what the training consisted of (Smith et al., 2004). Comparatively Amdur (1987) provided details on the type of training provided to staff, with training involving a didactic approach with assigned reading, group discussion, role-playing, and periodic tests. The content of training included theories of delinquency, information about the court system, and systematic study of the actual interventions to be used, as well as practical information about how to implement formal diversion programmes. However, due to the age of this study, the relevance today is questionable.

Duration of formal diversion

Most studies did not state the duration or intensity of the formal diversion programme. Where this information was available, children and young people were most likely to engage with the programme for between three- and six-months (Amdur, 1987; Benbow, 2019; Berger et al., 1977; Bohnstedt, 1978; Butts et al., 2002; Dembo, Wareham, & Schmeidler, 2005; Emshoff & Blakely, 1983; Lipsey et al., 1981; Quay & Love, 1977; Rose & Hamilton, 1970; Schneider, 1988; Smith et al., 2004). Some programmes were longer, lasting up to a year (Gummelt & Sullivan, 2016; Miller et al., 1998; Stewart, 2008).

Comparatively, where cautions were received, these could result in a one-off interaction, unless the children and young people were also referred on to additional services (HMIP & HMICFRS, 2018). For children and young people receiving further interventions, the duration and intensity were variable and

tailored to the individual's needs (Crofoot, 1987; Dembo et al., 2006; Dembo, Wareham, & Schmeidler, 2005; Dunford et al., 1982). For example, one study from the USA highlighted that children and young people with few psychosocial concerns and at low-risk of recidivism could complete a formal diversion programme within 90 days, whilst those with additional needs could remain in the programme for over a year (Dembo et al., 2008).

How Effective is the Intervention?

This section examines the effectiveness of formal pre-court diversion in reducing violence, crime and offending, and other related outcomes through a systematic review and meta-analysis, to provide a robust and objective summary of existing evidence, incorporating advanced statistical techniques, including robust variance estimators (Pustejovsky & Tipton, 2022), for improved accuracy.

Studies employed a variety of comparison conditions, categorised as either Treatment as Usual (TAU) or Alternative Interventions. These categories were based on how young people were processed within the justice system when they did not receive the formal pre-court diversion intervention. **Treatment as Usual (TAU)** was operationalised as the standard justice system response that would occur in the absence of the offer of diversion. This generally reflected formal system processing, including court appearances, probation, or adjudication. In contrast, **Alternative Interventions** included any responses other than TAU that involved structured action or service provision. These encompassed a range of diversionary options such as restorative justice conferences, informal adjustments, community-based supports, or other non-court-based approaches aimed at addressing youth behaviour outside of the traditional court pathway.

In this meta-analysis, and consistent with past research (e.g., Wilson et al., 2017; Wilson & Hoge, 2013b), we only included studies where formal diversion programmes were compared to TAU. Studies evaluating formal diversion against alternative interventions such as restorative justice, informal community resolutions, or other structured programmes, were excluded from the meta-analysis. This approach ensured that effect sizes reflected the distinct impact of formal diversion when measured against standard juvenile justice processing, providing a more consistent and interpretable comparison across studies.

This resulted in quantitative data from **36 studies** which provided information across a variety of outcomes related to the impact of formal pre-court diversion for children and young people.

These studies, included in the meta-analysis, assessed the effectiveness of formal pre-court diversion approaches across a total of **95,629 children and young people**. These studies employed a range of study designs, including:

- Quasi-Experimental Designs (QED): (n = 26, 72.2%)
- Randomised Controlled Trials (RCT): (n = 10, 27.8%)

The 36 effectiveness studies varied considerably in their methodological design and reporting characteristics. We examined each study on three design features: (1) how comparison groups were created, (2) the unit to which allocation was applied, and (3) the method used to generate the allocation sequence.

Most studies used pre-existing (natural) differences to create comparison groups (n = 21, 58.3%) while eleven others used a prospective design and assigned participants at the start of the study (30.5%), participant allocation was unclear in four studies (11.1%). Most studies allocated at the level of individual participants (n = 28, 77.8%); while eight studies failed to state the allocation process (22.2%). The methods used to generate allocation varied; truly random methods were used in ten studies (27.8%), six studies used quasi-random procedures (16.7%), while a further ten (27.8%) used non-random allocation. The remaining 10 studies (27.8 %) did not provide enough information to determine the method.

The effectiveness studies spanned multiple decades, with the earliest conducted by Rose (1970) and the most recent by Chernoff (2022) and Hartsell (2022). The studies were conducted in four different countries including:

- USA: (n = 25, 69.4%)
- Australia: (n = 6, 16.7%)
- England: (n = 3, 8.3%)
- Canada: (n = 2, 5.6%)

Details of where each study originated is available in the Characteristics of Included Studies table in Appendix 3. Studies were assessed for methodological quality using the YEF-EQA critical appraisal tool and were rated as follows:

- High: (n = 3, 8.3%)
- Moderate: (n = 24, 66.7%)
- Low: (n = 8, 22.2%)
- Very Low: (n = 1, 2.8%)

Funding information was not consistently reported; nearly half of the studies (n = 17, 47.2%) provided no funding source information. Where reported, funding came from a range of sources, including national government departments, either justice/criminal justice (n = 7, 19.4%) or health/social science (n = 5, 13.9%), state or local government justice or youth services (n = 3, 8.3%), mixed/shared funding (n = 3, 8.3%) or federal grants (n = 1, 2.8%). The intensity of interventions also varied, with one study classifying their intervention as high-intensity (2.8%), six as low-intensity (16.7%), and four as medium-intensity (11.1%). However, for 25 studies (69.4%), intensity could not be clearly determined due to a lack of detail.

Interventions were delivered across diverse settings, most commonly in community-based (n = 18, 50%) and justice system-based (n = 8, 22.2%) environments. One took place in a home or hybrid context (2.8%), while some studies lacked setting information entirely (25%).

Intervention components were mapped to our four-domain typology (see [Appendix 7](#) for additional examples):

1. **Accountability & Restoration** included programmes built around community service, restitution, or other restorative-justice activities (n = 13, 36.1%);
2. **Developmental Interventions** emphasised skill-building or mentoring and/or coaching, (n = 7, 19.4%);
3. **Supportive Casework** involved structured assessment, case planning, and regular check-ins, (n = 5, 13.9%), and;
4. **Therapeutic Support** presented interventions using family or individual counselling, crisis response, and parent-focused work (n = 3, 8.3%).

Eight studies (22.2%) did not clearly specify the intervention components.

In terms of demographic representation², some gender balance was reported in 16 studies (44.4%), while majority male samples ($\geq 70\%$) were present in 16 studies (44.4%) and a majority female sample ($\geq 60\%$)³ was present in only one study (2.8%). Gender balance was unclear in three (8.3%) studies. In respect of ethnicity, 12 studies (33.3%) indicated some diversity in the programme group, seven studies (19.4%) reported diverse/balanced participant groups, while six (16.7%) reported a majority white sample ($\geq 85\%$). Participants' ethnicity was unclear in 11 (30.6%) studies.

The **inclusion criteria** used across the 36 effectiveness studies varied in how children and young people were selected for participation in the formal pre-court diversion interventions. These criteria reflect different levels of risk, offence history, and referral processes:

- **Discretionary Referral (n = 27, 75%):** Referrals were made based on the discretion of practitioners, agencies, or the justice system. Eligibility was not strictly defined, potentially encompassing a mix of children and young people with first-time, minor, moderate, or repeat offences. The decision to refer was guided by professional judgement rather than formal eligibility rules.
- **First-Time Entrants (FTE) Only (n = 5, 13.9%):** These studies focused exclusively on children and young people with no prior recorded offences. The interventions targeted those identified as first-time entrants to the criminal justice system.
- **Minor Offences Only (n = 2, 5.6%):** Interventions in this category included only children and young people involved in minor offences (e.g., shoplifting, underage drinking). Referrals typically originated from schools or community agencies. While these studies may have included first-time offenders, this was not always explicitly stated.

² Studies were classified as male-targeted if the majority of participants (more than 50%) are male, female-targeted if the majority of participants (more than 50%) are female, or gender-balanced if there is an approximately equal representation of male and female participants.

³ Youth-justice studies with large female samples are much rarer than those with large male samples, so we applied different thresholds.

- **Repeat Offenders Only (n = 2, 5.6%):** These interventions were specifically designed for children and young people with prior offences or those identified as high-risk or chronically offending. Eligibility was based on offence history, focusing on those with repeated contact with the justice system.

Measured Outcomes

Across the 36 effectiveness studies, **8 outcome categories** were identified within the YEF Outcomes Framework⁴. These categories capture different aspects of youth violence, crime and offending, and other crime related outcomes, including:

1. Violence (k=10; n=5)
2. Crime and offending (k=200; n=35)
3. School engagement (k=5; n=4)
4. Drug and alcohol use (k=4; n=3)
5. Family relationships and support (k=3; n=2)
6. Self-esteem (k=2; n=2)
7. Community Connectedness (k=1; n=1)
8. Criminal peers (k=1; n=1)

The majority of these outcomes were derived from Criminal Justice System (CJS) records (n = 198, 91.7%); self-completed questionnaires (SCQ; n = 14, 6.5%); secondary data (n = 3, 1.4%); and school records: (n = 1, 0.5%).

We present summary results from two separate meta-analyses on violence and crime and offending outcomes below (Table 2).

Table 2. Summary of findings on violence and crime outcomes

Outcome	SMD	CI (95%)	P	% reduction	Impact rating	Number of studies	Evidence rating
Violence only	-0.21	-0.36 to - 0.05	0.01	24.7% reduction in	Moderate	5	2

⁴ The [YEF Outcomes Framework](#) identifies specific outcomes linked to reducing the risk of children and young people becoming involved in crime and violence, providing a structured approach for measuring the impact of interventions

				violent recidivism			
Crime & Offending	-0.16	-0.19 to - 0.12	<.001	14.4% reduction in crime	Moderate	35	3

Meta-analysis of violence outcomes related to Formal Pre-Court Diversion

Formal Pre-Court Diversion is associated with a moderate impact, corresponding with a 25% reduction in violence recidivism, based on 10 measured outcomes across five moderate-quality studies.

The primary focus in the initial analysis is the reduction and prevention of violence, as defined by YEF. Violence is a broad construct that incorporates incidents/behaviours as well as convictable offences. Violence may be of a physical, verbal, psychological, or sexual nature (YEF, 2023: p.12).

The team identified 10 outcomes measuring **violence** specifically across five studies. Violence outcomes were measured in a variety of ways, such as assessing whether children and young people were charged with a violent offence, either shortly after the intervention or over a longer follow-up period. Some studies looked at the most serious offence a child was involved in, including violent incidents such as 'brandishing a weapon' (Moore, 2015). Others considered patterns over time, including whether a child was involved in any further violent behaviour at 6, 12, or 18 months after the intervention. These varied measures reflect the different ways in which violent behaviour and involvement in the youth justice system were tracked, with a focus on understanding whether formal pre-court diversion approaches helped reduce harm and risk over time.

A total of $k = 10$ outcomes were included in the analysis. The estimated average outcome based on the random-effects model was $\hat{\mu} = -0.205$ (95% CI: -0.360 to -0.050). This estimate was statistically significantly different from zero $z = -2.59$, $p = 0.01$, although the effect became non-significant when adjusting for clustering across studies using robust variance estimation ($t = -1.95$, $df = 2.76$, $p = 0.15$). The estimate remained the same suggesting the original meta-analysis was

stable, although the increases in the p-value and standard error suggest that within-study correlation was underestimated in the original model.

Table 3: RVE Output for meta-analysis on violence outcomes

	Estimate	SE	t-stat	d.f (Satt)	p-val (Satt)	Sig
Intercept	-0.21	0.11	-1.95	2.76	0.15	Non-significant

In practical terms, this indicates that the intervention had a meaningful impact on violence-related outcomes across studies. Based on YEF impact categorisation, the effect size ($d = -0.21$) corresponds to a “moderate impact” rating, but the uncertainty around the adjusted estimate means the evidence should be interpreted cautiously.

According to the Q-test, low levels of heterogeneity were present $Q(9) = 11.89$, $p = 0.22$, $\hat{\tau}^2 = 0.021$, $I^2 = 37.49\%$. This level of variability suggests that the study results are fairly consistent across the five studies.

A forest plot showing the observed outcomes on violence is shown in Figure 1 below.

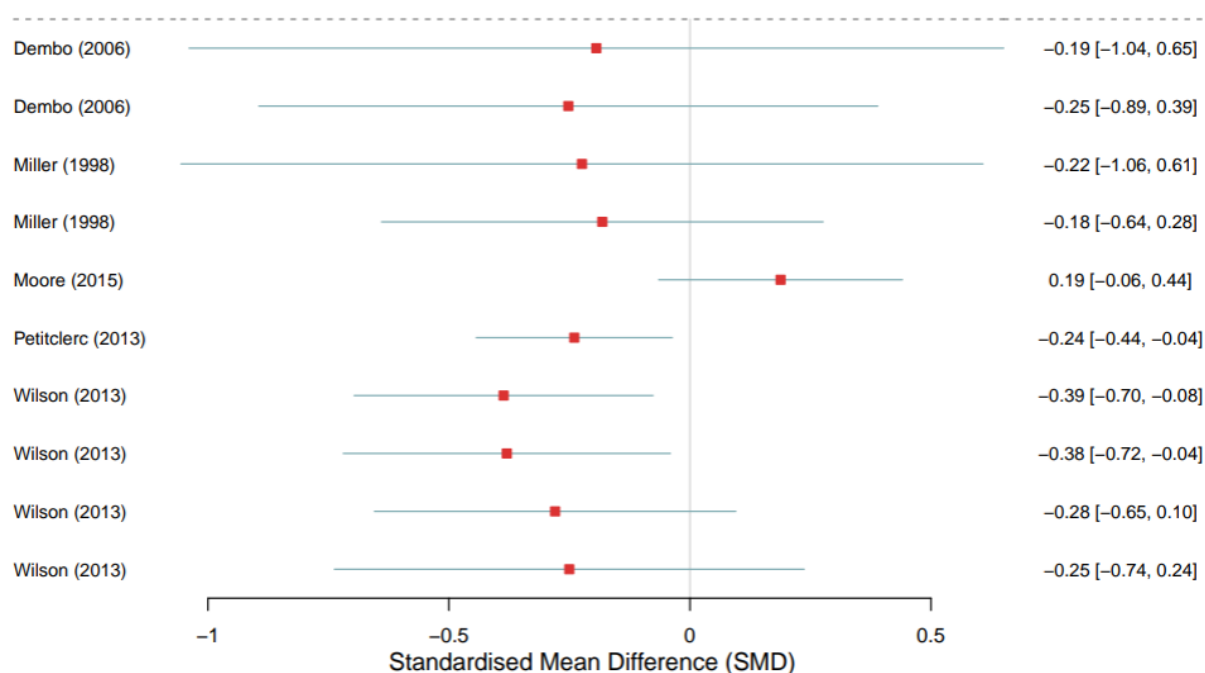


Figure 1: Forest plot showing the observed estimates of the random-effects model on violence outcomes (10 outcomes measured across 5 studies)

The SMD of -0.21 corresponds to a relative risk reduction of 24.8% in the risk of re-committing violence, with an absolute risk reduction of 7.2%⁵. Among those who are not diverted 29% go on to commit further violence, compared to 22% of those who undergo formal pre-court diversion (Figure 2).

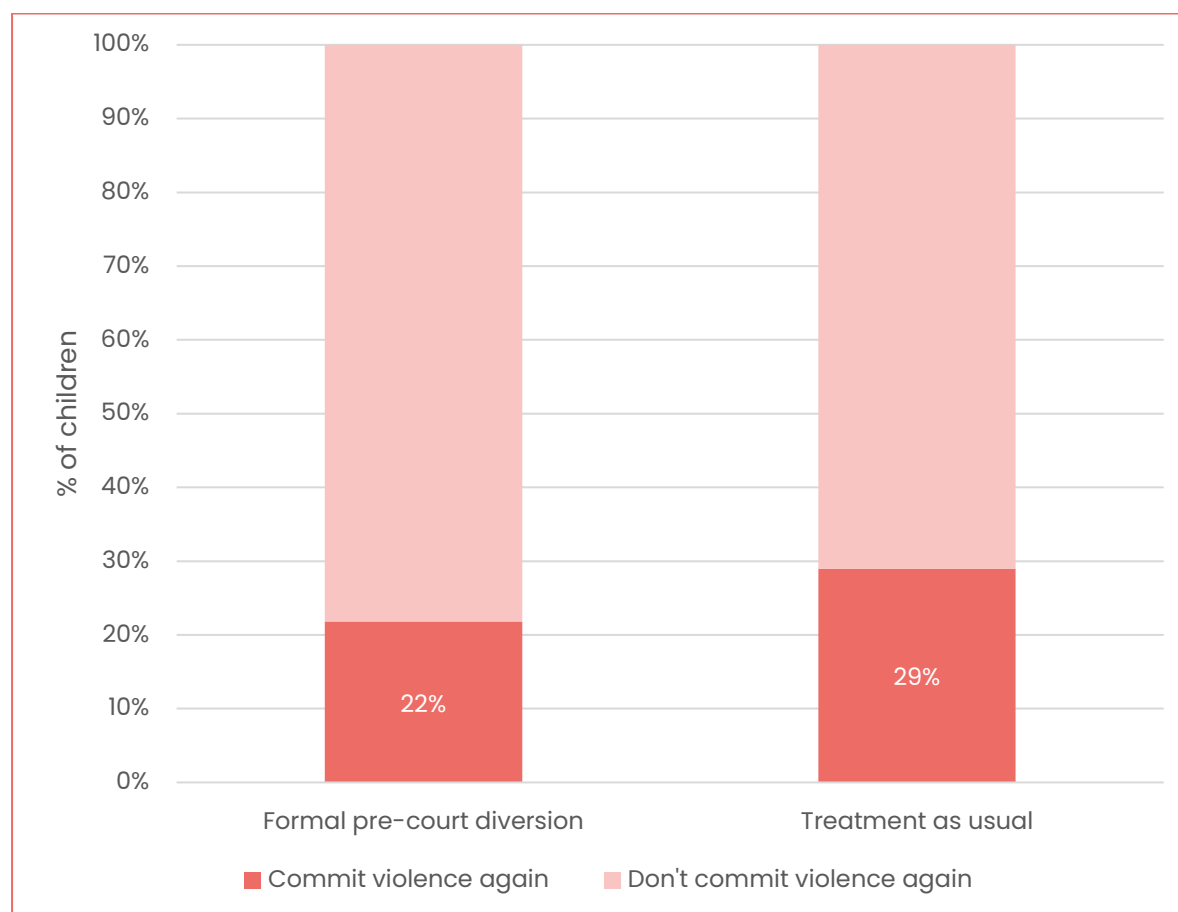


Figure 2: Risk of re-committing violence among children who undergo formal pre-court diversion and those who receive treatment as usual

⁵ Risk calculations use a 29% baseline prevalence of 'violent recidivism', if instead a 16% baseline prevalence of 'involvement in violence' had been used, the figures become a 28% relative reduction and a 4.5% absolute reduction.

Meta-analysis of crime and offending outcomes related to Formal Pre-Court Diversion

Formal Pre-Court Diversion is associated with a moderate impact, corresponding with a 14% decrease in crime and offending outcomes, based on 200 measured outcomes across 35 studies. However, there is substantial variation in results.

The majority of studies included **crime and offending** outcomes. A total of $k = 200$ outcomes were included in the analysis. The estimated average outcome based on the random-effects model was $\hat{\mu} = -0.156$ (95% CI: -0.191 to -0.120). This estimate was statistically significantly different from zero $z = -8.594$, $p < .001$, and remained significant even when adjusting for clustering across studies using robust variance estimation ($t = -5.12$, $df = 3.8$, $p = 0.008$). The estimate remained the same suggesting the original meta-analysis was stable, the increases in the p-value and standard error suggest that within-study correlation was underestimated in the original model.

Table 4: RVE Output for meta-analysis on crime and offending outcomes

	Estimate	SE	t-stat	d.f (Satt)	p-val (Satt)	Sig
Intercept	-0.16	0.03	-5.12	3.8	0.008	<.01

In practical terms, this indicates reliable evidence that the intervention had a meaningful impact on crime and offending outcomes across studies. Based on YEF impact categorisation, the effect size ($d = -0.156$) corresponds to a “moderate impact” rating and a 14% decrease in crime and offending behaviours compared to a baseline prevalence of 50%.

According to the Q-test, the true outcomes appear to be highly heterogeneous $Q(199) = 1335.109$, $p < 0.001$, $\hat{\tau}^2 = 0.040$, $I^2 = 81.03\%$. This level of variability suggests that differences in study characteristics may influence the effect sizes.

A forest plot showing the observed outcomes on crime and offending behaviour and the estimate based on the random-effects model is shown in Figure 3 below⁶.

⁶ Each study often reported multiple effect sizes (up to 200 in total), which would make a conventional forest plot unreadable. We therefore computed a single, inverse-variance-weighted summary effect per study for the “crime or offending behaviour” outcome and plotted one row per study to ensure clarity and interpretability. This approach differs from the violence-only forest plot, where every individual effect size is displayed separately.

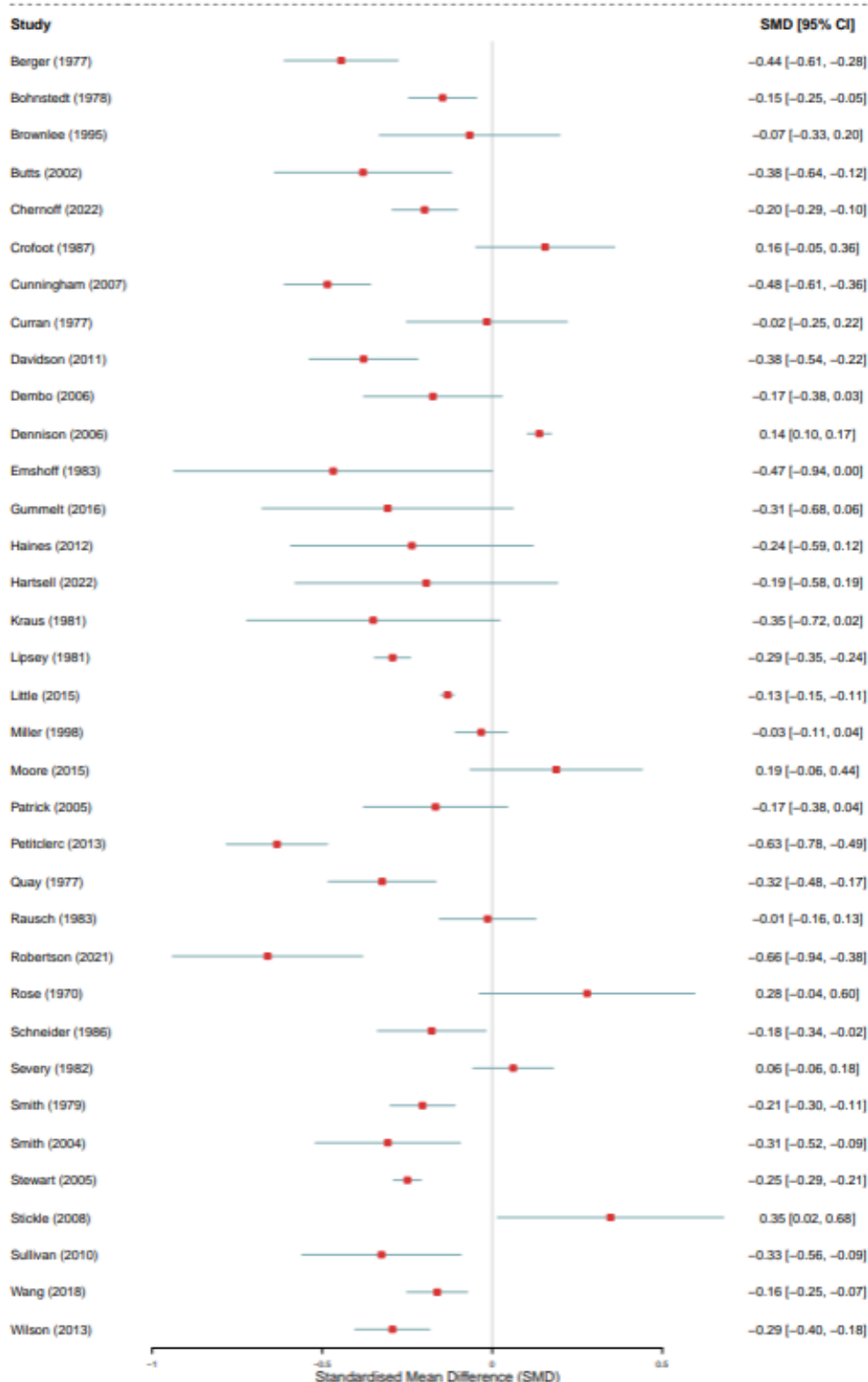


Figure 3: Forest plot showing the observed estimates of the random-effects model on crime and offending behaviour (200 outcomes across 35 studies)

The SMD of -0.16 corresponds to a relative risk reduction of 14.4%, and an absolute risk reduction of 7.2%. Among those who are not diverted, 50% go on to reoffend, compared to 43% of those who undergo formal pre-court diversion (Figure 4).

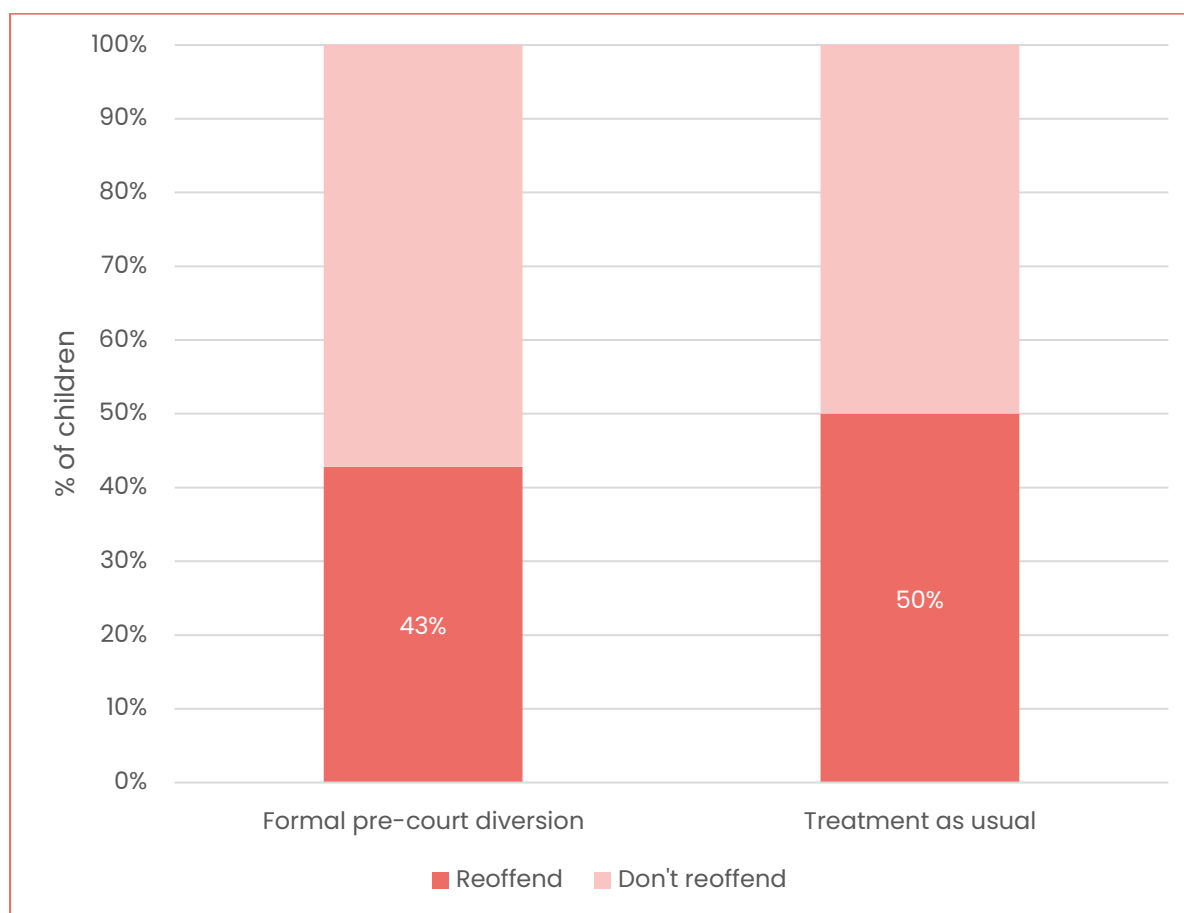


Figure 4: Risk of reoffending among children who undergo formal pre-court diversion compared to those who receive treatment as usual

Subgroup analysis

Gender

To investigate whether the effectiveness of formal pre-court diversion programmes varied according to the gender composition of the study samples, subgroup analyses were conducted across four categories: studies with majority

male samples, majority female samples, some gender balance, and those with no reported gender information (Table 5).

Table 5: Subgroup analysis on gender

Subgroup	k; n	SMD (95% CI)	p	Qw(df) ⁷ p-value	I ² %	Qb (df)	P ⁸
Majority Female	6; 1	-0.38 (-0.54 to -0.22)	<0.001	1.1 (5) p = 0.953	0	6.13 (3)	0.1
Majority Male	54; 16	-0.20 (-0.28 to -0.12)	<0.001	209 (53) p = <.001	75.3		
Some Gender Balance	122; 15	-0.13 (-0.17 to -0.09)	<0.001	1009 (121) p = <.001	82.2		
Unclear	18; 3	-0.16 (-0.29 to -0.02)	0.023	45 (17) p = <.001	70.2		

Note: k = number of effect sizes; n = number of studies; Qw = within studies; Qb = between studies.

The strongest pooled effect was observed in one study with a majority female sample (SMD = -0.38, 95% CI: -0.54 to -0.22, $p < .001$), suggesting a potential large reduction in offending-related outcomes. There is no heterogeneity as all outcomes are from the same study.

Studies with a majority male sample also showed a significant effect (SMD = -0.20, 95% CI: -0.28 to -0.12, $p < .001$), based on 54 outcomes. Heterogeneity was high ($I^2 = 75.3\%$), suggesting considerable variability in outcomes. Despite this, the overall direction of effect remained robust and consistently favourable toward diversion.

For samples with some gender balance, the pooled effect was smaller but still statistically significant (SMD = -0.13, 95% CI: -0.17 to -0.09, $p < .001$). This group

⁷ 'Qw (df) p-value' is the within-group heterogeneity test (Qw), which tests whether the variation in effect sizes within the subgroup is greater than would be expected by chance.

⁸ The p-value corresponds to whether heterogeneity between the subgroups (Qb) is statistically significant

comprised the largest number of outcomes ($n = 122$), offering the most stable estimate. However, heterogeneity was also high ($I^2 = 82.3\%$), indicating diverse outcomes across studies.

The unclear gender group ($n = 18$ outcomes) also yielded a statistically significant reduction ($SMD = -0.16$, 95% CI: -0.29 to -0.02 , $p = .023$), though the precision of the estimate was lower, and heterogeneity remained moderate ($I^2 = 70.3\%$).

Q-test for between-group heterogeneity

A Q-test for between-group heterogeneity was conducted to assess whether the effect sizes differed significantly across the gender subgroups. The result indicated that there was no significant difference between the gender subgroups ($Q_b = 6.13$, $df = 3$, $p = 0.1$). This suggests that while the effect sizes varied across subgroups, these differences were not statistically significant and, overall, gender did not appear to significantly moderate the intervention's effectiveness.

Ethnicity

To explore whether programme effectiveness varied by ethnicity, studies were grouped into three categories: Majority white ($>85\%$ white participants), Some Diversity (15–49% Black and Global Majority), and Diverse/Balanced ($\geq 50\%$ Black and Global Majority) (Table 6).

Table 6: Subgroup analysis on ethnicity

Subgroup	k; n	SMD (95% CI)	p	Qw(df) p-value	I ² %	Qb (df)	p
Diverse/ balanced	29; 6	-0.090 (-0.19 to -0.006)	0.065	484.23 (28) p=<.001	85	13.35 (3)	0.004
Majority white	97; 6	-0.12 (-0.16 to -0.07)	<0.001	442.60 (96) p=<.001	78.6		
Some diversity	39; 12	-0.26 (-0.34 to -0.17)	<0.001	67.73 (38) p= 0.002	46.6		
Unclear	35; 11	-0.24 (-0.34 to -0.15)	<0.001	129.34 (34) p=<.001	84.7		

Note: k= number of effect sizes; n = number of studies; Qw= within studies; Qb= between studies.

The strongest pooled effect was observed in studies classified as having some ethnic diversity (SMD = -0.26, 95% CI: -0.34 to -0.17, $p < .001$). This subgroup comprised 39 outcomes and demonstrated a large and statistically significant reduction in offending-related outcomes. Heterogeneity was moderate ($I^2 = 46.6\%$), suggesting relatively consistent effects across studies with a mixture of ethnic backgrounds.

Studies with unclear ethnicity reporting also suggested a relatively strong effect (SMD = -0.24, 95% CI: -0.34 to -0.15, $p < .001$), based on 35 effect sizes. However, the high heterogeneity ($I^2 = 84.7\%$) indicates considerable variability in results, and the lack of clarity around sample composition limits the interpretability and generalisability of this finding.

In samples with a majority white population, the intervention also yielded a statistically significant effect (SMD = -0.12, 95% CI: -0.16 to -0.07, $p < .001$), though the magnitude of impact was smaller. This subgroup, based on 97 effect sizes, provides a robust and stable estimate, but heterogeneity remained high ($I^2 = 78.6\%$), indicating a wide range of outcomes.

For samples coded as diverse or ethnically balanced, the effect size was smaller and only marginally significant (SMD = -0.09 , 95% CI: -0.19 to 0.006 , $p = .065$), with wide confidence intervals crossing zero.

Q-test for between-group heterogeneity

A Q-test for between-group heterogeneity was conducted to assess whether the effect sizes differed significantly across the ethnicity subgroups. The result indicated that the differences in effect sizes between the ethnicity subgroups are statistically significant ($Q_b = 13.35$, $df = 3$, $p = 0.004$), suggesting that ethnicity is a potentially meaningful moderator, which might influence the effectiveness of diversion programmes on crime and offending outcomes.

Country

Subgroup analyses were performed to assess whether the effectiveness of pre-court diversion interventions varied by country of implementation. Four countries were represented in the data: Australia, Canada, England, and the USA (Table 7).

Table 7: Subgroup analysis on country

Subgroup	k; n	SMD (95% CI)	P	Qw(df) p-value	I ² %	Qb (df)	p
Australia	92; 6	-0.13 (-0.17 to -0.08)	<0.001	927.58 (91) $p < .001$	85.5	10.89 (3)	0.01
Canada	10; 2	-0.38 (-0.56 to -0.19)	<0.001	45.85 (9) $p < .001$	75.4		
UK	8; 3	-0.03 (-0.23 to 0.17)	0.78	7.08 (7) $p = 0.421$	18		
USA	90; 24	-0.17 (-0.23 to -0.11)	<0.001	239.48 (89) $p < .001$	66.3		

Note: k= number of effect sizes; n = number of studies; Qw= within studies; Qb= between studies.

The strongest pooled effect was observed in studies from Canada (SMD = -0.38 , 95% CI: -0.56 to -0.19 , $p < .001$), based on 10 effect sizes. This suggests a potentially

large and statistically significant reduction in offending outcomes. However, the high heterogeneity ($I^2 = 75.4\%$) and smaller number of studies caution against overgeneralisation.

In the US, with 90 outcomes, the pooled estimate was also statistically significant (SMD = -0.17 , 95% CI: -0.23 to -0.11 , $p < .001$), indicating a possible moderate but reliable benefit of diversion programs. Heterogeneity was moderate ($I^2 = 66.3\%$), suggesting some variability in effectiveness across different settings or programme types.

Australian studies ($k = 92$) similarly suggested a small but significant effect (SMD = -0.13 , 95% CI: -0.17 to -0.08 , $p < .001$), with substantial heterogeneity ($I^2 = 85.8\%$), pointing to notable differences in implementation or population characteristics across included studies.

By contrast, findings from the UK find a small effect but were not statistically significant (SMD = -0.03 , 95% CI: -0.23 to 0.17 , $p = .781$), and the confidence interval includes zero. With only eight effect sizes and a relatively low heterogeneity estimate ($I^2 = 18\%$), the small effect size may reflect limited data or context-specific factors reducing intervention impact.

Q-test for between-group heterogeneity

A Q-test for between-group heterogeneity was conducted to assess whether the effect sizes differed significantly by country subgroups. The result indicated that the differences in effect sizes between the country subgroups are statistically significant ($Q_b = 10.89$, $df = 3$, $p = 0.012$), suggesting that country of origin potentially acts as a significant moderator, indicating that national or regional characteristics may influence programme impact.

Results from the meta-analysis on all outcomes related to Formal Pre-Court Diversion

A total of $k = 216$ outcomes were included in the analysis. The estimated average outcome based on the random-effects model was $\hat{\mu} = -0.148$ (95% CI: -0.182 to -0.114), and was statistically significant at the $p = <.001$ level, $z = -8.510$, $p < .001$, suggesting a moderate positive effect. When adjusting for clustering using robust variance estimation, the estimate remained the same suggesting the original meta-analysis was stable. The model remained statistically significant, although the increases in the p-value and standard error suggest that within-study correlation was underestimated in the original model ($t = -5.49$, $df = 4.38$, $p = 0.0041$, CI: -0.098 to 0.009).

Table 8: RVE Output for meta-analysis on all outcomes

	Estimate	SE	t-stat	d.f (Satt)	p-val (Satt)	Sig
Intercept	-0.15	0.03	-5.49	4.38	0.004	<.01

Heterogeneity

According to the Q-test for heterogeneity, the observed variability in effect sizes is significantly high: $Q(215) = 1382.854$, $p < .001$. This indicates that there is significant between-study variability, which is further supported by the tau-squared (τ^2) estimate of 0.04 ($SE = 0.027$), suggesting that approximately 4% of the variability in effect sizes is due to true differences between studies.

The I^2 statistic is 82.01%, meaning that 82.01% of the variability in effect sizes is attributable to heterogeneity (i.e., variability between studies), while the remaining 17.99% is due to random sampling error. This high I^2 value suggests substantial heterogeneity among the studies, indicating that differences in study characteristics, such as study design, intervention types, or population characteristics, may influence the reported effect sizes.

Given these results, the high degree of heterogeneity suggests that study-level characteristics, including interventions and study designs, may be important

moderators of effect sizes, and further investigation into these characteristics is warranted.

A forest plot showing the observed outcomes and the estimate based on the random-effects model is shown in Figure 5 below⁹.

⁹ Each study has been aggregated using RVE at the study-level for improved visualisation, thus, an overall mean effect is not displayed in the forest plot.

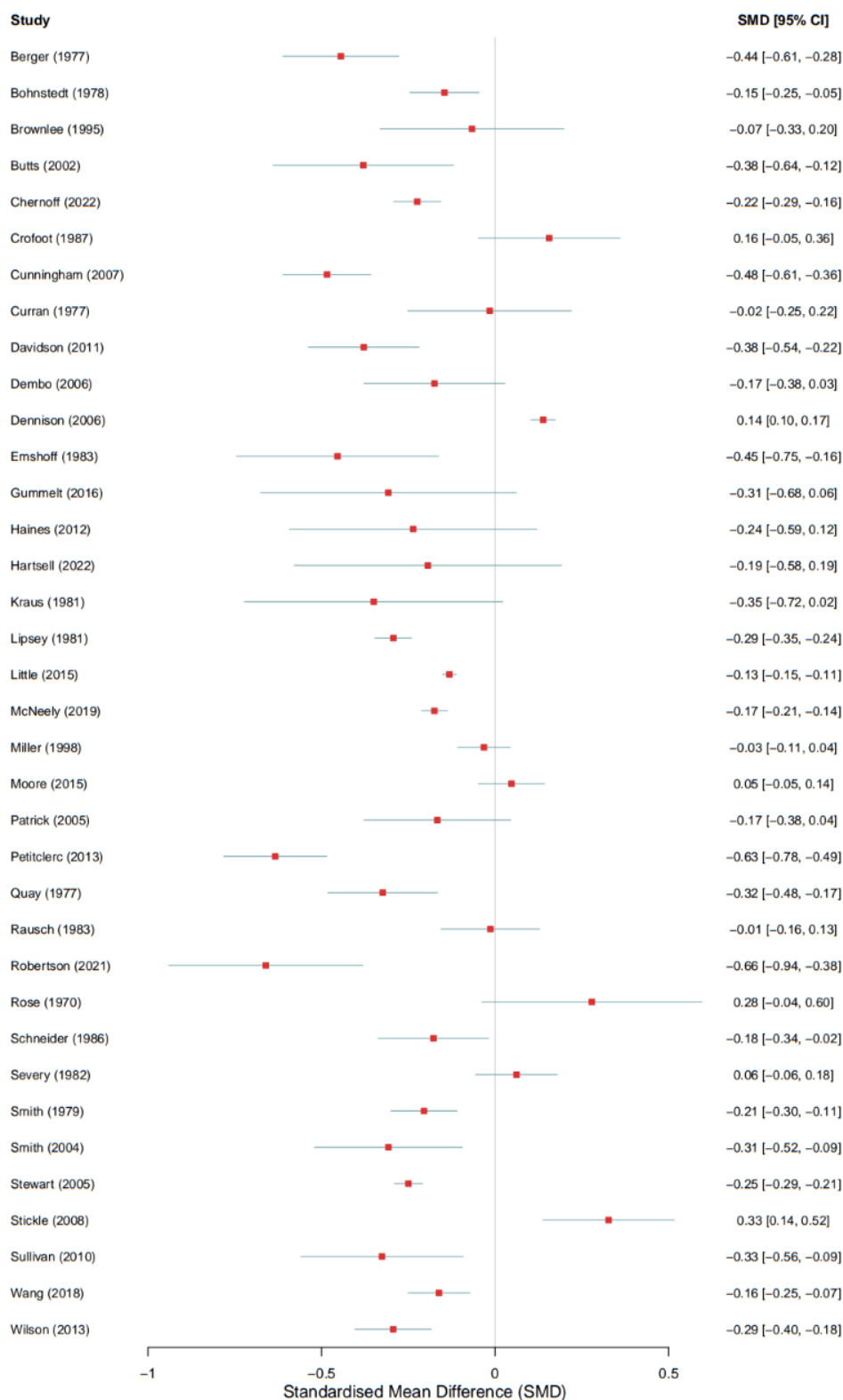


Figure 5: Forest plot showing the observed estimates of the random-effects model on outcomes (36 studies)

Subgroup analysis

Gender

To investigate whether the effectiveness of formal pre-court diversion programmes varied according to the gender composition of the study samples, subgroup analyses were conducted across four categories: studies with majority male samples, majority female samples, some gender balance, and those with no reported gender information (Table 9).

Table 9: Subgroup analysis on gender

Subgroup	k; n	SMD (95% CI)	P	Qw(df) p-value	I ² %	Qb (df)	P
Majority Female	6; 1	-0.38 (-0.54 to -0.22)	<0.001	1.12 (5) p = 0.95	0	4.98 (3)	0.17
Majority Male	58; 16	-0.17 (-0.25 to -0.09)	<0.001	229.5 (57) p = 0.00	76.4		
Some Gender Balance	134; 16	-0.13 (-0.17 to -0.09)	<0.001	1049.86 (133) p = <.001	83		
Unclear	18; 3	-0.16 (-0.29 to -0.02)	0.023	45.35 (17) p = 0.00	70.3		

Note: k= number of effect sizes; n = number of studies; Qw= within studies; Qb= between studies.

In samples with a majority female composition (k = 6), the effect of formal diversion appeared both statistically significant and relatively strong (SMD = -0.38, 95% CI: -0.54 to -0.22, $p < .001$). This contrasts with majority male samples (k = 58), which also suggested a significant moderate benefit of diversion on outcomes (SMD = -0.17, 95% CI: -0.25 to -0.09, $p < .001$), but with substantial heterogeneity ($I^2 = 76.4\%$). However, findings for the majority female group were from one study only.

Studies with some gender balance ($k = 134$) demonstrated a significant yet smaller effect ($SMD = -0.13$, 95% CI: -0.17 to -0.09 , $p < .001$), accompanied by high heterogeneity ($I^2 = 83.0\%$). Lastly, studies where gender composition was unclear ($k = 18$) also yielded a significant effect ($SMD = -0.16$, 95% CI: -0.29 to -0.02 , $p = .023$), with moderate heterogeneity ($I^2 = 70.3\%$).

Q-test for between-group heterogeneity

To formally test whether differences in effect sizes across gender categories contributed to overall heterogeneity, a Q-test for between-group heterogeneity was conducted. The result ($Qb = 4.98$, $df = 3$, $p = .173$) was not statistically significant suggesting no strong evidence that gender composition moderated the overall effect.

Ethnicity

To explore whether programme effectiveness varied by ethnicity, studies were grouped into three categories: Majority white ($>85\%$ white participants), Some Diversity (15–49% Black and Global Majority), and Diverse/Balanced ($\geq 50\%$ Black and Global Majority) (Table 10).

Table 10: Subgroup analysis on ethnicity

Subgroup	k; n	SMD (95% CI)	P	Qw(df) p-value	I ² %	Qb (df)	p
Diverse/ balanced	30; 7	-0.095 (-0.19 to -0.003)	0.043	549.47 (29), p=0.00	88.8	10.61 (3)	0.01
Majority white	106; 6	-0.12 (-0.16 to -0.07)	<0.001	466.01 (105), p <.001	77.7		
Some diversity	45; 12	-0.21 (-0.30 to -0.12)	<0.001	93.06 (44), p<.001	57.8		
Unclear	35; 11	-0.24(-0.34 to -0.15)	<0.001	129.34 (34), p= 0.00	84.7		

Note: k= number of effect sizes; n = number of studies; Qw= within studies; Qb= between studies.

For studies with a diverse or ethnically balanced sample ($k = 30$), the random-effects model suggested a small but statistically significant effect on outcomes ($SMD = -0.095$, 95% CI: -0.19 to -0.003 , $p = .043$). Despite this significant effect, heterogeneity was high ($I^2 = 88.8\%$), suggesting considerable variation in effect sizes across these studies.

The largest subgroup, consisting of samples with a majority white ethnicity ($k = 106$), also suggested a statistically significant reduction associated with diversion ($SMD = -0.17$, 95% CI: -0.16 to -0.07 , $p < .001$). The heterogeneity in this group was substantial but somewhat lower than in the diverse subgroup ($I^2 = 77.7\%$).

Studies classified as having some diversity in their ethnic composition ($k = 45$) showed a larger and more robust effect ($SMD = -0.21$, 95% CI: -0.304 to -0.124 , $p < .001$). Heterogeneity was moderate ($I^2 = 57.8\%$), suggesting more homogeneity in effect sizes within this subgroup.

Finally, samples where ethnicity was unclear or not reported ($k = 35$) also exhibited a significant moderate effect ($SMD = -0.24$, 95% CI: -0.34 to -0.15 , $p < .001$), accompanied by high heterogeneity ($I^2 = 84.7\%$). The lack of clarity in ethnicity complicates interpretation but suggests that the effectiveness of diversion in these studies may vary widely.

Q-test for between-group heterogeneity

A Q-test for between-group heterogeneity was conducted to assess whether the effect sizes differed significantly across the ethnicity subgroups. The result indicated that the differences in effect sizes between the ethnicity subgroups are statistically significant ($Q_b = 10.61$, $df = 3$, $p = 0.014$), suggesting that ethnicity is a meaningful moderator, influencing the effectiveness of diversion programmes on outcomes.

Outcomes

To explore whether programme effectiveness varied by outcome category, subgroup meta-analyses were conducted (Table 11).

Table 11: Subgroup analysis on outcome category

Subgroup	k; n	SMD (95% CI)	P	Qw(df) p-value	I ² %	Qb (df)	p
Crime and offending	200 ; 35	-0.16 (-0.19 to -0.12)	0.000	1335.12 (199) p=0.00	81	6.16 (6)	0.41
Violence	10; 5	-0.21 (-0.36 to -0.05)	0.01	11.89 (9) p =0.22	37.5		
Drug and alcohol use	4; 3	0.14 (-0.22 to 0.50)	0.453	24.31 (3) p <.001	84.1		
Family relationships and support	3; 2	-0.15 (-0.37 to 0.63)	0.17	3.78 (2), p=0.15	34.4		
School engagement	5; 4	-0.14 (-0.33 to 0.06)	0.17	9.98 (4), p=0.04	65.8		
Self-esteem	2; 2	0.09 (-0.26 to 0.43)	0.623	1.86 (1) p= 0.17	46.1		

For outcomes, the subgroup analyses showed that crime and offending outcomes were the most frequently reported, with 200 outcomes across 35 studies. This subgroup showed a statistically significant and moderate effect (SMD = -0.16, 95% CI: -0.19 to -0.12, $p < .001$) suggesting that diversion programmes are potentially associated with reductions in criminal behaviour. Despite this significant effect, heterogeneity was high ($I^2 = 81\%$), suggesting considerable variation in effect sizes across these studies. Similarly, violence-related outcomes (10 outcomes, 5 studies) showed a significant moderate effect (SMD = -0.21, 95% CI: -0.36 to -0.05, $p = 0.01$) with lower heterogeneity across studies ($I^2 = 37.5\%$), suggesting that these interventions may reduce violent behaviours in children and young people.

Several other subgroups also reported effects in the moderate or high impact range, though not all were statistically significant. For instance, school engagement showed a moderate effect (SMD = -0.14, 95% CI: -0.33 to 0.06, $p = 0.17$). In contrast, outcomes such as self-esteem and drug and alcohol use, effect

sizes suggested a potentially harmful direction of impact (ranging from SMD = 0.09 to 0.14); however, these findings were not statistically significant and were based on a small number of studies with wide confidence intervals. This indicates considerable uncertainty and limits the strength of any conclusions.

Q-test for between-group heterogeneity

To formally test whether differences in effect sizes across outcome categories contributed to overall heterogeneity, a Q-test for between-group heterogeneity was conducted. The results ($Q_b = 6.16$, $df = 6$, $p = 0.41$) indicated that differences between outcome categories were not statistically significant, suggesting that the type of outcome measured does not meaningfully explain the observed heterogeneity in intervention effects. Thus, while some outcome categories appear more responsive than others, this variation is not large enough to significantly account for differences across studies.

Decade

Subgroup meta-analyses were conducted by decade to explore variation in effect sizes over time, given the wide range of publication years across included studies (Table 12).

Table 12: Subgroup analysis on decade

Subgroup	k; n	SMD (95% CI)	p	$Q_w(df)$ p-value	$I^2\%$	$Q_b(df)$	P
1970s	20; 6	-0.21 (-0.35 to -0.08)	0.002	55.81 (19), p<.001	75.7	10.25 (5)	0.07
1980s	23; 7	-0.08 (-0.17 to 0.006)	0.067	65.99 (22), p=0.00	51.4		
1990s	20; 2	-0.04 (-0.12 to 0.04)	0.302	21.54 (19), p=0.31	11		

2000s	30; 8	-0.13 (-0.25 to -0.02)	0.026	597.2 (29), p=0.00	90.8		
2010s	112; 10	-0.14 (-0.19 to -0.10)	0.000	499.80 (111), p=0.00	81.7		
2020s	11; 3	-0.37 (-0.58 to -0.16)	0.000	62.2 (10), p=0.00	87.6		

The most recent decade, the 2020s, presented the largest effect size (SMD = -0.37, 95% CI: -0.58 to -0.16, $p < .001$) based on 11 outcomes from 3 studies. This finding suggests that the effectiveness of formal diversion seems stronger in recent years. However, as with earlier subgroup findings, caution is warranted due to the limited number of studies, high heterogeneity ($I^2 = 87.6\%$) and the potential for unmeasured confounding factors.

In the 2010s, which included the largest body of evidence (112 outcomes from 10 studies), the pooled effect size was -0.14 (95% CI: -0.19 to -0.10, $p < .001$) representing a moderate impact, although heterogeneity was high ($I^2 = 90.8\%$).

Conversely, studies from the 1980s and 1990s showed smaller and generally non-significant effects. The 1980s subgroup (7 studies, 23 outcomes) showed a small, non-significant effect (SMD = -0.08, 95% CI: -0.17 to 0.0006, $p = 0.067$) with moderate heterogeneity ($I^2 = 51.4\%$) similar to the 1990s subgroup (SMD = -0.04, 95% CI: -0.12 to 0.04, $p = 0.302$), although this result was taken from 2 studies only. The 1990s showed low heterogeneity ($I^2 = 11\%$), albeit this result was taken from 2 studies only.

The 1970s showed a statistically significant and moderate effect (SMD = -0.21, 95% CI: -0.35 to 0.08, $p = 0.002$), based on 20 outcomes from 6 studies. This suggests that early diversion programmes may have been effective, although differences in study design or context may limit direct comparisons to later decades. They were also less effective than the most recent studies.

Q-test for between-group heterogeneity

A Q-test for between-group heterogeneity was conducted to assess whether the effect sizes differed significantly across the decade subgroups. The result ($Q_b = 10.25$, $df=5$, $p = 0.07$) was not statistically significant suggesting that decade of publication does not significantly contribute to differences in effect sizes.

Country

To investigate potential differences in the effectiveness of formal pre-court diversion programmes, subgroup analyses were conducted by country (Table 13).

Table 13: Subgroup analysis on country

Subgroup	k; n	SMD (95% CI)	P	Qw(df) p-value	I ² %	Qb (df)	P
Australia	92; 6	-0.13 (-0.17 to -0.08)	<0.001	972.58 (91), p<.001	85.8	10.47 (3)	0.02
Canada	10; 2	-0.38 (-0.56 to -0.19)	<0.001	45.85 (9), p=0.00	75.4		
UK	8; 3	-0.03 (-0.23 to 0.17)	0.78	7.08 (7), p=0.42	18		
US	106; 25	-0.15 (-0.20 to -0.10)	<0.001	286.95 (105), p<.001	72.7		

Note: k= number of effect sizes; n = number of studies; Qw= within studies; Qb= between studies.

Across all four countries analysed (Australia, Canada, the UK, and the US), there was variation in both the magnitude and statistical significance of intervention effects.

In Canada, the pooled effect appeared the strongest (SMD = -0.38 , 95% CI: -0.56 to -0.19 , $p < .001$), suggesting a high-impact reduction in offending outcomes. The model showed substantial heterogeneity ($I^2 = 75.4\%$), suggesting variability across the included outcomes. While the results are statistically robust ($p < .001$), the relatively small number of studies ($n = 2$ studies, 10 outcomes) limits generalisability and warrants cautious interpretation.

The US had the largest number of effect sizes ($n = 106$), and results suggested a significant moderate effect (SMD = -0.15 , 95% CI: -0.20 to -0.10 , $p < .001$). Heterogeneity was moderate ($I^2 = 72.7\%$) suggesting a consistent though modest impact of diversion interventions in the US context, supported by a relatively strong evidence base.

In Australia, the intervention also demonstrated a potential moderate and statistically significant effect (SMD = -0.13 , 95% CI: -0.17 to -0.08 , $p < .001$), based on 92 outcomes. However, heterogeneity was high ($I^2 = 85.8\%$), indicating considerable variability among the included studies. As such, the pooled result remained significant, but the high heterogeneity suggests differences in programme design, populations, or measurement methods may influence outcomes.

In contrast, results from the UK showed small effects and were not statistically significant (SMD = -0.03 , 95% CI: -0.23 to 0.17 , $p = 0.78$), with a very low overall effect and wide confidence intervals. The small number of outcomes ($n = 8$) likely contribute to the lack of precision. Additionally, heterogeneity was low ($I^2 = 18.0\%$), indicating consistent findings but these consistently suggest a negligible impact.

Q-test for between-group heterogeneity

A Q-test for between-group heterogeneity was conducted to assess whether the effect sizes differed significantly across the country subgroups. The result ($Q_b = 10.47$, $df=3$, $p = 0.02$) indicated that the differences in effect sizes between the countries was statistically significant. This suggests that country might be a meaningful moderator, influencing the effectiveness of diversion programmes on outcomes.

Moderator analysis (Meta-regression models 1-5)

Following these three meta-analyses, meta-regressions were conducted to explore the effects of moderators including study design, study quality, intervention features, and outcomes. See [Appendix 1](#) for an overview of the methods used in this section and [Appendix 3](#) for a list of the studies that provided data for the meta-analyses.

Moderator Analysis 1. Quality Moderators

Characteristics added to model 1 include:

- Study Design
- Study Timing
- Unit of allocation into group
- Method of allocation into group
- Quality appraisal as assessed by the YEF-EQA tool

The meta-regression analysis examining study-level moderators suggest no statistically significant predictors of effectiveness in reducing crime and offending among children and young people. While several variables were examined, including study design, timing and allocation into the study, none reached levels of statistical significance.

Table 14: Results from moderator analysis 1 with study-quality moderators

Moderator	Estimate	SE	95% CI: Lower	95% CI: Upper	P-value	Sig
Study Design: Quasi-experimental Design (QED)	-0.29	0.28	-0.83	0.25	0.30	
Study Design: Randomised Controlled Trial (RCT)	-0.07	0.29	-0.65	0.51	0.81	
Study Timing: Prospective	-0.11	0.25	-0.61	0.38	0.65	
Study Timing: Retrospective	0.04	0.25	-0.46	0.53	0.88	
Unit of Allocation: Not stated/unclear	0.05	0.13	-0.21	0.30	0.73	
Method of Allocation: Not stated/ unclear	-0.02	0.13	-0.27	0.24	0.90	
Method of Allocation: Quasi- random	-0.03	0.13	-0.29	0.23	0.82	
YEF_EQA: Low	0.08	0.17	-0.25	0.42	0.63	
YEF_EQA: Moderate	0.08	0.16	-0.23	0.39	0.60	
YEF_EQA: Very Low	-0.18	0.29	-0.76	0.40	0.54	

Although no individual moderator showed a significant effect, the overall test of moderators ($QM(df=10) = 30.68, p = < .0001$) suggests that the included moderators collectively may explain some variability in effect sizes. However, substantial residual heterogeneity remained after accounting for moderators

($QE(df=206) = 11148.45, p < .0001$) suggesting that other unmeasured factors may contribute to the variation in effect sizes.

Moderator Analysis 2. Intervention-level Moderators

Characteristics added to model 2 include:

- What country the intervention took place
- The intensity of the intervention
- The key components of the intervention
- Where the intervention took place
- Special training given to people providing the intervention

The meta-regression analysis examining intervention-level moderators suggested no statistically significant predictors of effectiveness in reducing crime and offending among children and young people (Table 15).

Table 15: Results from moderator analysis 2 with intervention-level moderators

Moderator	Estimate	SE	95% CI: Lower	95% CI: Upper	P-value	Sig
Country: Australia	-0.28	0.29	-0.85	0.30	0.34	
Country: Canada	-0.58	0.32	-1.20	0.04	0.06	
Country: England	0.02	0.32	-0.60	0.65	0.94	
Country: US	-0.31	0.27	-0.84	0.22	0.25	
Intervention Intensity: Low	0.08	0.29	-0.49	0.66	0.77	
Intervention Intensity: Medium	-0.17	0.31	-0.78	0.44	0.58	
Intervention Intensity: Unclear	0.12	0.28	-0.43	0.68	0.66	
Component: Developmental Interventions	0.20	0.12	-0.04	0.44	0.10	
Component: Supportive	0.10	0.12	-0.14	0.34	0.41	

Casework						
Component: Therapeutic Support	-0.19	0.16	-0.50	0.12	0.22	
Component: Unclear	0.12	0.13	-0.14	0.37	0.37	
Intervention Setting: Home or Hybrid Settings	0.03	0.27	-0.51	0.56	0.92	
Intervention Setting: Justice System-Based Settings	-0.03	0.11	-0.23	0.18	0.81	
Intervention Setting: Unclear	-0.12	0.12	-0.36	0.12	0.34	
Implementer Training: Yes	-0.06	0.11	-0.27	0.15	0.56	

The test of moderators ($QM(df=15) = 44.26, p = < .0001$) suggests that the intervention-level moderators may explain some variability in effect sizes across studies. However, substantial residual heterogeneity remained after accounting for moderators ($QE(df=201) = 1071.29, p < .0001$) suggesting that other unmeasured factors may contribute to the variation in effect sizes.

Moderator Analysis 3. Population-Level Moderators

Characteristics added to model 3 include:

- The inclusion criteria
- Ethnicity of the sample
- Gender of the sample

The meta-regression analysis examining population-level moderators suggested no statistically significant predictors of effectiveness in reducing crime and offending among children and young people (Table 16).

Table 16: Results from moderator analysis 3 with population-level moderators

Moderator	Estimate	SE	95% CI Lower	95% CI Upper	P-value	Sig
Inclusion Criteria: Discretionary Referral	-0.32	0.23	-0.77	0.12	0.15	
Inclusion Criteria: FTE only	-0.46	0.25	-0.96	0.04	0.07	
Inclusion Criteria: Minor offences only	-0.28	0.26	-0.80	0.23	0.28	
Inclusion Criteria: Repeat offenders only	0.05	0.28	-0.51	0.61	0.86	
Ethnicity: Majority White Sample	0.12	0.11	-0.09	0.33	0.26	
Ethnicity: Some Diversity	-0.06	0.09	-0.24	0.13	0.55	
Ethnicity: Unclear	0.00	0.04	-0.07	0.08	0.93	
Gender: Majority Male Sample	0.11	0.22	-0.33	0.55	0.62	
Gender: Some Gender Balance	0.15	0.22	-0.29	0.58	0.51	
Gender: Unclear	0.13	0.26	-0.37	0.63	0.60	

The overall test of moderators ($QM(df=10) = 39.16, p = < .0001$) suggests that the included population characteristics may explain some variability in effect sizes across studies, although no single factor was significantly predictive. Substantial residual heterogeneity remained after accounting for moderators ($QE(df = 206) = 1202.45, p < .0001$) suggesting that other unmeasured factors may contribute to the variation in effect sizes.

Moderator Analysis 4. Outcome Moderators

Characteristics added to model 4 include:

- YEF's Outcome Category
- What methods were used to collect the outcome data

The meta-regression examining outcome-level moderators suggests that outcome characteristics may have significantly influenced intervention effectiveness (Table 17).

Table 17: Results from moderator analysis 4 with outcome moderators

Moderator	Estimate	SE	95% CI Lower	95% CI Upper	P- value	Sig
Outcome Category: Crime and Offending	-0.20	0.04	-0.28	-0.12	<.0001	***
Outcome Category: Community Connectedness	-0.41	0.26	-0.93	0.10	0.12	
Outcome Category: Criminal Peers	-0.12	0.1	-0.31	0.07	0.21	
Outcome Category: Drug and alcohol use	-0.24	0.08	-0.40	-0.08	0.00	**
Outcome Category: Family Relationships and Support	-0.45	0.13	-0.7	-0.20	0.00	***
Outcome Category: School engagement	-0.61	0.24	-0.80	-1.08	-0.14	*

Outcome Category: Self-esteem	-0.37	0.14	-0.65	-0.09	0.01	*
Data sources: School records	0.52	0.41	-0.29	1.33	0.21	
Data sources: SCQ	0.14	0.11	-0.08	0.36	0.21	
Data sources: Secondary Data	0.43	0.27	-0.09	0.95	0.11	

Interventions targeting drug and alcohol use ($\hat{\mu} = -0.24$, $p < 0.001$), family relationships and support ($\hat{\mu} = -0.45$, $p < 0.001$), school engagement ($\hat{\mu} = -0.61$, $p = 0.01$), and self-esteem ($\hat{\mu} = -0.36$, $p = 0.01$) showed the largest potential reduction in offending. Smaller but significant effects were observed for crime and offending ($\hat{\mu} = -0.20$, $p < 0.001$).

Data collection methods such as secondary data ($\hat{\mu} = 0.43$, $p = 0.11$), self-completion questionnaires ($\hat{\mu} = 0.14$, $p = 0.21$) and school records ($\hat{\mu} = 0.52$, $p = 0.21$) did not appear to significantly moderate effect sizes.

The overall model explained some of the variance in effect sizes ($QM(df=10) = 33.13$, $p < .0001$). However, substantial residual heterogeneity remained after accounting for moderators ($QE(df=206) = 1368.66$, $p < .0001$) suggesting that other unmeasured factors may contribute to the variation in effect sizes.

Publication Bias

To assess the presence of publication bias in our meta-analysis, we employed several statistical tests designed to detect funnel plot asymmetry, which can be indicative of such bias.

Funnel Plot Assessment: A funnel plot was generated to visually inspect for publication bias. In the absence of bias, the plot should resemble a symmetrical inverted funnel, with effect sizes from smaller studies scattering widely at the bottom and larger studies clustering near the top. Our funnel plot appeared symmetrical, suggesting no visual evidence of publication bias.

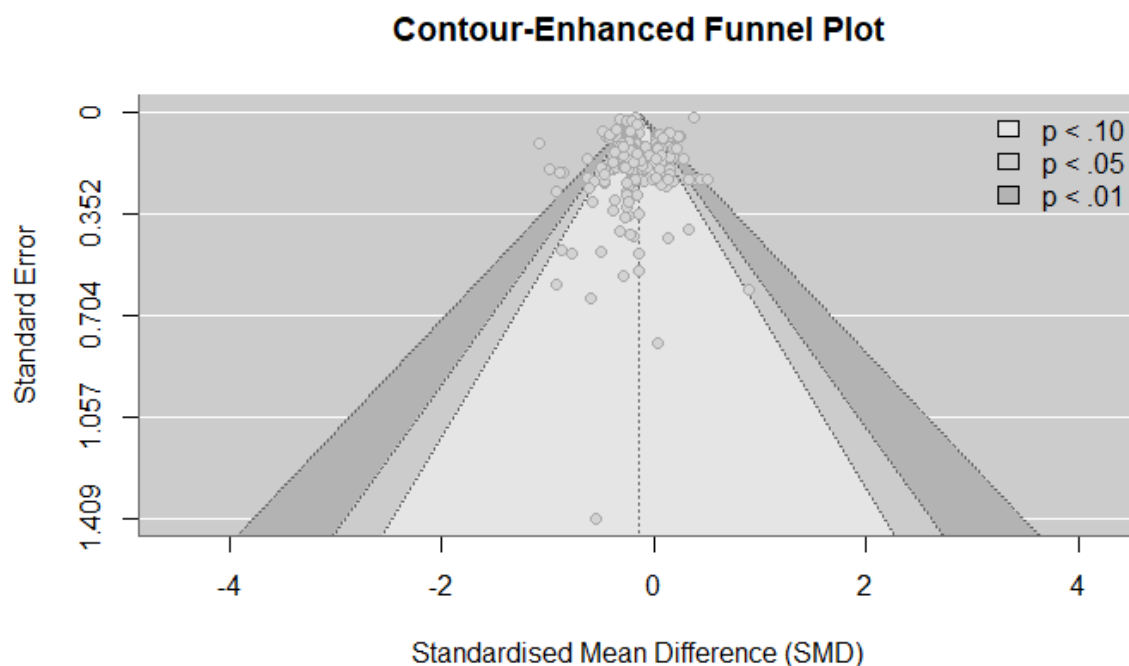


Figure 6: Funnel plot of effect sizes against standard errors

Regression Tests for Funnel Plot Asymmetry (Egger's Test and Variants): The Egger's test evaluates the relationship between the standard error of each study and its corresponding effect size. The regression test for funnel plot asymmetry indicated no statistically significant evidence of small study effects ($t = -0.99$, $df = 214$, $p = 0.32$). This non-significant result suggests no systematic asymmetry in the funnel plot and thus no strong indication of publication bias.

Trim-and-Fill Method: This method estimates the number of potentially missing studies that could be due to publication bias.

The Duval and Tweedie trim-and-fill method suggested the presence of 22 potentially missing studies on the right-hand side of the funnel plot ($SE = 9.40$). These would represent smaller or less precise studies with weaker or even null effects of formal diversion. After imputing these missing studies and re-estimating the meta-analysis ($k = 238^{10}$), the adjusted pooled effect size shifted slightly from approximately -0.15 to -0.11 (95% CI: -0.15 to -0.08), which remained statistically significant ($z = -5.98$, $p < .0001$). This attenuation indicates that

¹⁰ This figure includes 22 hypothetical trials.

while publication bias may have slightly inflated the estimated effect, the overall conclusion that formal diversion leads to a small but meaningful reduction in offending outcomes still holds.

The PET (Precision Effect Test) further supports this interpretation, with a slope of -0.417 ($z = -1.97$, $p = 0.049$), indicating a statistically significant small-study effect. The PEESE (Precision Effect Estimate with Squared Standard Error) model produced a slope of -0.639 ($z = -1.66$, $p = 0.097$), which was not statistically significant but trended in the same direction.

Taken together, these results suggest moderate evidence of publication bias, likely favouring the inclusion of studies reporting stronger effects. Nevertheless, the adjusted effect size remains statistically significant, and the magnitude of adjustment is not sufficient to overturn the main findings. Heterogeneity remained substantial even after imputation ($\tau^2 = 0.054$, $I^2 = 85.2\%$), indicating that between-study variability is driven by more than just selective reporting.

PET and PEESE models: The Precision Effect Test (PET) regresses effect sizes on their standard errors and is designed to detect inflated effects in studies with lower precision. The PET model yielded a statistically significant intercept ($\beta = -0.09$, $SE = 0.03$, $z = -2.69$, $p = 0.007$, 95% CI: -0.16 to -0.02) indicating a small average effect across studies. The slope of the standard error co-efficient was also statistically significant ($\beta = -0.42$, $SE = 0.21$, $z = -1.97$, $p = 0.05$, 95% CI: -0.83 to -0.002), suggesting that smaller studies tended to report larger effect sizes consistent with the presence of small-study bias.

The Precision Effect Estimate with Standard Error (PEESE) model which refines PET by using squared standard errors (SE^2) to better model the relationship between effect size and study precision, yielded similar but slightly more conservative findings. The intercept remained statistically significant ($\beta = -0.13$, $SE = 0.02$, $z = -6.62$, $p < .0001$, 95% CI: -0.17 to -0.09) confirming a non-zero average effect. However, the slope coefficient for the SE^2 was not statistically significant ($\beta = -0.64$, $SE = 0.38$, $z = -1.66$, $p = 0.096$, 95% CI: -1.39 to 0.12) indicating weaker evidence for a systematic relationship between effect size and precision under this model. While the PET model showed marginal significance in detecting small-study effects, the PEESE model suggests that this relationship may not be robust.

Taken together, the analyses provide a nuanced view of potential publication bias in this meta-analysis. While there is some indication of small-study effects, particularly in the PET model, this was not consistently supported across all methods. The results suggest that while a degree of small-study bias cannot be entirely ruled out, there is no strong or systematic evidence of publication bias.

Sensitivity Analyses

We conducted influence diagnostics and leave-one-out sensitivity analysis to assess the robustness of the meta-analytic findings.

We computed Cook's distance to identify studies that disproportionately influenced the overall effect. The Cook's distance threshold was set at 0.019 and the analysis showed no studies were identified as potentially influential.

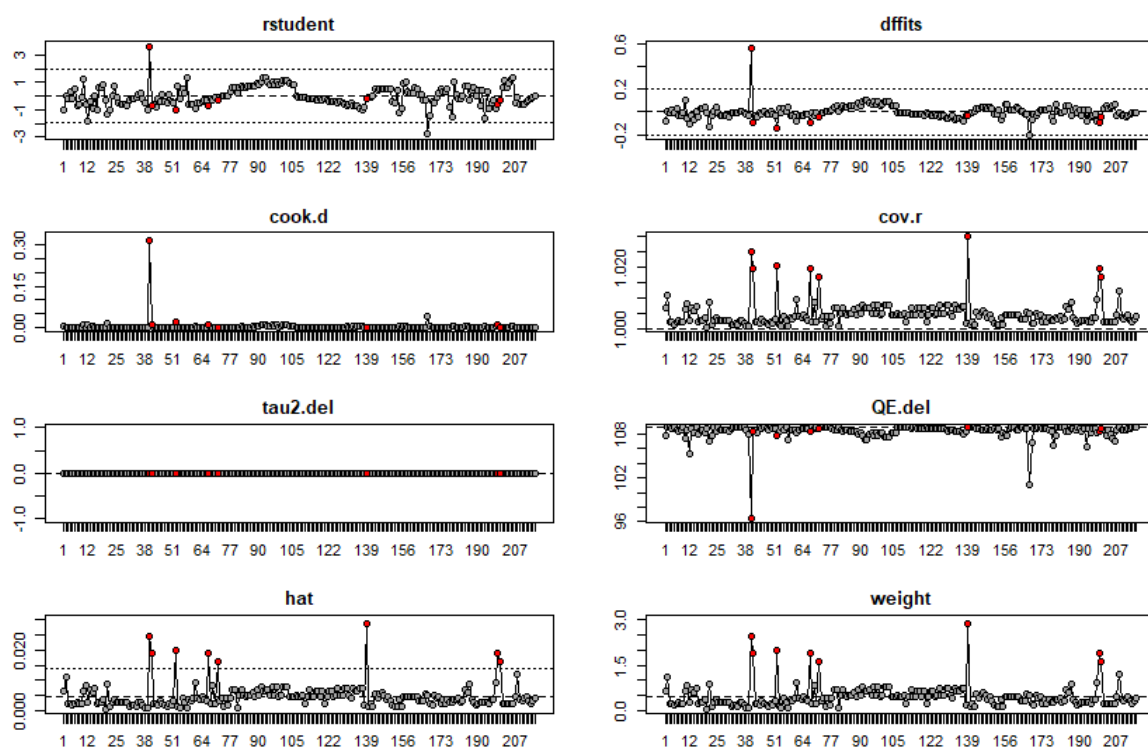


Figure 7: Influence diagnostics for individual studies

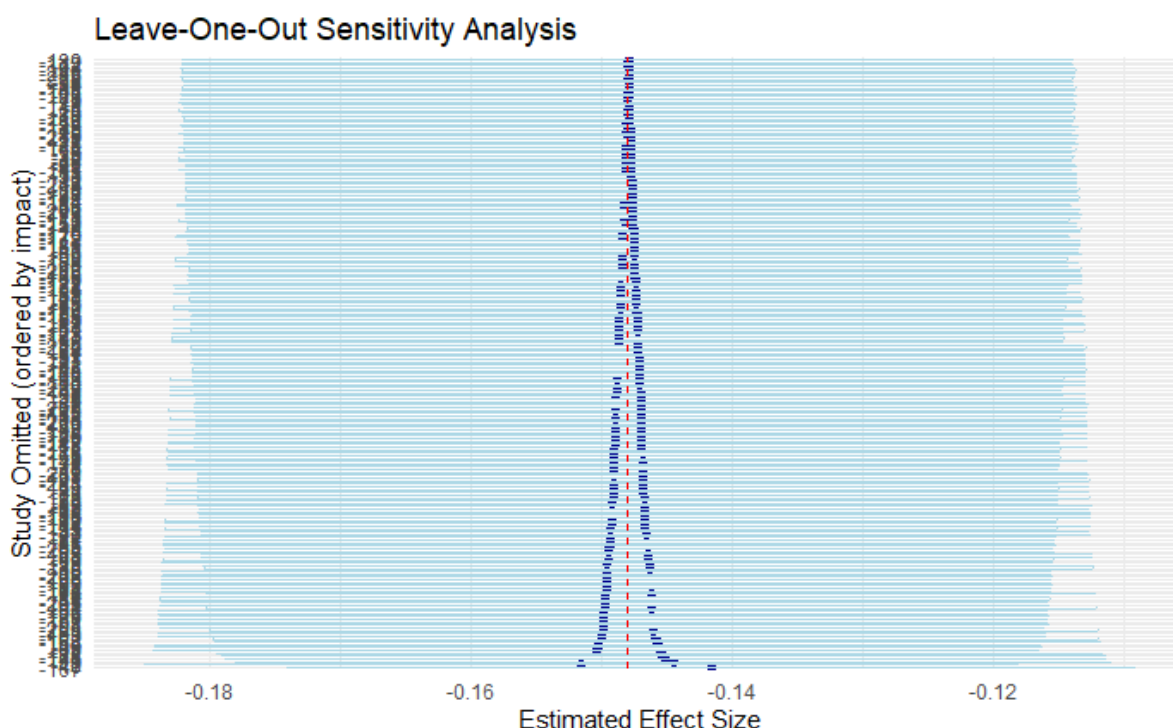


Figure 8: *Leave-One-Out Sensitivity Analysis¹¹*

The largest change in the pooled effect estimate, when omitting a single study during the leave-one-out analysis, was 0.006. In simple terms, none of the individual removals resulted in a statistically significant change in the direction or significance of the pooled effect. Confidence intervals for the leave-one-out estimates consistently overlapped with zero and with each other, indicating that no single study exerted disproportionate influence on the overall results. Additionally, the dashed red line in the plot indicates the original pooled effect size, and the minimal deviation of the black points from this line further supports the robustness of the findings. These results suggest that the overall effect estimate is not unduly influenced by any individual study and **no individual effect size materially altered the direction or precision of the overall result.**

The analysis also confirmed that no single outcome substantially influenced the heterogeneity statistics. Although the original meta-analysis indicated moderate between-study heterogeneity ($I^2 = 77.7\%$), recalculating I^2 during leave-one-out

¹¹ This plot shows the effect size estimates for each leave-one-out iteration, with the original pooled effect size (red dashed line) for reference. None of the individual removals caused a significant shift in the overall estimate.

sensitivity analyses revealed consistently higher values (ranging from 76.1% to 78.2%, mean = 77.7%).

These findings suggest that the overall effect estimate is not unduly influenced by any individual study, and no individual effect size materially altered the direction or precision of the overall result.

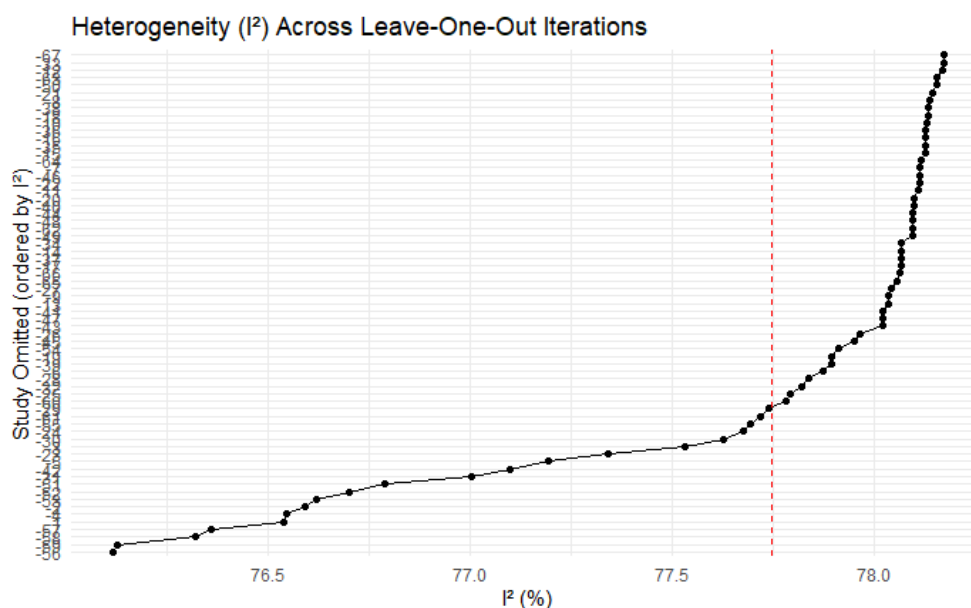


Figure 9: Heterogeneity (I^2) across Leave-One-Out iterations

Collectively, these findings support the robustness of the results, indicating that no individual study disproportionately drives the observed heterogeneity or alters the overall results.

How Secure is the Evidence?

Violence outcomes

Our confidence in the findings on the prevention and reduction of violence¹² is Low. The meta-analysis included 10 violence-related outcomes drawn from five studies that assessed the impact of formal diversion programmes on children and young people. All studies, as assessed using the YEF-EQA, were rated as moderate quality. All moderate-quality studies fell within **Type C impact evaluations** (one RCT and four QEDs), resulting in an evidence security rating of **Level 2**.

Crime and offending outcomes

Our confidence in the findings on crime and offending is Moderate. The meta-analysis included 200 crime and offending related outcomes drawn from 35 studies that assessed the impact of formal diversion programmes on children and young people.

Study quality, as assessed by the YEF-EQA, ranged from very low to high. The studies included:

- 10 RCTs: of these, one was rated as high quality (**Type A**), eight as moderate quality (**Type C**), and one as low quality (**Type D**).
- 25 QEDs: of these, two were rated as high quality (**Type B**), 15 as moderate quality (**Type C**), seven as low quality (**Type D**), and one as very low quality (**Type D**).

As a result, a **Level 3** evidence security rating was applied.

Heterogeneity was high ($I^2 = 81.30\%$), however, subsequent moderator analyses indicate that study-quality moderators, intervention level moderators, population characteristics, and outcome-level characteristics collectively account for a significant proportion of the observed heterogeneity in effect sizes. As such, the evidence security rating was not downgraded due to heterogeneity. This means that a **Level 3** evidence security rating was maintained.

¹² As defined by YEF: Violence may be of a physical, verbal, psychological, or sexual nature (YEF, 2023: p.12)

All outcomes

Our confidence in the findings on all outcomes is Moderate. The meta-analysis included 216 outcomes drawn from 36 studies that assessed the impact of formal diversion programmes on children and young people.

Study quality, as assessed by the YEF-EQA, ranged from very low to high. The studies included:

- 10 RCTs: of these, one was rated as high quality (**Type A**), eight as moderate quality (**Type C**), and one as low quality (**Type D**).
- 26 QEDs: of these, two were rated as high quality (**Type B**), 16 as moderate quality (**Type C**), seven as low quality (**Type D**), and one as very low quality (**Type D**).

As a result, a **Level 3** evidence security rating was applied.

Heterogeneity was high ($I^2 = 82.01\%$), however, subsequent moderator analyses indicate that outcome-level characteristics collectively account for a significant proportion of the observed heterogeneity in effect sizes. As such, the evidence security rating was not downgraded due to heterogeneity. This means that a **Level 3** evidence security rating was maintained.

Who does it work for?

This narrative summary of equity related outcomes supplements the meta-analysis by providing additional insights into how formal diversion programmes may affect different demographic groups. This was limited to studies that compared formal diversion programmes with TAU. Restricting the comparator to TAU ensured consistency and allowed for a clearer interpretation of whether formal diversion impacts equity in outcomes such as reoffending rates. Studies comparing formal diversion to alternative interventions were excluded from this section, as differences in comparator group content and implementation would have introduced variability that could obscure equity-related findings.

Thirteen studies provided detail in relation to personal characteristics of children and young people which help to understand who formal pre-court diversion programmes work for (Cunningham, 2007; Curran et al., 1977; Davidson et al., 2011; Dembo et al., 2006; Gaby & Magnus, 2023; Hartsell & Novak, 2022; McNeely et al.,

2019; Miller et al., 1998; Moore, 2015; Nadel et al., 2018; Stewart et al., 2005; Sullivan et al., 2010; Wang & Weatherburn, 2018). This covered gender, ethnicity, SEND, socioeconomic status, place of residence, care experience and intersectionality. No studies explored neurodiversity and education. Four studies were from Australia (Cunningham, 2007; Dennison et al., 2006; Stewart et al., 2005; Wang & Weatherburn, 2018), with the remaining studies from the US. Using the YEF-EQA tool, one study was rated as high quality (Hartsell & Novak, 2022), with the remaining as moderate quality. Studies where personal characteristics of the sample were described (e.g., gender) but not specifically related to outcomes of interest or do not contribute to the understanding of who formal diversion programmes works for, have not been included in this section.

Gender

Gender is a particularly important variable in terms of examining diversion outcomes. Despite the fact that females represent only a small proportion of the total prison population globally at just under 7%, the number of women and girls in prison worldwide has increased by nearly 60% since 2000 in comparison to male prisoner numbers that have increased by c. 22% over this same time. Further, incarceration rates for girls in the USA at 10.2% are some of the highest globally.¹³ The literature also points to poorer mental health outcomes in girls compared to boys. For example, in a study by Campbell et al. (2021) found that across four mental health outcomes – life satisfaction, psychological distress, hedonia (i.e. the experience of happiness), and eudaemonia (i.e. well-being) girls typically had worse mental health than boys. This suggests that girls in particular might benefit from gender specific mental health specialist services and interventions.

¹³ According to United Nations figures population growth has been around 30%. In terms of incarceration rates in the specific countries covered by this review, the percentage of the prison population who are female stands at 10.2% in the USA; 7.5% in Australia; 5.6% in Canada, and; 4% in England and Wales. For more details see: [https://www.prisonstudies.org/sites/default/files/resources/downloads/world_female_in_prisonment_list_5th_edition.pdf#:~:text=\(The%20figure%20for%20the%20Americas%20is%20skewed,and%20girls.\)%20*Excluding%20some%20very%20small%20jurisdictions.](https://www.prisonstudies.org/sites/default/files/resources/downloads/world_female_in_prisonment_list_5th_edition.pdf#:~:text=(The%20figure%20for%20the%20Americas%20is%20skewed,and%20girls.)%20*Excluding%20some%20very%20small%20jurisdictions.)

Eleven studies discussed gender as a variable in diversion outcomes with findings varying by context, programme type, and measured outcomes (Cunningham, 2007; Curran et al., 1977; Davidson et al., 2011; Dembo et al., 2006; Dennison et al., 2006; Hartsell & Novak, 2022; McNeely et al., 2019; Miller et al., 1998; Moore, 2015; Stewart et al., 2005; Wang & Weatherburn, 2018). While some studies report limited or no gender differences, others highlight significant disparities in reoffending rates and programme experience. The narratives are outlined here.

Several studies reported no significant gender differences in key outcomes. For instance, Dembo et al. (2006) in their evaluation of case management services found that gender did not significantly predict arrests or arrest charges during a 12-month follow-up, once factors such as offence history and psychosocial factors were accounted for. Similarly, no significant gender differences in school attendance were found among children and young people taking part in a formal diversion programme aiming to reduce truancy rates (McNeely et al., 2019). In the Australian context, gender did not significantly impact the reoffending risk for children and young people diverted via cautioning versus court referral, suggesting the effectiveness of cautions was comparable for males and females after statistical adjustments (Wang & Weatherburn, 2018).

Other studies found marked gender differences in reoffending outcomes, with males often experiencing poorer outcomes. For instance, some studies found that males were significantly more likely to reoffend or re-enter the justice system than females in both Australia and the US (Cunningham, 2007; Curran et al., 1977). Further reinforcing this pattern, Miller et al. (1998) found recidivism to be substantially higher among males (48.9%) compared to females (22.9%) in a US Drug Treatment Court. Likewise, evaluations of police cautioning in Australia found lower reoffending rates among females who were cautioned than their male counterparts (Dennison et al., 2006; Stewart et al., 2005), indicating that diversion may be more protective against reoffending for females. Moreover, these consistent trends highlight that males may face greater challenges sustaining diversion-related gains over time.

The design of some programmes responded specifically to gender-based needs. For example, Girls Court in the US targeted high-risk female children and young people with trauma-informed, relationship-focused services (Davidson et al., 2011). This led to substantial reductions in law violations (90.4%) and status

offences (95.6%) post-intervention, highlighting the value of gender-specific programming. In contrast, traditional mixed-gender programs may not adequately address the specific pathways and challenges faced by justice-involved females.

Notably, some studies found that gender influenced access to or disposition within programmes. For example, females were more likely than males to be diverted to Teen Court or have cases dismissed rather than referred to Drug Court or probation, though gender was analysed as a covariate, making it difficult to isolate causality (Hartsell & Novak, 2022). In the US, Moore (2015) evaluated the Family Intervention Team programme and found mixed gender impacts across several outcomes. While both males and females benefited in terms of reduced school absences and improved parental monitoring, females showed greater improvements in self-worth and larger reductions in disciplinary referrals. However, males in the programme experienced a greater increase in substance misuse than females, suggesting potential unintended effects for male participants that warrant further investigation.

To summarise, while some programmes show gender-neutral impacts on completion or attendance, a broader evidence base suggests that males tend to experience higher recidivism post-diversion, whereas females often derive stronger protective effects, especially in trauma-informed or relational-focused settings. These differences underline the potential value of gender-responsive and differentiated approaches to diversion programming.

Ethnicity

Ethnicity is also an important variable in terms of looking at the outcome of particular interventions. This is most evident in the United States where according to statistics those from a Black ethnic background are proportionately four times more likely to be incarcerated than those from a white background. In addition, those from a Hispanic background are more than twice as likely to be incarcerated than those who are from a white background¹⁴. The patterns in other

¹⁴ In 2022, 911 per 100,000 of those from a black ethnic group were incarcerated in comparison to 426 of those from an Hispanic background and 188 from a white background. For more details see:

<https://www.prisonpolicy.org/blog/2024/04/01/updated-charts/>

countries included in this Toolkit strand is similar but starker with incarceration rates for indigenous Australians¹⁵, for example, at over 15 times those of a white background.

Twelve studies narratively reported on ethnicity and outcomes across various diversion programme evaluations, outlined below (Cunningham, 2007; Davidson et al., 2011; Dembo et al., 2006; Dennison et al., 2006; Gaby & Magnus, 2023; Hartsell & Novak, 2022; McNeely et al., 2019; Miller et al., 1998; Moore, 2015; Nadel et al., 2018; Sullivan et al., 2010; Wang & Weatherburn, 2018). Ethnic disparities in diversion outcomes were frequently reported across studies, with variations in both programme access and outcomes. In some cases, statistical controls reduced apparent disparities, but more often, studies revealed persistent inequities.

Several studies found no significant differences according to ethnicity in diversion outcomes, once statistical controls were applied. For instance, findings from a formal diversion programme in the USA aiming to reduce truancy found that attendance outcomes for Black students mirrored the results of the full sample, showing no subgroup-specific impact (McNeely et al., 2019). Similarly, being Hispanic was not found to be a significant predictor of arrest or charges during follow-up in a US diversion programme, even when controlling for psychosocial and behavioural variables (Dembo et al., 2006). These findings indicate that in certain diversion contexts ethnic disparities in outcomes may not always be apparent or may be mitigated by programme design.

Structural and systemic issues were also identified in other US-based diversion initiatives. Miller et al. (1998) evaluated a Drug Treatment Court and found that African American and Hispanic children and young people experienced higher rearrest rates (60.5% and 66.7%, respectively) than white children and young people (33.1%). While reasons for this disparity were not explicitly analysed, the findings imply that participation alone may not be sufficient to equalise outcomes when underlying inequities persist.

¹⁵

<https://readingroom.law.gsu.edu/cgi/viewcontent.cgi?article=3092&context=gsulr#:~:text=Discrimination%20faced%20by%20the%20most%20socially%20and,an%20even%20higher%20rate%20than%20African%20Americans.>

Further evidence of systemic inequity emerged in a qualitative study by Gaby and Magnus (2023) of a US Teen Court. The authors documented that Black and Latinx children and young people were more likely than their white counterparts to receive punitive sanctions and fewer pathways to full record expungement. The disparities were explained by implicit bias and racial stereotyping. Children and young people themselves recognised these patterns, noting differential treatment that reflected broader injustices in the traditional criminal justice system.

The significance of local implementation contexts was highlighted in the rollout of civil citation across Florida counties. The study found that areas with smaller Black populations and larger Hispanic populations were more likely to implement civil citation successfully (Nadel et al., 2018). Although the effect sizes were small, the authors suggest that racial and ethnic composition of local areas may influence whether jurisdictions are willing or able to adopt diversion practices, raising concerns about geographic inequity in access. Access to diversion was also shaped by participants ethnicity, with Black children and young people more likely to be assigned to probation than to Teen Court or Drug Court (Hartsell & Novak, 2022). While ethnicity was treated as a covariate, the pattern suggests differential decision-making at the point of disposition that may reflect either policy or practitioner-level bias.

In Australia, Indigenous children and young people were initially overrepresented in court relative to caution (Wang & Weatherburn, 2018). After applying a statistical balancing method, these disparities were controlled, and the reduction in reoffending odds for cautioned young people held across ethnicities. However, the study also noted that the base case used to predict reoffending risk was non-Indigenous young people, reflecting a default framing that may obscure the distinct needs and experiences of Indigenous populations. The overrepresentation of Indigenous children and young people in the Australian justice system was further underscored by Cunningham (2007), who reported that Indigenous juveniles were twice as likely to reoffend compared to non-Indigenous peers (31% vs. 15%). The study explicitly linked these disparities to structural inequities and called for Indigenous-led, culturally safe interventions, recognising that mainstream approaches may be inadequate in addressing community-specific drivers of justice involvement.

Some programmes were designed with cultural responsiveness in mind. Girls Court in Hawaii (Davidson et al., 2011) included a racially and ethnically diverse participant group, with substantial representation from Native Hawaiian and Filipina children and young people. The intervention was associated with reductions in recidivism, highlighting the value of tailoring interventions to local cultural and demographic contexts.

Sullivan et al. (2010) conducted an evaluation of the civil citation programme in the US which was designed to reduce disproportionate contact for Black and Global Majority children and young people within the CJS. Despite this aim, the proportion of Black and Global Majority children and young people referred to the CJS increased slightly from 65% to 67% over three years, whilst diversion rates were lower for Black and Global Majority children and young people (44%) compared to white children and young people (56%). Whilst the authors note that the programme serves more Black and Global Majority children and young people than other non-residential prevention programmes, this has not translated into more equitable outcomes. The study does not provide a clear explanation for these differences and does not explore whether structural racism or other systemic issues contributed to the persistent disparities, instead highlighting limitations in data and evaluation design as contributing factors.

Overall, while some studies reported equitable outcomes to engaging in formal pre-court diversion programmes, after adjusting for confounding variables, a substantial number of studies highlighted persistent disparities in both programme access and outcomes by ethnicity. These differences often reflect broader structural inequalities, including systemic bias, variation in local implementation, and the inadequacy of standardised diversion models for addressing the needs of historically overrepresented groups. As such, many formal pre-court diversion programmes continue to replicate or magnify the inequities of the broader CJS. Despite this, where culturally grounded or community-led approaches were employed, there was some evidence of improved engagement and outcomes pointing to the importance of inclusive, responsive intervention design.

SEND

One study examined the impact of mental health problems in relation to diversion outcomes and recidivism (Dembo et al., 2006). For children and young people taking part in case management services in the US, mental health problems demonstrated a modest but statistically significant association with increased recidivism risk (Dembo et al., 2006). Specifically, children and young people with higher levels of behavioural and emotional dysregulation were more likely to be arrested or charged during the follow-up period. These findings suggest children and young people with special educational needs and disabilities, including mental health concerns, may face unique challenges in comprehending programme requirements, accessing support services, or managing impulse control, which can undermine successful programme completion and increase the likelihood of reoffending.

Socioeconomic Status

Six studies reported on the influence of socioeconomic status (SES) on diversion programme outcomes (Dembo et al., 2006; Gaby & Magnus, 2023; McNeely et al., 2019; Nadel et al., 2018; Sullivan et al., 2010; Wang & Weatherburn, 2018).

An evaluation on the impact of case management services in the US found that traditional socioeconomic indicators, such as family income and parental employment stability, did not emerge as significant predictors of recidivism (Dembo et al., 2006). This suggests that, within this programme, individual-level economic disadvantage did not independently influence diversion outcomes when considered alongside other demographic and behavioural variables. Similarly, an evaluation of a formal diversion programme aiming to reduce truancy in the US found no significant differences in attendance outcomes for children and young people eligible for free school meals (McNeely et al., 2019), suggesting limited impact of socioeconomic status on programme effectiveness.

In contrast, several studies identified children and young people's socioeconomic status as a key factor affecting access to and outcomes of diversion. In the US, counties with higher median incomes and lower poverty rates were significantly more likely to implement and sustain civil citation programme successfully (Nadel et al., 2018). In Australia, children and young people from more

socioeconomically advantaged backgrounds were more likely to receive a caution rather than proceed through the court system (Wang & Weatherburn, 2018). Critically, children and young people from lower-income backgrounds who took part in Teen Court programmes in the US were less likely to benefit fully from restorative elements such as expungement due to financial and procedural barriers (Gaby & Magnus, 2023). Socioeconomic status also affected courtroom performance and perceived credibility, creating inequities in how justice was experienced and delivered. These disparities point to the influence of local economic context on programme access, availability and quality.

Notably, Sullivan et al. (2010) utilised zip codes of where children and young people lived in the US to capture geographic patterns associated with socioeconomic risk. Notably, children and young people who received a civil citation were more likely to be from "high-risk" zip codes compared to the matched group of children and young people processed through the CJS, indicating that this diversion programme tended to reach more children and young people from deprived areas. Despite this, children and young people receiving civil citations still had better outcomes (e.g., lower recidivism and fewer felony referrals), suggesting the programme may buffer some effects of socioeconomic disadvantage.

Overall, while individual-level socioeconomic status did not consistently predict outcomes in all contexts, broader structural and systemic dimensions of socioeconomic inequality significantly shaped access to, engagement with, and the long-term benefits of diversion programs. These findings highlight the need to consider economic equity not only in outcome evaluation but also in programme design, resource allocation, and implementation strategies.

Care experience

One study explored the impact of care experience on children and young people who engaged in formal diversion programmes in the USA (Davidson et al., 2011). Nearly half (47%) of children and young people who participated in a Girls Court had histories of involvement with Child Protective Services and/or out-of-home placements. This subgroup showed substantial gains, including reductions in running away (-90.1%) and time on the run (-68.4%), following the Girls Court intervention. These outcomes are especially meaningful, as children and young

people who are care-experienced are often overrepresented amongst runaways and chronic offenders. The trauma-informed model of the Girls Court likely played a key role in creating the relational stability and structured support necessary to reduce such high-risk behaviour.

Place of residence

Three studies evaluated how children and young people's place of residence, ranging from family living arrangements to geographic and urban-rural contexts, affects diversion outcomes, with mixed findings (Cunningham, 2007; Dembo et al., 2006; Nadel et al., 2018).

In their study examining case management services in the US, Dembo et al. (2006) found no significant relationship between children and young people's living arrangements (e.g., with parents, extended family, or in institutional care) and reoffending outcomes over a 12-month period. In contrast, Cunningham (2007) and Nadel et al. (2018) found geographic location to be a significant factor in successful diversion. Cunningham (2007) reported higher reoffending rates in Australia among children and young people in regional (26%) and Indigenous (28%) communities compared to those in urban centres (21%). Although the differences were modest, the trend suggests that children and young people residing in more remote or regional areas face heightened risks of reoffending, possibly due to limited access to consistent formal diversion programmes, ongoing support services or follow-up supervision. Similarly, Nadel et al. (2018) found that urban counties in the US had greater use and more successful implementation of civil citation programmes, likely due to stronger infrastructure and institutional capacity. Rural areas were disadvantaged by limited resources and possible cultural resistance to diversion.

Together, these findings indicate that while living situations of children and young people may have limited influence, broader geographic and structural factors play a significant role in formal diversion outcomes and programme implementation. These findings underscore the need for context-sensitive approaches to diversion approaches that address regional disparities in access, infrastructure and support.

Intersectionality

One study examined multiple intersecting issues in relation to diversion outcomes. Dennison et al. (2006) compared outcomes between children and young people who received a caution and those who went to court in Queensland, Australia. Among those who received a caution, Indigenous children and young people with a history of maltreatment were more likely to have re-contact with the juvenile justice system, compared to non-Indigenous males and females. This demonstrates the need to account for children and young people's experiences of maltreatment, alongside personal characteristics such as ethnicity, in devising and implementing formal diversion programmes.

What factors affect implementation?

In contrast to the meta-analysis, the review of implementation evidence drew on a broader range of studies. This included evidence from all studies which included relevant details on implementing diversion services, irrespective of the comparison group (i.e., TAU or alternative interventions). Including this wider evidence base allows for a more comprehensive understanding of the contextual, operational and systemic factors that support or hinder the effective delivery of diversion programmes, regardless of the comparator. This approach was taken to reflect the real-world complexity and variation in diversionary programme implementation.

Twenty-two studies provided evidence related to implementation, of which six also provided effectiveness data used in the meta-analysis above (see [Appendix 5](#) for details of the studies providing evidence on implementation). Seven studies were from the UK (Benbow, 2019; Brown, 2019; DeMarco et al., 2021; Haines et al., 2012; HMIP & HMICFRS, 2018; Penman, 2007; Soppitt & Irving, 2014), one from New Zealand (Searle & Spier, 2006), with the remainder from the US. Three studies were classed as very low quality (Frazier & Cochran, 1986; HMIP & HMICFRS, 2018; Soppitt & Irving, 2014), four as low quality (Davidson et al., 2011; Kuch, 2017; Smith et al., 1979; Stickle et al., 2008), and the remainder as moderate quality. No studies were rated as high quality. Given the wealth of implementation data available, this section has focused on reporting data from moderate quality papers. Data for each individual study, regardless of quality, is available in [Appendix 5](#).

Factors that influenced the implementation of formal diversion approaches are organised using Proctor et al.'s (2011) Implementation Outcome Framework.

[Appendix 6](#) highlights the availability of evidence according to each of Proctor's implementation outcomes. Where studies reported on the experiences or perspectives of children and young people, these views are summarised with appropriate direct quotations from primary studies given where available.

To briefly summarise, key themes from this section highlight that for formal diversion strategies to be most effective and accepted within the community, the following should be established during implementation:

- Formal diversion programmes need to have a clear purpose, eligibility criteria and referral procedure to be viewed as a legitimate option by stakeholders.
- Formal training opportunities for all stakeholders will contribute to improved stakeholder understanding and uptake of formal diversion programmes.
- A dedicated diversion lead should be assigned to support the initial and ongoing adoption of formal diversion programmes, acting as the knowledge-expert, cascading information, and supporting multi-agency working.
- Outcomes of formal diversion need to be consistent, transparent, and fair, to ensure they are equitably applied, with factors such as ethnicity and socioeconomic status of participants not influencing decision-making.
- High quality multi-agency collaboration with strong, trusting relationships, committed leadership, good information sharing and open communication channels is essential.
- Perceived leniency in responses to offending needs to be balanced with the opportunity for long-term change amongst children and young people engaging in formal diversion programmes. Gaining and embedding regular feedback from children and young people, parents/carers, and stakeholders into programme development can support with implementing appropriate level responses.
- Ongoing supervision of staff, strong procedural oversight, and monitoring of decision-making regarding eligibility will support continued fidelity to programme aims.

- Formal diversion programmes need to be culturally competent and include gender responsive and specific approaches.

Acceptability

Formal diversion programmes were generally accepted by children and young people, parents/carers, and stakeholders due to the avoidance of unnecessary criminalisation (e.g., Beck et al., 2006; Brown, 2019; DeFosset et al., 2017). In particular, formal diversion programmes were praised by stakeholders for proportionate, child-focused responses that promote collaborative decision-making (Brown, 2019). However, the acceptability of formal diversion to stakeholders was heavily influenced by the perceived legitimacy and procedural fairness of the programmes. For example, Benbow (2019) examined stakeholders' views of diverting children and young people who offend in Scotland using early interventions and robust community alternatives. Stakeholder interviews suggest that diversion from prosecution is generally acceptable to stakeholders when implemented with clarity, purpose, and appropriate infrastructure. Acceptability was particularly high where strong communication existed with the prosecution service, supported by a dedicated diversion co-ordinator, which fostered local stakeholder support and process legitimacy. Conversely, where such dedicated roles were absent and joint expectations between partners were unclear, stakeholders expressed less confidence in the process. Confusion over how diversion decisions were made, undermined stakeholders' trust and limited their belief in the scheme's acceptability. This disparity highlights that acceptability is not simply about agreeing with the concept of diversion, but about stakeholders' experience of its consistency, transparency, and procedural fairness in local implementation.

These findings were echoed in US-based research, where the acceptability of civil citation programs was found to vary considerably across counties, directly influenced by the programmes' perceived legitimacy, as well as contextual factors such as local crime rates, poverty levels, and stakeholder buy-in (Nadel et al., 2018). Counties in the top quartile of civil citation use, where up to 90% of eligible youth received citations, appeared to have viewed the program as a credible and acceptable alternative to arrest. This was supported by strong local buy-in and greater stakeholder commitment. Acceptability appeared especially high in more

urban, higher-income counties with greater ethnic diversity and higher crime rates. Conversely, counties which did not use civil citation at all, likely lacked the institutional or cultural acceptance necessary for implementation. These patterns underscore that acceptability is not simply a function of policy design, but also of how well it resonates with local values and infrastructure. Further to this, findings indicate that the acceptability of formal diversion strategies could also be enhanced by collaborative approaches to implementation. For instance, stakeholders responsible for implementing a civil citation program indicated that the collaborative focus on youth well-being, amongst law enforcement, education, and the courts, fostered a sense of collective ownership by successfully merging distinct organisational systems. This collaborative mindset was critical to both the early acceptance and perceived legitimacy of the initiative (Sullivan et al., 2010).

Effective leadership was highlighted as critical in ensuring formal diversion programmes were perceived as acceptable amongst stakeholders. For example, 'Op Met Divan', a formal diversion programme implemented in England, UK, from 2018, was perceived as acceptable by police officers. Having a clear rationale and understanding of the programme meant this was broadly supported, whilst leadership's enthusiasm helped to reinforce its importance and credibility. However, initial concerns affecting the acceptability of implementing the programme emerged among some officers regarding the extra workload and how it might interfere with their core duties, including public visibility and community engagement. Despite these reservations, the team's leadership offered sufficient reassurance and practical guidance, enabling most frontline officers to buy into the intervention and view it as a meaningful part of their youth engagement toolkit (DeMarco et al., 2021).

Crucially, diversion's acceptability was also shaped by its perceived ethos. For example, a national welfare-based diversion scheme in Scotland was perceived as consistent with a welfare-ethos taken nationally (Penman, 2007). Further research of formal diversion programmes in Scotland indicated that stakeholders widely valued the educational and relational nature of diversion, emphasising principles such as listening, treating children and young people with dignity, and building trust as positive factors associated with the programme (Benbow, 2019). For many, diversion was not solely a route to desistance but a means of enabling

positive lifestyle changes and growth, even if that did not guarantee an end to offending. This more holistic view of success enhanced stakeholders' support for diversion. However, tension persists where others perceived diversion as too lenient if it lacks elements like restitution or visible accountability. These conflicting views illustrate how acceptability is closely linked to deeper ideological questions about the balance between support and punishment in youth justice.

Overall, most parents/carers held positive views of formal diversion programmes, appreciating the support received and the opportunity for their child to avoid the formal justice system (Brown, 2019). For instance, a survey was conducted of parents/carers of children and young people who participated in a US-based diversion programme, where the children and young people received a disposition (e.g., essays, work, probation, restitution, counselling) and, if no new complaints were received within a year, the children and young people's record was destroyed, and they did not have to go to court. Findings demonstrate a high level of acceptability among parents/carers of participating youth. Nearly 89% of respondents felt that participation in the program was in their child's best interest, and over 91% believed the process was respectful to both child and parent. Expressions of gratitude and appreciation point to widespread satisfaction with the process (Beck et al., 2006).

Across the included studies, children and young people expressed mixed views on the acceptability of formal diversion programmes. Where positive views were held by children and young people, this was due to the value of more lenient and fair consequences, feeling listened to, lower stress, the opportunity to avoid a criminal record or custodial sentences, and being involved in decision-making processes (Brown, 2019; DeFosset et al., 2017; Penman, 2007; Searle & Spier, 2006).

Comparatively, a national evaluation of diversion programmes in the US indicated that children and young people perceived these programmes as *"coercive, more oriented to social control, and less concerned with serving needs"* (p. 216). This suggests limited acceptability from the perspective of children and young people, particularly given the non-voluntary nature of formal diversion programmes and indicates a possible disconnect in expectations and experience.

An evaluation of teen courts in the US also found limited acceptability amongst children and young people (Gaby & Magnus, 2023), with children and young

people highlighting racial inequities in decision-making, undermining the legitimacy and emotional buy-in of participants who expect support but instead feel targeted by disproportionately harsh sentencing. Even seemingly beneficial elements, like expungement, were viewed as inconsistently applied or deceptively communicated, where expungement required costly legal follow-up with the need of an attorney, contradicting children and young people's assumptions of the programme and eroding trust. This suggests that teen courts can seem coercive and inequitable in practice, particularly by marginalised children and young people, limiting its perceived acceptability.

Adoption

All studies highlighted that the adoption of formal diversion programmes varied across sites, with factors such as leadership, competing priorities, communication barriers, multi-agency working, and statutory pressures all affecting uptake and implementation. For example, the adoption of Youth Justice Liaison and Diversion (YJLD) pilot scheme across six sites in England, UK, indicated that the greatest barrier to successful implementation was *"derived from different competing priorities and agendas of partners involved in the delivery of the project"*. (Haines et al., 2012, p.18). In particular, police targets around sanction detection were a particular barrier, *"leading to difficulties in securing police co-operation at both strategic and operational levels"* (p. 18). This tension produced inconsistent levels of commitment even though all formally signed up to the scheme. Furthermore, there appeared to be dissonance in some sites between senior level police support for the initiative and implementation in practice. Comparatively, in a minority of sites, collaboration facilitated a smoother uptake of the formal diversion programme, with very good police referral mechanisms and strong pre-existing multi-agency relationships praised.

Sullivan et al. (2010) highlighted that the adoption of a civil citation programme was supported by having decision-makers 'at the table' during initial discussions regarding implementation. This enabled the programme to be implemented rapidly without the need for additional approvals, reducing delays and building momentum. Similarly, the decision to implement 'Op Met Divan', a formal diversion programme in the UK, was facilitated by strong leadership, multi-agency collaboration, and early engagement with stakeholders (DeMarco et al.,

2021). Initial scepticism from local authorities centred on concerns over additional workload, funding competition, and negative perceptions of police-led interventions, which was overcome through persistent engagement by the programme leads. Officers and external services gradually came on board as the benefits of information sharing, structured support, and early engagement became clearer, supporting uptake of the intervention. Internal adoption within the police force was further supported through informal and role-specific training, shadowing opportunities, and the proactive dissemination of guidance documents.

In Scotland, UK, the adoption of diversionary practices for 16–17-year-olds was inconsistent both temporally and geographically (Benbow, 2019). While one of the three areas evaluated experienced an immediate spike in diversions following the release of the Diversion Toolkit, indicating a clear policy uptake, the remaining two areas diverted minimal children and young people and had no dedicated programmes until several years later. The delayed adoption was attributed to a lack of resource availability, local advocacy, and clarity on operational procedures. In addition, these two areas did not have a local diversion lead to coordinate the adoption of the new approach, highlighting the importance of clear leadership when implementing formal diversion programmes.

Furthermore, a lack of clear guidance on the need for children and young people to admit guilt led to challenges in uptake. While one area maintained a rigid stance requiring a full admission for diversion, other areas allowed partial admissions or delayed acknowledgements, increasing adoption rates. This variation, combined with differing opinions on the necessity of measures like restitution for vandalism demonstrates how individual professional discretion impacts both the uptake and implementation of diversionary programs.

Critically, one US-based study highlighted that equity factors in the local areas affected the adoption of formal diversion programmes (Nadel et al., 2018). Specifically, urban counties, with lower poverty and higher median incomes, were more likely to adopt and implement civil citation programmes meaningfully. A difference-in-difference analysis revealed that only counties with high adoption and usage of civil citation experienced significant reductions in reoffending rates. As such, children and young people in urban counties, with lower poverty and higher median incomes were more likely to receive formal diversion, reducing

their likelihood of reoffending, than those in higher poverty areas. While this has not been replicated in other studies or the UK, it is important that formal diversion programmes are adopted fairly and equally so all children and young people have the opportunity to access this resource.

Appropriateness

Generally, formal diversion programmes were seen as appropriate for children and young people who engaged in low-level offending, preventing them from reoffending (Penman, 2007). However, Benbow (2019) found that perceptions of what constitutes an appropriate case for diversion (e.g., low level offending, domestic violence) varied widely between areas and amongst stakeholders, leading to inconsistencies in decision-making and a lack of shared standards. Some stakeholders expressed concern that some diversion efforts might appear too lenient, stressing the need for interventions to demonstrate sufficient rigor to be deemed an appropriate response. Comparatively, some saw diversion as an appropriate response when it facilitated growth, education, and positive lifestyle changes, even if future offending was not always prevented. The challenge was calibrating the 'right' level of system contacts to ensure that it was neither too light-touch to be ineffective nor so intrusive that it led to net-widening or over-punishment. This diversity in views, with some favouring support and relationship-building and others expressing concern over the absence of punitive elements, illustrated the ongoing struggle to define what 'appropriate' diversion looks like in practice.

The issue of formal diversion programmes being overly lenient was also flagged by parents/carers and children and young people. For example, an evaluation of the Children's Hearings System in Scotland, UK, highlighted that some children and young people viewed hearings as inconsequential, with one female persistent offender stating: *"I didn't really bother cos I knew that they couldn't do anything to me"* (pg. 223), questioning the appropriateness and usefulness of the programme. Similarly, Searle and Spier's (2006) evaluation of a New Zealand Drug Court highlighted that some families felt children and young people were given too many chances by the judge. However, this view was not held by all, with some children and young people and families reporting that regular and compulsory monthly reporting was felt to be appropriate, whilst some felt the approach was

too restrictive. Critically, the appropriateness of teen courts was called into question given the unequal distribution of optional sanctions, such as mandatory apologies or therapy referrals, disproportionately impacting Black children and young people, suggesting that racialised narratives shaped sentencing decisions (Gaby & Magnus, 2023).

Views on the appropriateness of formal diversion programmes amongst children and young people and parents/carers tended to differ dependent on their experience of the 'decision-maker'. For example, children and young people's perceptions of a US-based teen court were mixed, with some appreciating the relatability and understanding of their peers, while others felt the jurors to be inexperienced, judgemental or unexpectedly harsh, challenging initial assumptions that peers would be more lenient than adults (DeFosset et al., 2017). Comparatively, parents perceived the US-based Hamilton County Unofficial Juvenile Courts Diversion Program to be appropriate, with the articulate and supportive judges highlighted as accounting for this view (Beck et al., 2006). In particular, 97.2% of parents reported that their child had not been stigmatised by the process, with many seeing positive behavioural changes following the intervention. This emphasises that for formal diversion programmes to be perceived as appropriate, programme facilitators must be well-trained, unbiased and fair in their decision-making.

Feasibility

Most studies highlighted a number of barriers affecting the feasibility of implementing formal diversion programmes. Inconsistent decision-making, delays in social work and police reports, a lack of resources, poor service coordination, and difficulties in accessing targeted interventions for substance misuse and behavioural needs affected the successful implementation of the Children's Hearing Scheme in Scotland, UK (Penman, 2007). Similarly, the feasibility of a Youth Justice Liaison and Diversion scheme in England, UK, was hindered by inconsistent operational support, especially from police services (Haines et al., 2012). Whilst there was good senior level support for the Youth Justice Liaison and Diversion scheme, information was not adequately cascaded to the frontline, meaning many police officers lacked any knowledge of the formal

diversion programme, contributing to confusion about referral processes and inhibiting implementation.

The feasibility of a Whole System Approach to formal diversion in Scotland, UK, was similarly impeded by challenges accessing local resources, a lack of capacity and infrastructure (Benbow, 2019). In areas without dedicated diversion teams, stakeholders faced challenges in establishing formal diversion as a reliable option due to staffing pressures and unclear referral pathways. Furthermore, significant discretion within the Crown Office, Procurator Fiscal Service and local authorities meant that even when cases were marked for diversion, they could still be rejected at the time of delivery. Fragmented communication and the lack of formalised joint processes made implementation even less feasible in areas without strong operational integration. However, the implementation of a dedicated diversion coordinator embedded within the youth justice team in one area helped streamline the process and improved feasibility of the programme overall.

Notably, the implementation of 'Op Met Divan' in the UK demonstrated clear feasibility, but only through significant adaptation and effort from existing teams (DeMarco et al., 2021). Nonetheless, teams made operational adjustments to ensure delivery continued, primarily because they recognised the value the intervention brought, demonstrating that stakeholders' commitment to the aims and ethos of formal diversion directly contributes to its feasibility. Officers had to incorporate intervention delivery into already demanding workloads, without the benefit of dedicated additional staffing or a dedicated budget. Police teams were able to adapt internal structures and resource allocations to ensure the intervention was delivered consistently. The availability of multiple police databases (e.g., Merlin, CRIS, Crimint) allowed for detailed assessment of young people's history and needs and informed decision-making, although this also increased the administrative burden. However, expansion across boroughs highlighted feasibility concerns related to differing local authority structures, co-location of services, and varying degrees of buy-in from community stakeholders.

Fidelity

The degree to which the formal diversion was delivered as intended differed across studies and programmes. For example, a national evaluation of US-based

diversion programmes found fidelity to be a major issue (Dunford et al., 1982). Despite the shared label of “diversion”, programmes varied so substantially in structure, service content, and intensity that they bore little resemblance to a standardised model. The evaluators note extreme variability among the diversion projects, in terms of how children were referred and the types and levels of services provided. This lack of standardisation significantly constrained the evaluators’ ability to draw generalisable conclusions about which elements of diversion were responsible for observed outcomes.

Contextual issues and operational constraints were cited as barriers to fidelity in the implementation of ‘Op Met Divan’ in the UK (DeMarco et al., 2021). Officers often had to balance delivery with their existing duties, which sometimes resulted in limited time or resources dedicated to the intervention. Officers were encouraged to tailor their delivery based on operational realities, and while the programme’s aims were generally understood, delivery varied in depth and consistency. Some officers cited gaps in formal training led to the variability in implementation. In some circumstances, this can also lead to long-term net-widening. For example, Nadel et al. (2018) found that civil citations began to supplement arrest over time, rather than replacing it, indicating a divergence from the policy’s core intent. Concerningly, this is a shift away from utilising the programme as a form of formal diversion. While it was not fully assessed why this net-widening occurred, authors did indicate that sustained stakeholder commitment was required for the accurate implementation of the formal diversion programme.

Observations of twelve Los Angeles County Teen Court hearings across six sites showed the programme was largely delivered as intended with the core structure and format of the hearings maintained, although there was variation in program length and jury pool size seen (DeFosset et al., 2017). Strong programme leadership was cited by Dembo et al. (2006) as a factor leading to high fidelity, with corrective efforts made if service providers failed to adhere to prescribed procedures. In addition, Amdur (1987) found that intensive training and supervision of staff and strong procedural oversight through continuous monitoring, supported the moderate-to-high degree of fidelity seen in the implementation of a formal diversion programme based on behavioural contracting, advocacy, and relationship-based support.

Reach/Penetration

Some programmes, such as the Los Angeles Teen Court programme achieved good reach and penetration, becoming embedded in the juvenile justice and educational systems through 24 school-based sites (DeFosset et al., 2017). This was supported by co-ordination from the Superior Court, with regional probation offices screening and supervising every eligible 12–18-year-old first-time offender referred. It was evident that good reach and penetration was dependent on high quality multi-agency working, with clear integration into existing service pathways.

Multi-agency working was a clear barrier to the reach and penetration of the Youth Justice Liaison and Diversion scheme in the UK, which was hampered by variation in access to children and young people in custody suites, often because of challenges with officers recognising poor mental health in children and young people (Haines et al., 2012). Comparatively, Op Met Divan achieved promising reach in the UK, thanks to the proactive identification of children and young people through police intelligence, effective data sharing and strong multi-agency networks (DeMarco et al., 2021). The ability to share data and case insights across policing units and statutory services helped in identifying suitable candidates for the intervention.

Similarly, the US-based Hamilton County diversion programme, showed considerable reach and penetration, with 28 community courts active and 393 cases reviewed over a one-year period (Beck et al., 2006). Despite this, some parents/carers queried why their child was not eligible for formal diversion instead of court-processing. This indicates some gaps in eligibility or referral practices. To enhance penetration, greater outreach and clarity around program availability and criteria was recommended, especially in underrepresented communities or among marginalised youth. This view was echoed by research on a Youth Drug Court in New Zealand, finding that children and young people and parents recommended that the programme should be further rolled out, with an extension to the eligibility criteria meaning more children and young people could access the much-needed support (Searle & Spier, 2006).

Geographical variation in reach and penetration was seen in the implementation of a Whole System Approach to formal diversion in Scotland, UK (Benbow, 2019).

Reach was directly influenced by whether diversionary practices were embedded within pre-existing youth justice or diversion frameworks in each area.

Inconsistent practices around case flagging and unclear pathways for making decisions were key barriers, with legal representatives noting that failure to flag appropriate cases early resulted in them being subsumed into the general prosecution workflow. The extent to which diversion reaches eligible young people was also constrained by policy variability and professional discretion.

Misunderstandings surrounding necessary criteria, particularly whether an admission of guilt is required, led some professionals to prematurely exclude individuals from referral, especially in cases involving group offences or complex contexts. This demonstrates the need for clear policies and procedures, and guidance on eligibility criteria to support the reach and penetration of formal diversion programmes.

Sustainability

Data on the sustainability of formal diversion programmes was lacking across studies, with only one moderate quality UK study and one US study providing information. The implementation of a Whole System Approach to formal diversion in Scotland was threatened by several factors, including fluctuating diversion rates, lack of standardised data, and heavy reliance on local champions or specific programs (Benbow, 2019). Stakeholders raised concerns about inconsistent data recording across organisations, highlighting systemic weaknesses in monitoring and accountability. However, in one area where formal diversion was successfully implemented, weekly data sharing between stakeholders supported continuity, suggesting that sustained implementation depends on institutionalised processes. The absence of permanent, dedicated diversion teams in most areas suggests that diversion efforts would not be resilient to staff turnover or shifting local priorities. Without institutionalised structures, staff support, and data integrity, sustainable delivery would continue to be a significant challenge.

Similar sustainability concerns were noted in the US civil citation programme (Sullivan et al., 2010). While effective despite limited funding, stakeholders stressed the need for stable financial and institutional backing. Proposals included expanding eligibility, engaging external funders, and reinvesting cost savings.

Plans to extend civil citation beyond schools would require additional resources for oversight and service provision. Ensuring long-term impact was seen to depend on formalising structures and addressing issues such as “double jeopardy” from overlapping sanctions. These efforts reflect a growing awareness, much like in the UK context, that the long-term viability of diversion initiatives depends not only on collaboration but also on formalised structures, institutional commitment, and safeguards against system fragmentation

Experiences of Children and Young People

Ten studies explored the experiences of children and young people who had engaged in formal diversion programmes (Brown, 2019; Davidson et al., 2011; DeFosset et al., 2017; Dunford et al., 1982; Gaby & Magnus, 2023; Haines et al., 2012; HMIP & HMICFRS, 2018; Penman, 2007; Searle & Spier, 2006; Soppitt & Irving, 2014). Of these, five were from the UK (Brown, 2019; Haines et al., 2012; HMIP & HMICFRS, 2018; Penman, 2007; Soppitt & Irving, 2014). Only four of the 10 studies exploring experiences of children and young people involved in formal diversion programmes were conducted in the last 10 years. This highlights the need for new quality evaluations to understand children and young people’s experiences today.

Children and young people who had participated in formal diversion in the UK tended to hold positive views of the programmes, although some barriers to effective participation were noted. For example, children and young people were very positive about the services they received from a Youth Offending Team following an OoCD, finding the support valuable to better understanding their behaviour (HMIP & HMICFRS, 2018). However, the evaluation found that children and young people’s views were not adequately considered when planning diversion activities, whilst plans failed to use accessible language which would enable children and young people to use these to help change their behaviour. Similarly, practical challenges were identified as barriers by children and young people engaging in a UK-based triage intervention, with activities like writing apology letters hindered by limited literacy skills (Soppitt & Irving, 2014). Despite these barriers, children and young people valued the programme’s educational and restorative elements and felt they were able to express their views throughout. Many articulated a sense of remorse and an understanding of the

consequences of their actions, especially regarding criminal records and their impact on future opportunities. However, differences in children and young people's experiences based on personal characteristics (e.g., ethnicity and gender) were not explored, meaning it is not possible to understand if there are any differences in the way in which children and young people view formal diversion programmes

Diversion programmes in Wales and Scotland were complimented by children and young people as a welcome alternative to formal court settings (Brown, 2019; Penman, 2007). The formal diversion programmes were perceived as fair and clearly explained. In Wales, children and young people felt comfortable engaging in the formal diversion programme, programme staff were *"very warming"* and spoke to the children and young people in a positive and approachable manner (Brown, 2019). The Children's Hearings System in Scotland was commended by children and young people as acting in their best interest, with panel members trying to understand the individual's circumstances (Penman, 2007). However, some children and young people did express that the hearings had little consequence on their behaviour, as they felt the outcomes tended to be very lenient.

Leniency was also cited as an issue by children and young people participating in a New Zealand based Youth Drug Court, with some young people suggesting they were given *"too many chances"* (Searle & Spier, 2006). Despite this, all children and young people recalled positive elements of their involvement with the court, with relationships with the judge a particular highlight. Children and young people felt expanding the eligibility for the Youth Drug Court would open access to others in similar circumstances who need support, demonstrating positive attitudes towards the formal diversion programme. However, it must be noted that only six children and young people were interviewed, meaning this cannot be taken to reflect the views of all those who have been involved with the programme.

Children and young people highlighted that feeling heard, being able to meaningfully express their experiences, influence their own journeys, and being treated fairly were critical in having a positive experience of formal diversion programmes (Davidson et al., 2011; DeFosset et al., 2017; Gaby & Magnus, 2023; Haines et al., 2012). One-to-one contact with UK-based Youth Justice Liaison and Diversion Service practitioners was praised by children and young people as

facilitating this, although some expressed a continued sense of confusion, uncertainty and lack of understanding in respect to the programme itself (Haines et al., 2012). This highlights the need for clarity around the support provided and purpose of engagement, as well as space for children and young people to discuss their needs.

US-based Girls Courts fostered a space that felt safe, validating, and empowering, allowing participants to reflect openly on their challenges and growth (Davidson et al., 2011). Girls described the court as a place where they could “*just be ourselves*” and where they can “*trust each other*”, highlighting a sense of community and emotional security often absent from traditional justice settings. This supportive environment not only encouraged candid self-expression but also contributed to substantial behavioural change, including reductions in law violations, runaway episodes, and detention time. Similarly, children and young people viewed the Teen Court as a more supportive and constructive alternative to the traditional court, highlighting its less punitive consequences, reduced stress, and the opportunity to avoid a criminal record as key benefits to engagement (DeFosset et al., 2017). Children and young people noted that being judged by peers, while sometimes unexpectedly tough or judgmental, still felt more relatable and understandable than facing adult judges. Importantly, all children and young people interviewed reported positive behavioural changes and increased motivation to avoid future delinquency, citing self-reflection, improved family relationships, emotional support, and enhanced life skills as key outcomes associated with engaging in the Teen Court.

Some children and young people were more critical of formal diversion programmes. For example, in a national evaluation of US-based diversion programmes, children and young people reported that these were coercive and had limited concern for the children and young people’s needs (Dunford et al., 1982). Given the age of this review, the coercive nature of formal diversion programmes may have changed, given that it was not reported by children and young people as a problem in any newer studies. However, equity in decision-making appears to be problematic in current formal diversion programmes. For example, children and young people critiqued US-based Teen Courts for racial bias, class-based disadvantage and a lack of procedural fairness (Gaby & Magnus, 2023). One young person observed that “*you can tell who’s going to get*

the hard sentence... it's not just what they did—it's who they are", revealing an acute awareness of the role identity plays in justice outcomes. Taken together, these findings highlight that formal diversion programmes can be viewed positively by children and young people, as long as they are equitable, procedurally fair, and consider the thoughts, feelings and experiences of children and young people throughout the process.

How much does it cost?

Ten studies provided data on cost, of which three were from the UK (Brownlee, 1995; DeMarco et al., 2021; Haines et al., 2012), five were from the US (Bohnstedt, 1978; Curran et al., 1977; Dembo, Wareham, Chirikos, et al., 2005; Dembo, Wareham, Schmeidler, et al., 2005; Dunford et al., 1982), and one was from New Zealand (Searle & Spier, 2006). With the exception of one UK study (DeMarco et al., 2021), all were over 10 years old, with most at least 20 years old. Overall, findings regarding the cost of formal diversion programmes were mixed, with some studies reporting cost-savings, whilst others report that formal diversion programmes were more expensive than standard court processing. However, it is important to note that whilst formal diversion programmes may be more expensive in some studies than standard court processing, this does not account for savings accounted for by preventing violence, crime and offending.

Administrative burden, costs associated with case management and ongoing monitoring, staffing costs and hours of programme operation were all reported as affecting overall costs. However, there was a lack of research exploring long-term cost-effectiveness associated with diverting children and young people from the CJS and reducing recidivism rates.

The most recent UK study highlighted that estimating the full cost of the formal diversion programme, 'Op Met Divan', was challenging due to it being at an early stage of implementation. The primary cost driver was identified as staff time. With the delivery of Op Met Divan integrated into existing Metropolitan Police Service practice, staff involved in the intervention dedicated only a portion of their contracted hours to the programme. Based on these allocations, annual staff costs were estimated at approximately £23,000, with 91 cases that came to staff attention via police intelligence systems in a six-month period from April 2021. However, this figure will likely rise if the intervention expands and staff are required

to dedicate a larger share of their time to programme activities. The model also relied heavily on the presence of an existing network of school officers, which may not be available in all areas. As such, replicating or scaling the programme in other regions could significantly increase costs, particularly where additional recruitment or role development is needed. Stakeholders also anticipate increasing costs when participant numbers grow as the programme becomes more embedded. However, cost-savings associated with implementing Op Met Divan and diverting children and young people from the CJS were not assessed.

An economic analysis of a UK-based Youth Justice Liaison and Diversion pilot scheme had mixed results (Haines et al., 2012). Initial results were less positive, showing that total costs of reoffending were greater in the intervention sites compared to control sites. Although, this was attributed to the higher complexity of needs and offending severity in the intervention cohort, rather than the scheme itself being inefficient. A resource analysis did indicate some savings from the scheme in terms of keeping children and young people in school, avoiding school exclusion and the need for costly alternative schooling arrangements. There were increased resource demands on the NHS and social services, which may appear costly in the short-term, but have long-term resource efficiencies compared to the costs of children and young people entering the CJS and/or becoming a 'career criminal'. Thus, the report suggests that the Youth Justice Liaison and Diversion holds some long-term potential to be cost-effective, particularly when integrated into local services and targeted at vulnerable young people at the earliest opportunity. However, evaluation of the long-term costs and benefits is needed prior to any judgements on cost-effectiveness.

Brownlee (1995) evaluated the effectiveness of The Edge, a high intensity diversion project, based in the UK. The first four years of the project were funded by a grant, totalling £70,000, from The Home Office. However, further funding of approximately £80,000 to keep the project running was felt unjustifiable. The West Yorkshire Probation Committee, who took over funding decisions, felt that the services offered by The Edge (intensive supervision and counselling) should be undertaken by the probation service themselves, rather than funding additional projects. This led to the closure of The Edge in 1994. Both the West Yorkshire Probation Service and NCH Action for Children, the entities that originally set up

The Edge, did highlight that the closure of the project was due to the changing financial climate, not due to any dissatisfaction with the project itself.

Research from New Zealand suggests that the cost of advocates in Youth Drug Courts was four times more expensive than advocates for standard Youth Courts (Searle & Spier, 2006). In Youth Drug Courts, the total cost of advocates in the first year was \$138,215, with an average of \$4,607 per young person, compared to an average of \$1207.50 per young person in standard Youth Courts. The authors noted that this was to be expected, as children and young people work with the Youth Drug Court for substantially longer than the standard Youth Court.

These findings were echoed in the US-based national evaluation of diversion programmes (Dunford et al., 1982), where the average cost per diverted child or young person (unadjusted for inflation) was \$1,302 across the 11 projects evaluated, compared to an estimated \$463.43 per child or young person for justice system processing through youth courts. Authors note however, that the cost data was obtained within the first two years of operation, meaning it reflects expenses associated with start-up. Cost data associated with more established programmes may appear more cost-effective. Authors provide further insights that despite a relatively low service intensity, the administrative burden and costs associated with case management and monitoring made formal diversion programmes more expensive than standard court handling. However, this study was over 40 years old, questioning its applicability to today's market.

Yet, Curran et al. (1977) found that it was *slightly* less expensive to use formal diversion services than processing through court (\$3,313 vs. \$3,398 per child or young person respectively, unadjusted for inflation). This was associated with a reduction in court-related expenses, such as investigation and supervision. Similarly, Bohnstedt (1978) found that the average project cost, unadjusted for inflation, of formal diversion per child or young person was reported as \$180, less than the cost of processing a young person beyond probation intake which was estimated at \$500 per child or young person. Supporting this, Smith et al. (1979) found the average diversion project cost per client was \$195, slightly less than the cost incurred by processing via the justice system at \$269 on average per client. This does suggest some cost-efficiencies associated with formal diversion programmes, although these studies are almost 50 years old, meaning these

findings need to be interpreted with extreme caution given the increase in inflation and associated costs.

US-based research highlighted that a well-structured, community-based formal diversion programme not only reduced CJS involvement but did so at a lower financial burden (Dembo, Wareham, Chirikos, et al., 2005; Dembo, Wareham, Schmeidler, et al., 2005). Cost-savings associated with the formal diversion programme remained significant even after controlling for a range of individual differences, including prior offences, demographics, educational background, and in-programme behaviour (Dembo, Wareham, Schmeidler, et al., 2005). The lower recidivism rates associated with engagement in this programme also has the potential of reducing system costs long-term. Despite evidence of cost-effectiveness, state budget cuts led to the discontinuation of the programme. This demonstrates the risk that immediate funding decisions can lead to long-term cost inefficiencies when formal diversion programmes found to be effective are stopped.

Conclusion and Takeaway Messages

Evidence from this systematic review and meta-analysis indicated that formal pre-court diversion has a moderate impact on reducing violence, crime and offending amongst children and young people. However, its effectiveness likely varies based on context, intervention design, fidelity of implementation, and age of the study.

Violence

Formal pre-court diversion programmes resulted in an estimated **25% reduction in violence** amongst children and young people. These findings are based on a meta-analysis of 10 outcomes across five studies. Our robust systematic meta-analysis indicates that formal pre-court diversion programmes may have a moderate effect on reducing violence. However, due to the quality and number of studies included the confidence in our findings regarding violence outcomes are low.

This is the first study to specifically explore the impact of formal pre-court diversion programmes on reducing and preventing violence amongst children

and young people, meaning it is not possible to compare findings to previous reviews. However, a recent study, published after the searches for this review were complete and also ineligible based on study design, which explored secondary data in the UK found children and young people who engaged in formal pre-court diversion were 4.79 percentage points less likely to be arrested within six months compared to their non-diverted peers (Rahal et al., 2025). This is similar to our absolute risk reduction of 7.2%, whilst the difference can be accounted for by the broader inclusion criteria of our meta-analysis, such as including international studies, various indicators of violence outcomes, and more forms of formal pre-court diversion.

Importantly, the studies evaluated in this report were designed to reduce crime and offending more generally, with violence as an outcome. As such, future research should involve designing and evaluating formal pre-court diversion programmes designed to specifically target the reduction and prevention of violence in young people, exploring whether these are more effective than generic formal pre-court diversion programmes for crime and offending.

Crime and Offending

Formal pre-court diversion programmes resulted in an estimated **14% reduction in crime and offending** amongst children and young people. These findings are based on a meta-analysis of 200 outcomes across 35 studies.

The confidence in our findings is Moderate. Ten RCTs provided robust causal evidence (one high quality, eight moderate quality, and one low quality), with the remainder relying on QEDs. Given the strong evidence base and robust systematic meta-analysis, this provides clear evidence that formal pre-court diversion programmes have a moderate effect on reducing crime and offending amongst children and young people. However, its effectiveness likely varies based on context, intervention design, and fidelity of implementation. It is also important to note that the moderate impact observed across studies was accompanied by high heterogeneity, suggesting that variation in study design, population characteristics, and intervention models may influence outcomes. Future studies should examine these sources of variation more systematically.

This is the first meta-analysis to specifically focus on formal pre-court diversion programmes only, with past meta-analyses having wider eligibility criteria, incorporating informal pre-court diversion, such as those with victim-offender mediation, treatment and educational programmes (Petrosino et al., 2018; Wilson et al., 2018). Our finding that formal pre-court diversion is associated with an estimated 14% relative risk reduction in crime and offending, is in line with past reviews. For example, Wilson et al. (2018) indicated a 12–17% decrease, whilst Petrosino et al. (2018) found an estimated 9–13% decrease in recidivism.

Our finding that formal pre-court diversion is associated with an absolute risk reduction of 7.2% is higher than recent research focused on the UK. Specifically, Rahal et al. (2025) found pre-court diversion overall was associated with an absolute risk reduction in crime and offending of 5.1%, whilst formal pre-court diversion was associated with a 2.9% reduction over 12 months. However, our meta-analysis incorporated international findings, different follow-up measures and timepoints, and a broader range of formal pre-court diversion approaches, which may account for this difference.

Critically, we have simultaneously conducted a review of informal pre-court diversion only, which demonstrated a 30% reduction in crime and offending (Keenan et al., 2025). Consistent with recent research (Rahal et al., 2025), this suggests that formal pre-court diversion, whilst effective, is associated with a smaller reduction in crime and offending than informal approaches. Whilst formal pre-court diversion involves a justice component, assessment and intervention with conditions (such as admitting guilt), informal pre-court diversion means children and young people are supported outside of custody environments and do not have formal sanctions (Keenan et al., 2023). As such, some children and young people who engage in formal pre-court diversion may experience labelling as a 'criminal' or 'delinquent', which they internalise and act in ways consistent with the applied label. This is acknowledged as an unintended consequence of diversion approaches (Smith, 2021). Whilst informal pre-court diversion leads to higher reductions in crime and offending, there may be situations where formal pre-court diversion must be used (e.g., type of offence), given that our findings indicate a 14% reduction in crime and offending, this still supports the use of formal pre-court diversion in practice.

All outcomes

In addition to violence, crime and offending outcomes reported above, we explored the effectiveness of formal pre-court diversion on outcomes known to be associated with youth offending. Whilst findings suggest a moderate effect on school engagement and low-to-moderate effect on self-esteem and drug and alcohol use, none of these reached statistical significance. For drug and alcohol use in particular, the direction of effect was potentially harmful, though based on few studies, indicating weak evidence. Critically, these additional outcomes were based on a small number of studies with wide confidence intervals, limiting our ability to draw conclusions regarding the effectiveness of formal pre-court diversion for these specific outcomes. Taken together, these findings indicate that formal pre-court diversion is most effective at reducing crime, offending, and violence amongst children and young people, with the need for further research into outcomes associated with youth offending, including potential adverse effects on drug and alcohol use.

Petrosino et al. (2018) found that diversion programmes with services were significantly more effective than diversion alone. Consistent with this, meta-regression findings suggest that formal pre-court diversion programmes targeting specific behaviours, such as drug and alcohol use, family relationships and support, school engagement and self-esteem showed stronger reductions in violence, crime, and associated outcomes. However, this trend must be interpreted with caution, as these findings are based on a small number of studies (e.g., two studies exploring family relationships and support, three exploring drug and alcohol use).

Sensitivity analyses conducted on all violence, crime, offending and associated outcomes indicated that no individual study disproportionately influenced the overall results. While some evidence of small-study bias was detected, adjusted estimates remained statistically significant, supporting the robustness of the findings.

What Works?

Our analysis highlights key factors that influence the effectiveness of formal diversion programmes.

Programmes are more likely to be implemented well and effectively if they have a clear purpose, eligibility criteria and referral process, with good leadership. Staff providing the intervention need to be well-trained and have ongoing supervision/monitoring to establish programme fidelity. Effective multi-agency teams need to be established, with good information sharing, open communication, and trusting relationships.

Formal pre-court diversion implemented more recently (in the 2010s and 2020s) was more effective than in studies conducted in the 1970s and 1980s. Older studies on formal pre-court diversion tended to take more punitive stances, offering less of the targeted support identified as important in the previous paragraph. This is consistent with changing attitudes and progression within the youth justice landscape internationally, where there has been a narrative change redefining 'youth offenders' as young people with unmet needs who are in trouble with the law (Case & Haines, 2021). For example, in the UK, youth cautions, conditional cautions, and community resolutions replaced reprimands and final warnings in 2012, giving police more options that could be targeted at young people's needs (HM Inspectorate of Probation, 2025). Internationally, similar changes have been observed. For instance, Australia introduced the Young Offenders Act in 1997 which led to structured cautions, warnings, and conferences, rather than police discretion and minimal options for diversion.

Subgroup analyses suggest that country of origin impacts on the effectiveness of formal pre-court diversion. Formal pre-court diversion was most effective in Canada, followed by Australia and the US. Formal pre-court diversion implemented in the UK was not found to be effective at reducing crime and offending. However, this was underpinned by only three studies. Of these, one found a significant increase in recidivism after children and young people engaged with formal pre-court diversion, however, this was a very old study underpinned by different justice policies and systems (Rose & Hamilton, 1970). The remaining two more recent studies conducted in the UK found formal pre-court diversion to be effective (DeMarco et al., 2021; Haines et al., 2012). Given that post-millennial formal pre-court diversion is more likely to be effective, the findings regarding UK effectiveness should be interpreted with caution.

Who Benefits Most?

Overall, gender did not appear to significantly moderate the effectiveness of formal pre-court diversion. This is consistent with previous research which identified no differences in the effectiveness of diversion programmes working with majority male or majority female groups (Wilson & Hoge, 2013). There was a trend towards formal pre-court diversion being more effective amongst majority female programmes than majority male or mixed-gender programmes. However, this was only based on a single study. Supporting this trend, some included studies found that males are significantly more likely to reoffend or re-enter the justice system than females (Cunningham, 2007; Curran et al., 1977; Dennison et al., 2006; Stewart et al., 2005). Some studies found that gender influenced access to or disposition within programmes, with females more likely to be diverted from court processing (Hartsell & Novak, 2022).

The trend towards formal pre-court diversion being more effective amongst majority female groups may be because girls tend to commit less serious and less persistent offences, making them more responsive to early interventions (Nilsson, 2017). They also exhibit greater sensitivity to authority and shame and often have stronger social bonds with family and school, which are activated by the formal pre-court diversion process to support positive change (De Boeck et al., 2018; Liu & Miller, 2020). As such, the stigma of receiving a caution may also have a greater deterrent effect on girls.

This is consistent with the wider evidence-base which highlights that gender responsive programmes can more effectively target the specific needs of children and young people, leading to reduced recidivism rates (Day et al., 2015). This must be interpreted with caution though, as findings on majority female groups were based on a single study (Davidson et al., 2011). Of note, one included study with a mixed-gender sample directly compared the effectiveness of formal pre-court diversion between male and female recipients, finding lower recidivism rates amongst females than males (Dennison et al., 2006).

Ethnicity was found to significantly moderate the effectiveness of formal pre-court diversion. Formal pre-court diversion was more likely to be effective at reducing crime and offending in studies that were majority white or had some diversity (15–49% of participants identified as Black and Global Majority).

Comparatively, formal pre-court diversion showed smaller effects that were not statistically significant when exploring crime and offending outcomes for diverse samples (50% or more Black and Global Majority). These findings were consistent with past research (Wilson & Hoge, 2013), which suggest persistent disparities in both programme access and outcomes by ethnicity. Further, research by Brodie et al (2025) show that whilst black boys, in particular, were 75% more likely to receive OoCDs than their white peers, there was a poor evidence base to show how racism and other issues of identity fed into design and delivery of diversionary activities¹⁶ thereby potentially impacting on the effectiveness of interventions for particular ethnic groups. However, the population-level meta-regression was not significant. This means that after accounting for other variables, such as gender and inclusion criteria, ethnicity alone does not consistently explain variation in outcomes.

Despite this, structural and systemic inequities associated with implicit bias and racial stereotyping were identified in some formal pre-court diversion programmes, with Black and Global Majority children and young people being more likely than their white counterparts to receive punitive sanctions (e.g., Gaby & Magnus, 2023). This is consistent with recent research in England and Wales which found Black and Global Majority children and young people were 9% less likely to receive pre-court diversion than white children and young people, after accounting for type of offence (Rahal et al., 2025). Our findings indicate that where programmes designed with cultural responsiveness in mind, there was some evidence of improved engagement and outcomes amongst Black and Global Majority children and young people (e.g., Davidson et al., 2011), highlighting the importance of inclusive, responsive intervention design.

In general, formal pre-court diversion programmes were more likely to be available to children and young people in higher income areas with lower poverty rates. This is despite socioeconomic status not affecting diversion outcomes in the included studies. This suggests that broader structural and systemic dimensions of socioeconomic inequality shape access to, engagement with, and the long-term benefits of diversion programs. As such, access to formal diversion

¹⁶ Brodie et al. (2015) identified other associated issues such as uncertainty on the part of professionals about what this might mean in practice. In addition, there was no consistent recording of ethnicity in case files.

programmes should be more equitable, enabling more children and young people to access these, regardless of SES.

Limitations

Challenges with the studies measuring effectiveness

This review highlights several methodological and reporting challenges in evaluating the effectiveness of approaches and interventions across youth justice. A key limitation was the inconsistent and incomplete statistical reporting across primary studies, which often prevented the direct inclusion of effect sizes in the meta-analysis. In several cases, studies did not report standardised effect sizes or sufficient summary statistics (e.g., group-level means, standard deviations, or confidence intervals), requiring manual effect size conversions from t-tests, odds ratios, and pre-post mean differences, or excluding studies altogether when conversion was not possible. For example:

- Amdur (1987) reported path coefficients corrected for attenuation but did not include group-level statistics or dichotomous outcomes that would allow effect size estimation.
- Penman (2007) used Mann–Whitney U tests without reporting raw means or SDs, and the small sample sizes further limited reliable effect size conversion.

Where possible, this was either followed up with the authors directly or alternative approaches were employed, such as computing SMDs from logistic regression-reported reoffending rates (e.g., in Wang et al.) using pooled variance estimates but only when data quality and assumptions supported such approximations.

These challenges mirror those encountered in other policing and crime-related meta-analyses (e.g., Hinkle et al., 2020, 2024; Turchan & Braga, 2024; Weisburd et al., 2011) underscoring persistent limitations in primary study reporting. Greater transparency, consistency in effect size reporting, and access to summary statistics remain critical for improving the interpretability and comparability of meta-analytic findings across criminal justice research.

It is important to note that the moderate impact observed across studies was accompanied by high heterogeneity, suggesting that variation in study design, population characteristics, and intervention models may influence outcomes. Future studies should examine these sources of variation more systematically.

Challenges with the studies measuring implementation

There was a lack of implementation data regarding sustainability, with only one moderate quality UK study exploring this. As such, conclusions regarding facilitators and barriers contributing to the continued implementation of formal diversion programmes overtime cannot be drawn. Given that sustainable interventions are needed to effect long-term change in a local area, more research is needed to establish whether formal diversion programmes are sustainable, alongside any areas that can be improved to aid this.

Furthermore, given the wide variety of options available for formal diversion programmes, there was a lack of information regarding the decision-making process on what programmes to implement in a local area and why. This was compounded by limited information on which children and young people gained access to formal diversion programmes, their individual characteristics, and the length of support received. These challenges are not unique to this research, with similar issues found in past research exploring the implementation of general diversion programmes (Keenan et al., 2023). Specifically, past research found that there is a lack of data on which children and young people are diverted, how they are diverted (type and length of intervention offered and received), as well as the outcomes for each child.

Final Thoughts and Recommendations

Formal pre-court diversion leads to a moderate reduction in violence, crime and offending amongst children and young people. Notwithstanding this, caution needs to be exercised in interpreting and using these findings given the relatively low number of studies upon which it is based as well as the age of some of the studies. The success of formal pre-court diversion is dependent on programmes having a clear purpose, eligibility criteria and referral procedure, dedicated diversion leads, formal training and supervision for staff, and consistent, transparent, and fair application. Children and young people in the UK tended to

hold more positive views of formal pre-court diversion than those from other countries.

Findings regarding the cost-effectiveness of formal diversion programmes were mixed, with some studies reporting cost-savings, whilst others reporting that formal diversion programmes were more expensive than standard court processing. However, there was a lack of research exploring long-term cost-effectiveness associated with diverting children and young people from the youth justice system and reducing recidivism rates. Furthermore, all but one study (DeMarco et al., 2021) was over 10 years old, with most over 20 years old, meaning findings regarding the cost-effectiveness of formal pre-court diversion are out of date.

Based on our understanding of previous meta-analyses and this current research, we make the following key recommendations:

- Overall, the age of studies included in this review is an issue for a wide range of areas discussed (e.g. ascertaining the views of children and young people, assessing cost effectiveness). As such there is a need for more contemporary high quality evaluations of formal version programmes and interventions.
- Given that formal pre-court diversion is moderately effective at reducing violence, crime and offending, we recommend its continued use with children and young people.
- Whilst there is a growing evidence base on formal pre-court diversion, there are persistent limitations in primary study reporting, with inconsistent and incomplete statistical reporting. Evaluations need to be transparent and consistent in effect size reporting for inclusion in future meta-analyses.
- Regarding the impact of formal pre-court diversion on the reduction and prevention of violence specifically, more high-quality evaluations are needed to determine what works best and for whom.
- To support implementation of effective formal pre-court diversion, we recommend that programmes have a clear purpose, eligibility criteria and referral procedure, dedicated diversion leads, formal training and supervision for staff, and consistent, transparent, and fair application.
- We recommend that formal pre-court diversion is designed with cultural responsiveness in mind, ensuring inclusive and responsive intervention

design to identify scalable approaches that reduce structural disparities in justice outcomes.

- Our review indicates that formal pre-court diversion targeting specific behaviours, such as drug and alcohol use, family relationships and support, school engagement and self-esteem may lead to improved outcomes for children and young people. However, as this finding is based on only a small number of studies, we recommend more high-quality research is conducted to investigate whether programmes which target specific behaviours are more effective in reducing violence, crime and offending amongst children and young people.

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Appendix 1. Methods of the systematic review

Protocol

Prior to initiating this systematic review, we developed a comprehensive protocol for an Evidence and Gap Map (EGM) outlining the research objectives, eligibility criteria, search strategy, data extraction, quality appraisal, and synthesis methods. This protocol was registered and is available on the Open Science Framework (OSF),¹⁷ ensuring transparency and adherence to predefined methods.

The search strategy and eligibility criteria outlined in the protocol are designed to be sufficiently comprehensive to capture a broad and systematically identified body of literature, enabling the extraction of relevant subsets of studies for inclusion in the Toolkit. The methods described below are aligned with the current Toolkit Strand on Problem-Oriented Policing ensuring a structured and rigorous approach to evidence synthesis.

Details of screening

For the Formal Pre-Court Diversion Toolkit strand, title and abstract screening was supported by the EPPI-Reviewer robot alongside a human reviewer.

Disagreements between the robot and human decisions were checked by a senior team member with content expertise. Common issues and inconsistencies were noted and discussed in a team meeting to align decision-making criteria.

Following data extraction of these 231 studies at the EGM level, 134 studies were identified as eligible for additional extraction for either the Formal Pre-Court Diversion or Informal Pre-Court Diversion Toolkit strand. Of these, 38 were subsequently excluded on study design and 9 were assigned to other Toolkit strands following more detailed review. One study was identified as a duplicate and one was found not to have relevant outcomes. Of these remaining 85 studies, 59 were assigned to Formal Pre-Court Diversion and 26 were assigned to Informal Pre-Court Diversion (Figure 10).

¹⁷ Protocol is available to access here: <https://osf.io/vamxy>

Therefore, a total of 59 studies were included in the Formal Pre-Court Diversion review, of which 36 contained data on effectiveness. The characteristics of these studies are detailed in [Appendix 3](#) and [Appendix 5](#).

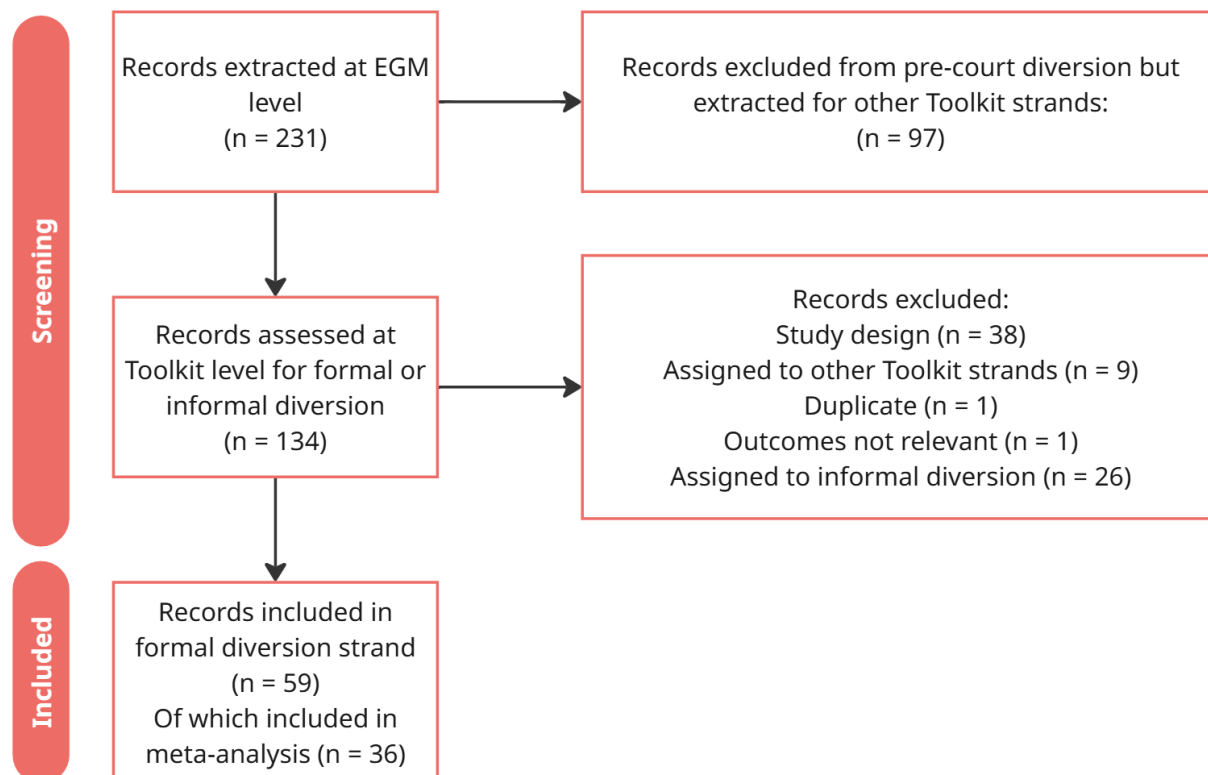


Figure 10: PRISMA flow diagram for the formal diversion strand

Quality appraisal process

The YEF-EQA tool was used across all 59 Toolkit studies to systematically assess the quality, reliability, and relevance of the research. This tool was applied by one reviewer, with a second reviewer checking their appraisals. In cases where studies had more than one component (i.e., randomised controlled trial and process evaluation) reviewers applied the tool separately for each component¹⁸.

¹⁸ For the purposes of quality appraisal, the two publications based on the same cohort were treated as a single study (e.g. Dembo, Wareham, Schmeidler, et al., 2005). This allowed for a unified assessment of methodological quality across all outputs. A single rating was applied to each domain of the quality appraisal tool, reflecting the collective strength and limitations of the evidence base as a whole. This approach ensured consistency in evaluation while acknowledging the interdependence of the findings across the four related studies.

Table A 1: Quality appraisal ratings for studies included in the Pre-court Diversion: Formal Toolkit strand

Study ID	Overall quality of the study	Study Design
Amdur (1987)	Moderate = RCT Low = PE	RCT – Randomised Controlled Trials PE – Process Evaluation
Beck et al. (2006)	Moderate	PE – Process Evaluation PPD – Pre/Post Designs
Benbow (2019)	Moderate	PE – Process Evaluation
Berger et al. (1977)	Very Low	QED – Quasi-Experimental Designs
Bohnstedt et al. (1978)	Low	QED – Quasi-Experimental Designs Cost
Brown (2019)	Moderate	PE – Process Evaluation OQD – Other Quantitative Designs
Brownlee (1995)	Low	QED – Quasi-Experimental Designs Cost
Butts et al. (2002)	Moderate	QED – Quasi-Experimental Designs
Chernoff et al. (2022)	Moderate	QED – Quasi-Experimental Designs

Crofoot et al. (1987)	Moderate	QED – Quasi-Experimental Designs
Cunningham (2007)	Moderate	QED – Quasi-Experimental Designs
Curran et al. (1977)	Moderate = RCT Low = PE	RCT – Randomised Controlled Trials PE – Process Evaluation
Davidson et al. (2011)	Moderate = QED Low = PE	QED – Quasi-Experimental Designs PE – Process Evaluation
DeFosset et al. (2017)	Moderate	PE – Process Evaluation
DeMarco et al. (2021)	Moderate	PE – Process Evaluation
Dembo Wareham, Schmeidler, et al. (2005)	Moderate	QED – Quasi-Experimental Designs Cost
Dembo, Wareham, Chirikos, et al., 2005	Moderate	QED – Quasi-Experimental Designs Cost
Dembo et al. (2006)	Moderate	QED – Quasi-Experimental Designs
Dembo et al. (2008)	Moderate = QED Low = PE	QED – Quasi-Experimental Designs PE – Process Evaluation
Dennison et al. (2006)	Moderate	QED – Quasi-Experimental Designs
Dunford et al. (1982)	Moderate = RCT Moderate = PE	RCT – Randomised Controlled Trials

		PE – Process Evaluation
Emshoff et al. (1983)	High	RCT – Randomised Controlled Trials
Frazier and Cochran (1986)	Very Low	PE – Process Evaluation
Gaby and Magnus. (2023)	Moderate	PE – Process Evaluation
Gummelt et al. (2016)	Moderate	QED – Quasi-Experimental Designs
Haines et al. (2012)	Moderate = QED Moderate = PE	QED – Quasi-Experimental Designs PE – Process Evaluation
Hartsell and Novak (2022)	High	QED – Quasi-Experimental Designs
HMIP and HMICFRS (2018)	Very Low	PE – Process Evaluation
Kraus (1981)	Low	QED – Quasi-Experimental Designs
Kuch (2017)	Low	PE – Process Evaluation OQD – Other Quantitative Designs
Lipsey et al. (1981)	Low	QED – Quasi-Experimental Designs
Little (2015)	High	QED – Quasi-Experimental Designs
McNeely et al. (2019)	Moderate	QED – Quasi-Experimental Designs
Miller et al. (1998)	Moderate	QED – Quasi-Experimental Designs

Moore (2015)	Moderate	QED – Quasi-Experimental Designs
Nadel et al. (2018)	Moderate	PE – Process Evaluation OQD – Other Quantitative Designs
Patrick & Marsh (2005)	Moderate	RCT – Randomised Controlled Trials
Penman (2007)	High = QED Moderate = PE	QED – Quasi-Experimental Designs PE – Process Evaluation
Petitclerc et al. (2013)	Moderate	QED – Quasi-Experimental Designs
Quay and Love (1977)	Low	RCT – Randomised Controlled Trials
Rausch (1983)	Low	QED – Quasi-Experimental Designs
Robertson et al. (2021)	Moderate	QED – Quasi-Experimental Designs
Rose and Hamilton (1970)	Moderate	RCT – Randomised Controlled Trials
Schneider (1986)	Moderate	RCT – Randomised Controlled Trials
Searle and Spier (2006)	Moderate = QED Moderate = PE	QED – Quasi-Experimental Designs PE – Process Evaluation
Severy et al. (1982)	Moderate	RCT – Randomised Controlled Trials

Smith et al. (1979)	Low	QED – Quasi-Experimental Designs Cost
Smith et al. (2004)	Moderate	RCT – Randomised Controlled Trials
Soppitt and Irving (2014)	Very Low	PE – Process Evaluation
Stewart et al. (2005)	Moderate	QED – Quasi-Experimental Designs
Stewart (2008)	Moderate = QED Low = PE	QED – Quasi-Experimental Designs PE – Process Evaluation
Stickle et al. (2008)	Moderate = RCT Low = PE	RCT – Randomised Controlled Trials PE – Process Evaluation
Sullivan et al., (2010)	Moderate = QED Low = PE	QED – Quasi-Experimental Designs PE – Process Evaluation
Wang and Weatherburn (2018)	Moderate	QED – Quasi-Experimental Designs
Wilson and Hoge (2013)	Moderate	QED – Quasi-Experimental Designs

How the findings were analysed and combined.

Converting Odds Ratios to Standardised Mean Differences (Cohen's d)

In meta-analyses, an Odds Ratios (OR) from binary outcome data can be approximately converted into an equivalent standardized mean difference (SMD).

Under the commonly used logistic distribution assumption¹⁹, the conversion is given by a simple constant multiplier. Specifically, Cohen's *d* (an SMD) is obtained by multiplying the natural log of the OR $\times \frac{\sqrt{3}}{\pi}$ (approximately 0.5513)²⁰. In practical terms:

$$SMD \text{ (Cohen's } d) \approx \frac{\sqrt{3}}{\pi} \ln(OR) = \frac{\ln(OR)}{1.814}$$

This formula was first proposed by Chinn (2000) and is also presented in the Cochrane Handbook. The R metafor package used for this work implements this logistic conversion to transform log-OR values to SMDs in an automated way.

An important caveat is that the OR is context-dependent and depends on baseline risk, whereas the SMD is scale-dependent. Extremely large ORs (or very small ORs) might correspond to an SMD beyond the typical range, which can be hard to interpret.

We extracted *t*-test results from Miller (1998) and Severy (1982). These studies reported sufficient statistical data. Namely, sample sizes for two independent groups and *t*-values for group comparisons, allowing for the calculation of SMD. The SMD (equivalent to Cohen's *d*) was calculated using the following formula, which derives the effect size from the *t*-statistic for independent samples:

$$SMD = t / \sqrt{(n_1 * n_2) / (n_1 + n_2)}$$

Where:

- *t* is the reported *t*-value,
- *n*₁ and *n*₂ are the sample sizes of Group 1 and Group 2, respectively.

To assess the precision of the estimated effect sizes, the standard error (SE) of the SMD was calculated using the following formula:

$$SE_{SMD} = \sqrt{(n_1 + n_2) / (n_1 * n_2) + (SMD^2) / (2 * (n_1 + n_2))}$$

¹⁹ E.g., assuming the underlying continuous outcome is logistic and both groups have equal variance

²⁰ Because this transformation is a linear scaling, the standard error of the SMD can be obtained by applying the same $\frac{\sqrt{3}}{\pi}$ factor to the standard error of the log OR

These conversions allow for consistent effect size estimation across studies that report group mean differences via *t*-tests but do not provide standardised effect sizes directly.

Meta-Regressions vs Subgroup Analyses

Subgroup analysis means stratifying the data by moderator level and computing separate meta-analyses for each subgroup of studies. In contrast, meta-regression incorporates the moderator as a covariate in a single model using all studies. Conceptually, these are two ways to do the same thing. A categorical moderator in a meta-regression, with dummy variables, is statistically equivalent to an ANOVA or between-subgroups test. However, a practical advantage of the meta-regression approach is that all data can be used in one model, and the overall error degrees of freedom is based on the on the total number of clusters (36) minus model parameters²¹.

In all meta-regression models, the intercept term was removed to enable direct estimation of effect sizes for each category within the moderator variables. This approach avoids anchoring comparisons to a potentially arbitrary reference group and instead allows for clearer interpretation of how each study or intervention characteristic is independently associated with effect size. It is particularly useful when the overall intercept lacks substantive meaning, and the primary interest lie in understanding the influence of specific moderators on intervention outcomes.

A subgroup analysis will calculate the SMD within each subgroup and then compare effectiveness and heterogeneity with the other subgroups in the category. Subgroup analysis will present details about the variance within the subgroups (Q_w) which is unexplained, and the variance between the subgroups (Q_b), and whether those differences are statistically significant.

²¹ This approach can sometimes be more powerful than splitting the data into separate subgroups. For example, if Category A includes 4 studies and Category B includes 13, running a meta-regression that includes both groups allows you to compare them using about 15 degrees of freedom (17 studies minus 2 model parameters). In contrast, analysing Category A on its own would give you only 3 degrees of freedom, which is too few to reliably estimate or compare effects. By combining all studies in one model, meta-regression makes better use of the available data and provides a more stable estimate of the difference between groups.

To examine whether the intervention effects varied by ethnicity and gender, we conducted a multivariate meta-regression using the `rma.mv()` function from the `metafor` package in R. This model accounts for the dependency of effect sizes within studies by including a random intercept for each study (clustered by `Study_ID`).

Robust Variance Estimation

In a meta-analysis with 36 studies and 216 effect sizes, dependent outcomes are nested within studies. To address this, robust variance estimation (RVE) is used (via the `metafor` and `clubSandwich` packages in R) to handle within-study dependence without needing the exact covariance of effects. Tipton & Pustejovsky (2015) demonstrated that while RVE yields accurate inference for overall effects with relatively few studies, statistical tests for moderators can suffer from inflated Type I error rates when the number of studies is low. To correct for this, we implemented the small-sample corrections proposed by Tipton & Pustejovsky (2015), which include bias-reduced variance estimation (the CR2 method) and the use of Satterthwaite-adjusted degrees of freedom for hypothesis testing. These corrections substantially improve the accuracy of standard errors and help maintain appropriate Type I error rates in small-sample settings.

Additionally, given that our moderator variables are categorical, and some levels are unevenly represented across studies, the effective degrees of freedom may be further reduced. Consistent with current best practices, we therefore applied small-sample adjusted RVE methods in all moderator analyses. This was done using the `robust()` function in the `metafor` package, with the `clubSandwich` package providing the CR2 adjustments.

To examine whether the effectiveness of formal pre-court diversion varies across specific subgroups we created new categorical moderators (see [Appendix 7](#) below) to allow further exploration.

Preparing the data frame for analysis

As is common in meta-analysis, the team encountered several challenges in harmonising effect sizes across studies. First, there was a need to standardise the direction of SMD values so that negative values consistently indicate a favourable intervention effect. For studies where lower scores in the intervention group meant

'tpositive effects of the intervention, for example, in Berger (1977), the outcome "Recidivism Rates" decreased more in the treatment group than in the control group ($d = -0.45$), showing a greater improvement in the treatment condition, here we didn't need to change the direction of the effect. However, there were some cases where a positive SMD demonstrated a positive effect in the treatment group, (e.g., school engagement). Since higher scores on this outcome measure reflected a beneficial effect, the SMD required a negative adjustment to align with other outcomes in the same direction of benefit. To achieve this consistently, we reviewed all effect size direction labels and, where necessary, multiplied positive SMD values by -1 for outcomes where a lower score signified improvement. This ensured that all SMDs reflected the same directional meaning, **that negative SMD values always indicate beneficial effects**. This approach supports clear interpretation and comparability across studies within the meta-analysis.

Third, there were occasions where results and/ or level of variance was not reported in a way that allowed us to transform data or have confidence in the results. In cases where we could make inferences based on other statistics, we included that data in the meta-analysis description but did not attempt to include their data due to potential of bias. Briefly below we highlight those studies:

- **Amdur (1987)** This moderate quality RCT was excluded from the meta-analysis because while it employed a randomised design and collected extensive outcome data, the absence of group-level quantitative outcomes comparing all seven intervention conditions to the control group prevent inclusion in a meta-analytic synthesis. Key metrics such as group means and standard deviations were not reported. Outcomes like school engagement, family conflict etc., were primarily used as indicators of the mechanisms through which the interventions were hypothesised to operate, rather than as standalone measures of intervention effectiveness. The path coefficients and beta values discussed are corrected for attenuation, and do not include confidence intervals or standard errors that are usable directly. We cannot calculate an odds ratio from the information provided in this document alone and there are no usable dichotomous outcome frequencies reported that would allow computation of a 2×2 table. Most quantitative results are described in a narrative

fashion, or are embedded in structural equation/path models without the raw data.

- **Penman (2007)** Data from Penman (2007) were excluded from quantitative synthesis due to insufficient statistical reporting to compute SMDs. The study evaluated changes in minor and serious self-reported delinquency (SRD) between a group placed on Supervision Requirement and a matched control group using Mann–Whitney U tests. While mean ranks and U statistics were reported, raw means and standard deviations were not provided, and no z-scores were available to convert U statistics into effect sizes. Given the small, matched sample sizes ($n = 21$ per group) and the non-parametric nature of the analysis, reliable approximation of SMDs was not feasible. These findings were therefore excluded from meta-analysis but are discussed narratively.

Meta-analysis

A random-effects model was fitted to the data. The amount of heterogeneity (i.e., τ^2), was estimated using the restricted maximum-likelihood estimator (Viechtbauer, 2005). In addition to the estimate of τ^2 , the Q-test for heterogeneity (Cochran, 1954) and the I^2 statistic (Higgins & Thompson, 2002) are reported. In case any amount of heterogeneity is detected, a prediction interval for the true outcomes is also provided (Riley et al., 2011).

Sensitivity analyses

Studentized residuals and Cook's distances are used to examine whether studies may be outliers and/or influential in the context of the model (Viechtbauer & Cheung, 2010). Studies with a studentized residual larger than the $100 \times (1 - 0.05 / (2 \times k))$ th percentile of a standard normal distribution are considered potential outliers (i.e., using a Bonferroni correction with two-sided $\alpha = 0.05$ for k studies included in the meta-analysis). Studies with a Cook's distance larger than the median plus six times the interquartile range of the Cook's distances are considered to be influential. The rank correlation test (Begg & Mazumdar, 1994) and the regression test (Sterne & Egger, 2005), using the standard error of the observed outcomes as predictor, are used to check for funnel plot asymmetry. The analysis was carried out using R (version

4.4.2) (R Core Team, 2020) and the metafor package (version 4.8.0) (Viechtbauer, 2010).

Implementation data

Information on factors that influenced, or was perceived to influence, implementation was extracted from studies where this was reported by study authors.

To capture implementation outcomes the toolkit data extraction made use of Proctor et al.'s (2011) Implementation Outcomes Framework to capture and categorise the barriers and facilitators to achieving good implementation.

The data extraction for the toolkit is an extension of what is already captured in the EGM. For the EGM the focus was on whether or not implementation outcomes were measured. In other words, does a study report on indicators of how well the programme/intervention was implemented or not. For toolkit data extraction we capture why implementation did or did not go well, what influenced implementation? This is typically thought of as barriers and facilitators to implementation. Information on barriers and facilitators will be presented using Proctor et al.'s (2011) Implementation Outcomes as headings so that the reader can understand the evidence, and gaps in the evidence, on the following implementation outcomes:

- **Acceptability:** Stakeholders' perceptions that the intervention or change is agreeable, palatable, or satisfactory.
 - Example indicators: Children's views on the intervention, participant engagement, satisfaction with content or delivery.
- **Adoption:** The decision or action to employ an intervention or implementation target.
 - Example indicators: Uptake of the intervention by services, schools, or communities.
- **Appropriateness:** The perceived fit or relevance of the intervention to the given context or problem.
 - Example indicators: Adaptations made to improve the intervention's fit with the context, perceived usefulness.

- **Feasibility:** The extent to which the intervention can be successfully implemented in a specific setting.
 - Example indicators: Evidence of practicality or utility, ability to deliver the intervention in the target environment.
- **Fidelity:** The degree to which the intervention was delivered as intended.
 - Example indicators: Training quality, dosage and intensity of the intervention, adherence to the prescribed approach.
- **Reach/Penetration:** The extent to which the intervention has been integrated into a service setting or reached eligible recipients.
 - Example indicators: Ratio of recipients served to the target population, evidence of saturation or integration.
- **Sustainability:** The ability to maintain or institutionalise the intervention over time.
 - Example indicators: Evidence of routinisation, integration into policies or practices, durability of implementation efforts.

To be included in the data extraction, process evaluations had to meet the following criteria, in line with Proctor et al.'s (2011) framework:

- Be an empirical study of implementation (qualitative, quantitative, or mixed methods).
- Include a clearly defined intervention, with implementation measurable against intended design.
- Involve active data collection about the implementation process (not reliant solely on author opinion).
- Include stakeholder perspectives—such as from implementers (e.g., police, professionals), recipients (e.g., children, parents, communities), or commissioners—to capture the complexity of implementation experience.
- Explore factors that influenced how and why the intervention worked or did not work.

Studies were excluded from the implementation extraction if they only included:

- Observations without evaluation design,

- Case studies without systematic data collection, or
- Interviews with a single individual.

The information extracted on each implementation outcome was narratively summarised. Further analysis and integration of implementation information with the meta-analysis and meta-regression was limited because of a lack of detailed evaluations of implementation. Cost data was treated separately. Any study reporting actual financial figures was included in a separate cost data extraction, even if it did not qualify for implementation analysis. Where implementation barriers/facilitators or influences on an implementation outcome were not measured and/or reported this is stated.

Appendix 2. Location Details

	Number of UK Studies	Number (and Location) of International Studies
Overall, for Strand	9	37 (USA) 6 (Australia) 2 (Canada) 1 (New Zealand)
Evidence Quality	3	24 (USA) 6 (Australia) 2 (Canada)
Estimated Impact on Violence	0	3 (USA) 2 (Canada)
Estimated Impact on Crime and Offending	3 (England)	24 (USA) 6 (Australia) 2 (Canada)
Estimated impact on all outcomes	3 (England)	25 (USA) 6 (Australia) 2 (Canada)



EDIE	0	9 (USA) 4 (Australia)
Implementation	7	14 (USA) 1 (New Zealand)
Cost	3	6 (USA) 1 (New Zealand)

Appendix 3. Characteristics of included studies for effectiveness

Authors (Year)	Country	Study Design	Intervention	Population/ Place	Comparison	Outcomes Measured	Quality Level	Findings
Berger et al. (1977)	USA	QED	Evaluated three formal diversion programmes practiced by a Sheriff's Department in Los Angeles.	Youth referred by juvenile court for misdemeanours or minor felonies (aged 9-17 years)	Traditional processing	<ul style="list-style-type: none"> Crime and offending 	Very low	Neither home nor school interventions were effective at reducing delinquency.
Bohnstedt (1978)	USA	QED	Evaluated 11 formal diversion programmes conducted in California. Programmes	Youth referred by law enforcement including low-risk and high-risk clients.	Traditional processing	<ul style="list-style-type: none"> Crime and offending 	Low	Most diversion project youth were rearrested within the six-month follow-up period at a

			varied in their structure and components.					similar rate to the comparison group. Three individual diversion projects reduced recidivism during the six-month follow-up period.
Brownlee (1995)	UK	QED	Evaluated effectiveness of The Edge, a community-based project which offered intensive supervision	Convicted offenders who were at serious risk of entering custody. Including both males and females, aged	Young people recommended to the project but sentenced to custody or sent to custody without referral.	<ul style="list-style-type: none"> • Crime and offending 	Low	After 24 months, there was a high level of reconviction rates (73%) for those who entered the

			and one-to-one counselling as a condition of a probation order.	between 17-21 years.				project in its first year. There were no significant differences in reconviction rates for those who engaged with the project and those in the comparison groups within the same period.
Butts et al. (2002)	USA	QED	Evaluation of a Teen Courts Project which involved comparing	Case referred to teen court following consent by children and	Traditional processing	<ul style="list-style-type: none"> Crime and offending 	Moderate	Teen court children and young people were significantly

			>500 teen court cases from 4 sites (Missouri, Alaska, Maryland, Arizona) with similar cases handled by the traditional juvenile justice system.	young people and parents.				less likely to re-offend than were comparison group children and young people in Alaska and Missouri. Similar trends observed in Arizona, although they did not reach statistical significance. Youth from Alaska and Maryland sites were more likely to hold
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								pro-social attitudes prior to their appearance in teen court.
Chernoff et al. (2022)	USA	QED	Thomas County Kansas Juvenile Drug Court	Young people with and without a history of drug taking were included in the diversion programme. Young people with extensive prior records as well as those charged with felony offences were omitted from study.	Traditional court processing	<ul style="list-style-type: none"> • Crime and offending • Criminal peers • Drug and alcohol use • School engagement 	Moderate	Despite similar completion rates, recidivism was greater and occurred sooner in the intervention group (drug court) relative to conventional diversion services.

Crofoot (1987)	USA	QED	Community-based diversion program involving intake assessment, family counselling, legal awareness workshops, community restitution, and drug/alcohol education.	Young people arrested for misdemeanour or felony offences in one precinct of Orange County, California (N = 240)	Traditional processing	<ul style="list-style-type: none"> • Crime and offending 	Moderate	No significant difference in recidivism between diverted and nondiverted groups overall.
Cunningham (2007)	Australia	QED	Northern Territory juvenile pre-court diversion scheme which	Young people from the Northern Territory with minor or serious offences.	Court-processing	<ul style="list-style-type: none"> • Crime and offending 	Moderate	Most young people did not reoffend during the first year after

			involved warnings and conferences.	Data taken from police records.				intervention. Younger groups who had a court appearance as their first event reoffended to a greater extent than offenders of the same age who had been diverted.
Curran et al. (1977)	USA	RCT	Operation Juvenile Intercept (OJI) was designed to divert Persons-In-Need- of-	Young people who need supervision but have not committed adult-type offences. PINS cases are brought to the	Traditional processing	<ul style="list-style-type: none"> • Crime and offending 	Moderate	Recidivism was more common among males who were under 13 years of age,

			Supervision (PINS) cases from the juvenile court system. OJI emphasised pre-adjudicatory treatment and community-based approaches by providing direct services and referral to outside agencies involving treatment approaches such as home	court by a complainant and cases often involve young people who do not attend school or who is incorrigible, ungovernable, or habitually disobedient and beyond the lawful control of parent or other lawful authority.				truants, and young people with prior contact with the justice system. OJI was minimally effective in influencing school attendance among diverted young people.
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			visits, team intervention, multi-methods, and family centred intervention.					
Davidson et al. (2011)	USA	QED	Evaluated the First Circuit Court, a specialised 'girls court' for adolescent girls who have committed a first-time offence. Case management is a significant component of the court, with ongoing	Girls living in Honolulu who were on probation or protective custody.	Traditional processing via the family court	<ul style="list-style-type: none"> • Crime and offending 	Moderate	Girls Court participants showed significant improvements in multiple areas of juvenile justice outcomes. From pre- to post-Court, law violations, status offences and

			supervision of the adolescent girls.					runaways dropped significantly. Compared to a matched group, Girls Court girls had fewer law and status re-offences.
Dembo et al. (2006)	USA	QED	Youth support project: A case management service	Any young person entering the juvenile arbitration services who lived within a 15-mile radius of Tampa, Florida were eligible to participate in the diversion programme.	Traditional processing.	<ul style="list-style-type: none"> • Crime and offending 	Moderate	Young people assigned to the intervention did not have significantly lower recidivism during the 12-month period than those

								assigned to the usual Juvenile Arbitration services.
Dennison et al. (2006)	Australia	QED	Children and young people who received a caution rather than formal processing.	14,730 children and young people aged 10–16 years.	Young people who appeared in court at first contact who could have been cautioned.	<ul style="list-style-type: none"> • Crime and offending 	Moderate	Young people who were cautioned had re-contact with the justice system less frequently than those whose first contact resulted in a court appearance

Emshoff et al. (1983)	USA	RCT	Adolescent Diversion Project (18-week program using behavioural contracting and advocacy).	73 youth (mean age = 14.5) with serious misdemeanours or nonserious felonies, referred from juvenile court	Traditional processing	<ul style="list-style-type: none"> • Crime and offending • School engagement • Family relationships and support 	High	Children and young people involved in the project were less likely to be incarcerated and showed a decrease in the frequency and seriousness of contacts with the police over time.
Gummelt et al. (2016)	USA	QED	Juvenile drug court, involving the development of individualised	20 children and young people aged 15-17 years (older youth excluded from analysis)	Young people on probation	<ul style="list-style-type: none"> • Crime and offending 	Moderate	Children and young people involved in the juvenile drug court had lower levels of

			plans, earning incentives for positive achievements or sanctions for regression in behaviour.					recidivism than those undergoing traditional probation.
Haines et al. (2012)	England	QED	Evaluation of the Youth Justice Liaison and Diversion (YJLD) Pilot. This is a pilot set up in six areas that aimed to test a model of diversion with young people to enhance health	1027 children and young people who were referred to the YJLD service, who had data inputted by staff into the record management system.	Children and young people who did not have access to the YJLD scheme, closely matched from other Youth Offending Teams.	<ul style="list-style-type: none"> • Crime and offending 	Moderate	Engagement in the diversion project led to lower levels of recidivism and reductions in depression and self-harm.

			<p>provision in their Youth Offending Services. The scheme was specifically focused on young people with mental health and developmental problems, speech and communication difficulties, learning disabilities and other similar vulnerabilities.</p>					
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Hartsell and Novak (2022)	USA	QED	Children and young people who received either a teen court or drug court intervention.	5,604 children and young people received a teen court intervention, whilst 636 received drug court intervention.	Children and young people who were assigned to probation.	<ul style="list-style-type: none"> • Crime and offending 	High	Children and young people who engaged in teen court or drug court were significantly more likely to be re-arrested compared to those whose cases were dismissed.
Kraus (1981)	Australia	QED	All male juvenile offenders who received police cautions between July	Males aged 10–15 years.	Children and young people receiving court orders.	<ul style="list-style-type: none"> • Crime and offending 	Low	Children and young people receiving police cautions were less likely to reoffend after

			and October 1975.					30 months, compared to those who received court orders.
Lipsey et al. (1981)	USA	QED	The programme is comprised of three projects which refer children and young people for individual or family counselling, as well as support from over 40 community agencies.	Arrested children and young people under the age of 17.	Young people who were counselled and released or given probation.	<ul style="list-style-type: none"> • Crime and offending 	Low	No significant differences in recidivism between counsel and release / probation cases which resembled diversion cases and cases which were diverted. No significant differences in recidivism

								<p>between diverted cases and cases randomly allocated to counsel and release. Significantly lower recidivism for children and young people who completed the programme compared to those whose cases closed early.</p>
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Little (2015)	USA	QED	Children and young people who were diverted formally through receipt of a police caution or youth justice conference.	Children and young people aged 10-16 years in contact with the youth justice system in Queensland.	Children and young people who appeared in court.	<ul style="list-style-type: none"> • Crime and offending 	Moderate	Formal police cautioning and youth justice conferencing were effective at reducing recidivism, when compared to children and young people who appeared in court.
McNeely et al. (2019)	USA	QED	The Truancy Intervention Program was designed to improve school attendance	Students aged 12 to 16 who had accrued more than five unexcused absences.	Traditional processing: students from a contiguous county which did not operate a	<ul style="list-style-type: none"> • School engagement 	Moderate	Small reductions in attendance were observed in the years

			amongst children and young people who were chronically absent.		diversion programme.			following the intervention, but few of these were statistically significant.
Miller et al. (1998)	USA	QED	The Juvenile Drug Court program supported children and young people to access a substance use treatment programme.	Children and young people with minimal criminal records who were arrested for misdemeanor drug charges.	Matched children and young people with similar criminal histories who were arrested prior to the start of the programme.	<ul style="list-style-type: none"> • Crime and offending 	Moderate	Significantly lower rate of rearrests during treatment period for those who took part in the programme compared to comparison group. After treatment

								<p>period, no significant differences between full treatment group and comparison group. However, significantly lower rate of rearrests for those who successfully completed the treatment when compared to the comparison group were</p>
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								present for 12 months after treatment, becoming insignificant at 18 months.
Moore (2015)	USA	QED	Family intervention team programme, providing support to children and young people who have disciplinary problems. children and young people who are uncooperative	Children and young people aged 10-18 years who had disciplinary issues.	Traditional processing	<ul style="list-style-type: none"> • Crime and offending • Drug and alcohol use • School engagement • Family relationships and support • Self-esteem 	Moderate	Children and young people who engaged in the diversion programme had more positive attitudes about personal violence and school-related outcomes.

			or fail to participate may undergo court proceedings.					Pre-post changes indicated programme participants had better behavioural self-worth and parental monitoring after the intervention.
Patrick and Marsh (2005)	USA	RCT	Juvenile Accountability Programme, a structured diversion alternative to magistrate court for first-time juvenile offenders	First time young offenders charged with status crimes involving alcohol or tobacco possession.	Traditional court processing	<ul style="list-style-type: none"> Crime and offending 	Moderate	No statistically significant differences in recidivism rates among the four groups. Over 3 years, 56.7% of first-time offenders did

			charged with status crimes (e.g. alcohol or tobacco possession). Intervention involved community service, payment of any restitution, attendance at alcohol or drug awareness class, reflective essay and record expungement if no reoffending after 1 year.					not recidivate and 32.4% recidivated 3 times or less.
Petitclerc et al. (2013)	Canada	QED	Children and young people	Children and young people	Traditional court processing	<ul style="list-style-type: none"> • Crime and offending 	Moderate	Children and young people

			who were arrested and spent time in the police station but not sent to court.	aged 12-17 years who participated in the Montreal Longitudinal and Experimental Study.				who were arrested and had contact with the police were less likely to reoffend than those who underwent court processing.
Quay and Love (1977)	USA	RCT	A formal pretrial diversion programme involving vocational or personal counselling, training, or	436 children and young people aged 12-16 years.	Traditional processing	<ul style="list-style-type: none"> • Crime and offending 	Low	Children and young people exposed to the pre-court diversion programme were less likely to be rearrested

			academic education.					compared to the control.
Rausch (1983)	USA	QED	Children and young people who received a community-based formal pre-court diversion programme, although components were unspecified.	Children and young people who had committed a status offence and had programme records available.	Traditional court processing	<ul style="list-style-type: none"> • Crime and offending 	Low	There were no significant differences between children and young people who received formal pre-court diversion and those who did not.
Robertson et al. (2021)	USA	QED	Described as an informal diversion via probation or community programs (meets our	1,216 first-time male adolescent offenders (ages 13–17) across three U.S. regions	Traditional court processing	<ul style="list-style-type: none"> • Crime and offending 	Moderate	Diverted youth showed significantly less self-reported offending and rearrests than

			criteria as 'formal' diversion)					formally processed peers.
Rose and Hamilton (1970)	England	RCT	Children and young people who accessed a Juvenile Liaison Scheme, where they were either cautioned or cautioned and received supervision.	Boys under the age of 17 who have committed a minor, first-time offence, admitted guilt, have family willing to participate, and complainant who will not prosecute.	Cautioned only	<ul style="list-style-type: none"> • Crime and offending 	Moderate	Supervision was not found to reduce the rate of reoffending.
Schneider (1986)	USA	RCT	Children and young people randomly assigned to restitution, such as paying	Children and young people who had committed an offence in one of four counties. Some counties	Children and young people randomly assigned to receive traditional dispositions, such	<ul style="list-style-type: none"> • Crime and offending 	Moderate	Overall, restitution had a small positive effect on reducing recidivism.

			money to victims, mediation sessions, or community service.	specified that the children and young people must have committed a first-time felony offence and admitted guilt.	as probation and detention.			However, this finding was not consistent across all four locations.
Severy et al. (1982)	USA	RCT	Evaluates the Memphis-Metro Youth Diversion Project, which redirects children and young people to existing services and monitor's progress. children and young people	Children and young people aged 8-17 years who had been charged with a crime sufficient enough that they otherwise would not have been diverted from the CJS.	Children and young people randomly assigned to traditional court-processing that would otherwise be diversion eligible.	<ul style="list-style-type: none"> • Crime and offending 	Moderate	No differences were found between children and young people who received treatment with services, without services or normal court processing in reoffending rates.

			either received treatment with services (community-based support) or without services (discussion with parents only).					
Smith et al. (1979)	USA	QED	Evaluation of eight formal pre-court diversion projects for children and young people. Programmes varied in their components,	Children and young people referred by law enforcement to diversion services, who otherwise would have been sent to probation or traditional court processing.	Traditional processing	<ul style="list-style-type: none"> • Crime and offending 	Low	Findings suggest that diversion project clients did no worse and sometimes did better than the matched

			including counselling, supervision, academic tutoring, employment support and substance use services.					comparison cases who had been processed through the traditional justice system.
Smith et al. (2004)	USA	RCT	The Adolescent Diversion Project works to promote relationships between children and young people, their families and communities to prevent	Children and young people were mostly referred for property offences.	Traditional court processing	<ul style="list-style-type: none"> • Crime and offending 	Moderate	Significant effect of time and group 12 months post-treatment. Those in the programme had lower recorded recidivism rates than the

			further offending.					comparison groups. No significant differences between groups for self-reported delinquency.
Stewart et al. (2005)	Australia	QED	Children and young people who received a police caution.	Police cautions are usually administered to children and young people who admit to a first-time or non-serious offence.	Children and young people who appeared in court but appeared to have been eligible for a caution.	<ul style="list-style-type: none"> • Crime and offending 	Moderate	Significantly fewer young people who were cautioned reoffended, compared to young people who appeared in court.

Stickle et al. (2008)	USA	RCT	Evaluated the use of a Teen Court programme, designed to prevent formal processing of children and young people who have offended for the first time. Teen Courts utilise informal processing and sanctions to prevent future offending.	Eligibility requirements for the Teen Courts varied from county to county, but all offenders had to have committed an offence appropriate for Teen Court, be between the ages of 11 years and 17 years, and admit personal responsibility for the offence with which they were charged. Repeat offenders were permitted to go through Teen	Traditional processing	<ul style="list-style-type: none"> • Crime and offending • Drug and alcohol use • Community Connectedness • Self-esteem 	Moderate	The Teen Court group offended at a higher rate and had a higher number of total rearrests than the TAU group.
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				Court provided that they had not participated in Teen Court during the past 2 years.				
Sullivan et al. (2010)	USA	QED	A Civil Citation program to address school-based offences and provides an alternative to school-based justice referrals. children and young people must agree to complete service hours within the required time frame. The	Young people with no more than a single prior misdemeanour charge on their record. children and young people and their parents must also be willing to participate and complete service hours within the required time frame (21 days)	Traditional processing	<ul style="list-style-type: none"> • Crime and offending 	Moderate	The odds of a new offence were greater in the children and young people in the TAU group relative to the intervention group. There were no significant differences between the two groups in terms of time to that referral.

			school resource officer meets with the children and young people and parents to discuss appropriate community service options and if these are completed within a specified time frame, no legal sanctions are imposed.					
Wang and Weatherburn (2018)	USA	QED	Children and young people who received a police caution.	Children and young people considered ineligible for the caution if they had	Traditional processing	<ul style="list-style-type: none"> • Crime and offending 	Moderate	Cautioning children and young people who had committed

				three or more prior cautions, plead not guilty at their index contact, had been convicted of or pleaded guilty to an excluded offence, was dealt by a court but had previously been cautioned and juveniles with rare offences				minor offences and who had not previously been referred to court resulted in a lower risk of reoffending relative to children and young people who were referred to court.
Wilson and Hoge (2013a)	USA	QED	Ottawa Community Youth Diversion Program (OCYDP) which involved	Medium-risk children and young people who were required to be between the ages of 12-17 and	Children and young people who were on probation.	<ul style="list-style-type: none"> Crime and offending 	Moderate	No significant differences between recidivism rates of the diversion and

			targeting medium-risk youth who would have been counselled and released, providing community-based interventions.	accept responsibility for the offence.				<p>probation samples for general or violent offences after 6 months or 1 year.</p> <p>For both general and violent offences at 18 months and the entirety of the follow-up period, children and young people referred to OCYDP had lower</p>
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								reconviction rates than children and young people sentenced to a period of probation.
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Appendix 4. Measured outcomes across included studies for effectiveness

YEF outcome framework category	Measured outcomes (descriptions by study authors)	Studies
Category description (as described in the framework) Violence <i>Violence incorporates incidents/behaviours as well as convictable offences. Violence may be of a physical, verbal, psychological, or sexual nature (YEF, 2023: p.12). Examples of violence include: Aggravated assault, Arson/firesetting, Bullying, Coercive/controlling</i>	violent felony, violent misdemeanor, violent behavior, brandishing a weapon, number of violent adult offences	(n = 5, k= 10, 4.6%) Dembo (2006); Miller (1998); Moore (2015); Petitclerc (2013); Wilson (2013)

<p><i>behaviour, Grievous/actual bodily harm, Harassment, Homicide, Kidnapping/false imprisonment, Manslaughter/murder, Mugging (personal theft), Possession of items to endanger life (e.g., knives/guns), Rape and sexual assault, Riot, Robbery, Sexual exploitation/grooming, Stalking, Threats to kill, Violent disorder</i></p>		
<p>Crime and offending</p> <p><i>Focuses on criminal behaviours ranging from minor offences that do not involve violence against another person to serious violent crimes which do.</i></p>	<p>Recidivism; recidivism rates; reconvictions 12 / 24 Months from date of order/release; recidivism (re-arrest); reoffending; rearrest rates; charge reduction; detention; failing to comply; felony – recidivism; rearrest; male recidivism; female recidivism; re-entered cases in 3 / 6/ 9 months; status offences; hycf days; detention days; law violations; drug misdemeanor; property felony; total arrests 1+ times; total arrest charges 1+ times; violent misdemeanor; public disorder</p>	<p>(n = 35, k= 200, 92.6%)</p> <p>Berger (1977); Bohnstedt (1978); Brownlee (1995); Butts (2002); Chernoff (2022); Crofoot (1987); Cunningham (2007); Curran (1977); Davidson (2011); Dembo (2006); Dennison (2006); Emshoff (1983); Gummelt (2016); Haines (2012);</p>

	<p>misdemeanor; offending re-contact; incarceration; proven reoffending; number of recontacts within two years after first / second / third youth justice event; recontact within two years after first / second / third youth justice event; future prison sentence after first / second / third youth justice event; next offence more serious after first / second / third youth justice event; recontact by 19.5 years of age after first / second / third youth justice event; number of recontacts by 19.5 years of age after first / second / third youth justice event; time to next event in days after first / second / third youth justice event; recidivism – prevalence; recidivism – incidence; recidivism – seriousness; most serious new charges incurred after the treatment period – violent misdemeanor; most serious new charges incurred after the treatment period – violent felony; re-arrested during the first year; recidivism rates 3 / 18 months after treatment period; cumulative recidivism rates (including recidivism during and after the treatment period) 3 months after treatment period; recidivism – new arrests during the 200 day treatment period; brandishing a weapon; number of violent adult offences; number of nonviolent adult offences; rearrest experience; offending; recidivism rates in 6 / 12 months; subsequent</p>	<p>Hartsell (2022); Kraus (1981); Lipsey (1981); Little (2015); Miller (1998); Moore (2015); Patrick (2015); Petitcherc (2013); Quay (1977); Rausch (1983); Robertson (2021); Rose (1970); Schneider (1986); Severy (1982); Smith (1979); Smith (2004); Stewart (2005); Stickle (2008); Sullivan (2010); Wang (2018); Wilson (2013)</p>
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	delinquency; delinquent behaviour; new referrals; recidivism at 6 / 12/ 18 months / ever: general; ; recidivism at 6 / 12/ 18 months / ever: violent	
School engagement <i>School engagement is a multifaceted construct including affective, behavioural, and cognitive components. The sub-outcomes below are different indicators of school engagement.</i>	school violation; not enrolled in school; school attendance, attendance rate; school absences; school disciplinary referrals	(n =4, k=5, 2.3%) Chernoff (2022); Emshoff (1983); McNeely (2019); Moore (2015)
Drug and alcohol use <i>Also called 'substance misuse/abuse'. Problematic use of drugs and/or alcohol that results in negative and harmful consequences to the self or others, such as impaired</i>	failed drug/alcohol test; getting drunk or high; frequency of drug use; variety of drug use in the last month	(n =3, k=4, 1.9%) Chernoff (2022); Moore (2015); Stickle (2008)

physical health, difficulties concentrating or skipping school.		
<p>Criminal peers</p> <p><i>Also called 'delinquent* peers'</i> Having a close group of people who take part in and promote criminal behaviour – criminal behaviour may be an important part of the group's identity.</p> <p><i>*The term 'delinquent' is falling out of use to reduce stigma</i></p>	delinquent peers	<p>(n = 1, k=1, 0.5%)</p> <p>Chernoff (2022)</p>
<p>Family relationships and support</p> <p><i>Positive and supportive relationships with family members.</i></p>	parental monitoring; existence of family curfew; more involved parents	<p>(n = 2, k=3, 1.4%)</p> <p>Emshoff (1983); Moore (2015)</p>

<p>Self-esteem</p> <p><i>Viewing yourself positively, including confidence in your abilities, appearance and self-worth</i></p>	<p>behavioral self-worth; positive Self-Concept</p>	<p>(n = 2, k=2, 0.9%)</p> <p>Moore (2015); Stickle (2008)</p>
<p>Community connectedness</p> <p><i>Feeling connected to one's community can look like identifying as a member of the community, trusting others in the community, having personal needs met by the community and engaging in community activities.</i></p>	<p>neighbourhood attachment</p>	<p>(n = 1, k=1, 0.5%)</p> <p>Stickle (2008)</p>

Appendix 5. Characteristics of included studies for implementation

Authors (Year)	Country	Study Design	Intervention	Quality Level	Implementation Outcomes	Experiences of children and young people
Amdur (1987)	USA	RCT	Evaluated a formal diversion intervention using Teen Courts, based on behavioural contracting, advocacy, and relationship-based support, assessed using psychometrically validated implementation scales.	Moderate	Fidelity: Staff were intensively trained, and fidelity continuously monitored through structured ratings and supervision of volunteer advocates, providing strong procedural oversight. The rigorous measurement of treatment integrity through statistical techniques suggested a moderate-to-high degree of fidelity to the intervention model.	N/A

Beck et al. (2006)	USA	PE	children and young people are referred to the Hamilton County Unofficial Juvenile Courts Diversion Program by police or schools. children and young people undergo a hearing, where a referee reviews the children and young people's behaviour and imposes a disposition (e.g., essays, work detail, probation, restitution, counselling). If no new complaints are received within a year, the children and	Moderate	<p>Acceptability: There was high parental satisfaction with the programme with 88.7% of parents reporting that the program was in their child's best interest, with an average satisfaction rating of 8.69/10.</p> <p>Appropriateness: Most parents (97.2%) reported no stigmatisation of their child, and many noted positive behavioural changes like increased rule-following and reduced association with anti-social peers.</p> <p>Reach / penetration: The programme operates across 28 community courts, but varying awareness and a 46% survey response rate suggest opportunities to strengthen communication and coverage.</p>	N/A
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			young people's record is destroyed.			
Benbow (2019)	Scotland	PE	Explored the implementation of the new 'Whole System Approach', which advocates for pre-referral screening, diversion from prosecution, and increasing the use of the Children's Hearing System. This aims to divert 16- and 17-year-olds away from the court process, using a welfare-based hearing, with compulsory	Moderate	<p>Acceptability: Perceptions of what constitutes a suitable case for diversion vary significantly, with criteria such as the need for an admission of guilt and professional discretion influencing differential access across local areas.</p> <p>Adoption: Adoption of diversion practices across Scotland was inconsistent, with some areas quickly embracing diversion and others lagging due to factors like local champions, resources, and operational clarity.</p> <p>Appropriateness: The appropriateness of diversion is debated, particularly regarding the types of offences and the need for a full admission of guilt, leading to inconsistent implementation.</p>	N/A

			supervision orders as an alternative.		<p>Feasibility: Feasibility is influenced by local resources, staffing, and integration with prosecution processes, with areas lacking dedicated teams or clear referral pathways facing significant challenges.</p> <p>Reach / penetration: Geographical and systemic variability in diversion practices leads to uneven reach, with access to diversion often limited by unclear pathways and inconsistent professional discretion.</p> <p>Sustainability: Long-term sustainability is at risk due to fluctuating diversion rates, lack of standardised data, and heavy reliance on key individuals or programs, with limited resilience to staff turnover or policy shifts.</p>	
Bohnstedt (1978)	USA	QED	Evaluated the cost-effectiveness of 11 formal diversion	Low	Cost: Cost assessments showed that the diversion projects did not save any money, however the individual cost of	N/A

			programmes conducted in California. Programmes varied in their structure and components.		diversion per client was much lower at \$180, compared to further processing which is estimated to cost \$500 per client.	
Brown (2019)	Wales	PE	Children and young people who commit minor, first-time offences were referred to the Youth Crime Diversion Model (Welsh Bureaux). The case is presented to a multi-agency panel, with possible outcomes including no further action, community restitution (apology letters,	Moderate	Acceptability: Practitioners, children and young people, and parents/carers widely considered the programme effective and acceptable Practitioners noted that the model enabled proportionate and child-focused responses which helped avoid premature criminalisation and promoted collaborative decision-making across stakeholders. Parents/carers appreciated the supportive approach shown towards their children, noting the opportunity for their child to avoid formal prosecution, while still facing the consequences of their actions.	Most children and young people felt that the process was fair, explained clearly, non-threatening and helpful in supporting self-reflection and instigating change. Although some children and

			restorative justice sessions with victims) or voluntary support services (e.g. anger management or substance misuse support).			young people felt intimidated by the setting of the panel.
Brownlee (1995)	UK	QED	Evaluated effectiveness of The Edge, a community-based project which offered intensive supervision and one-to-one counselling as a condition of a probation order.	Low	Cost: After receiving initial funding of £70,000 for the first four years of The Edge project, further funding of an additional £80,000 was viewed as unjustifiable due to a changing financial climate, leading the project to close in 1994.	N/A
Curran et al. (1977)	USA	RCT & PE	Operation Juvenile Intercept (OJI) was designed to divert	Low	Adoption: OJI successfully adjusted 68% of its cases compared to 35% for intake, with statistically significant differences,	N/A

			Persons-In-Need- of-Supervision (PINS) cases from the juvenile court system. OJI emphasised pre-adjudicatory treatment and community-based approaches by providing direct services and referral to outside agencies involving treatment approaches such as home visits, team intervention, multi-methods, and family centred intervention.		<p>showing it can be readily adopted by systems seeking to prioritise early diversion from deeper juvenile justice involvement.</p> <p>Feasibility: OJI achieved low rates of re-entry into the CJS and maintained lower placement rates despite adjusting more cases, demonstrating that it is operationally feasible without overburdening system resources.</p> <p>Cost: OJI program demonstrated a slightly lower overall cost per case (\$3,313) compared to traditional Intake processing (\$3,398), primarily due to fewer cases requiring expensive court investigation, supervision, and adjustment services.</p>	
Davidson et al. (2011)	USA	QED & PE	Evaluated the First Circuit Court, a	Low	Acceptability: Children and young people and families viewed Girls Court as	Girls Court created a

			<p>specialised 'girls court' for adolescent girls who have committed a first-time offence. Case management is a significant component of the court, with ongoing supervision of the adolescent girls.</p>		<p>a supportive and non-judgmental space that encouraged engagement and healing.</p> <p>Appropriateness: Girls Court effectively addressed gender-specific needs through tailored, trauma-informed programming.</p> <p>Feasibility: Implementation was feasible but required adjustments, such as staff training and support for families' time commitments.</p> <p>Fidelity: Fidelity increased over time as staff received training and clearer guidance on implementing the model consistently.</p> <p>Reach / penetration: The program reached its target population effectively, especially as it evolved to better match girls' needs and contexts.</p>	<p>supportive, non-judgmental environment where children and young people who took part in the program felt safe to express themselves, leading to meaningful engagement, behavioural change, and clear evidence that their voices were central to the program's impact.</p>
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DeFosset et al. (2017)	USA	PE	<p>Evaluated the Los Angeles County Teen Court program. This programme is embedded within the juvenile justice and educational systems and co-ordinated by the Superior Court. Regional probation officers screen and supervise every eligible 12–18-year-old first-time offender referred by the Deputy Probation Officer.</p>	Moderate	<p>Acceptability: children and young people viewed Teen Court as a less severe, more appealing alternative to formal court due to its leniency and lack of lasting legal consequences.</p> <p>Appropriateness: children and young people had mixed views on peer jurors, finding them both relatable and harsh which impacted their perceptions of the Teen Court process.</p> <p>Fidelity: Observations across Teen Court sites in Los Angeles showed that the program was delivered consistently with its intended structure, involving key participants and following a standard format despite variation in site maturity and session frequency.</p> <p>Reach / penetration: The Los Angeles County Teen Court program is well-</p>	<p>Children and young people in Teen Court found it a supportive, less punitive alternative to traditional court, gave thoughtful feedback on their experiences, and reported meaningful personal growth and behaviour change.</p>
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					integrated into the juvenile justice and education systems, operating 24 school-based sites and engaging local probation offices and volunteer judges to serve eligible youth offenders, ensuring broach reach and consistent access across the county.	
DeMarco et al. (2021)	England	PE	Evaluated 'Op Met Divan', a formal diversion programme implemented by the Metropolitan Police in the UK, aiming to reduce knife crime. The programme consists of multi-agency between stakeholders and children and young people identified as at	Moderate	<p>Acceptability: Op Met Divan was generally well-received by police staff, who appreciated its early intervention approach, though some frontline officers expressed concerns about workload and reduced community visibility.</p> <p>Adoption: The programme gained strong leadership support and was implemented across multiple boroughs, although initial hesitation from local authorities and concerns about a police-led model affected early buy-in.</p>	N/A

			<p>risk of carrying a weapon, with diversion activities given.</p>		<p>Feasibility: Delivery was feasible within existing police structures but was constrained by limited capacity, reliance on staff working beyond contracted hours, and the need to balance existing duties.</p> <p>Fidelity: While the core principles of the original Op Divan model were retained, adaptations were made to address London's higher volume of youth violence, though variation in training and delivery suggested some inconsistency in implementation.</p> <p>Reach / penetration: Op Met Divan was successfully expanded from Croydon to Sutton and Bromley, but differences in local authority engagement, infrastructure, and co-location posed</p>	
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					<p>challenges to consistent programme reach.</p> <p>Cost: Estimated at around £23,000 annually, costs were driven entirely by staff time; however, scaling the programme or replicating it in areas without existing school officers would likely raise overall expenditure</p>	
Dembo, Wareham, Schmeidler, et al. (2005)	USA	QED	Economic impact associated with budget cuts and replacement of a diversion program known as Juvenile Alternative Services Program (JASP).	Moderate	<p>Cost: JASP proved more cost-effective than alternative diversion programs over 12 months, with lower recidivism and justice system costs, especially compared to court-involved models.</p>	N/A
Dembo, Wareham,	USA	QED	Economic impact associated with budget cuts and	Moderate	<p>Cost: JASP had significantly lower direct justice system costs compared to the other diversion programs, suggesting it</p>	N/A

Chirikos, et al. (2005)			replacement of a diversion program known as JASP.		offered a more cost-effective model for reducing recidivism-related expenditures while delivering comparable or better outcomes	
Dembo et al. (2008)	USA	QED	Evaluated a post-arrest diversion programme implemented in Miami-Dade County, Florida. The programme utilised needs assessments to provide individual treatment for first-time, non-violent children and young people who have offended.	Moderate	Fidelity: Fidelity was largely maintained through close supervision and monitoring from senior staff, with one professional removed for not following protocol.	N/A

Dunford et al. (1982)	USA	RCT and PE	National evaluation of diversion programmes implemented across 11 sites in the US. Programmes varied in structure and components.	Moderate	<p>Fidelity: programmes varied substantially in structure, service content, and intensity, as well as how children and young people were referred and the types and levels of services provided.</p> <p>Cost: Average cost per diverted children and young people (unadjusted for inflation) was \$1,302 across the 11 projects evaluated, compared to an estimated \$463.43 per children and young people for justice system processing through youth courts. The cost data was obtained within the first two years of operation, meaning the higher costs may reflect expenses associated with start-up.</p>	Children and young people reported that formal diversion programmes were coercive and had limited concern for the children and young people's needs.
Frazier and Cochran (1986)	USA	PE	Evaluated the effectiveness of a formal diversion programme,	Very Low	Adoption: While early agreements with justice officials supported the diversion model, entrenched legal practices and conflicting staff philosophies led to	N/A

			implemented in eight North Florida counties. Volunteers from local colleges and universities acted as adult role models for children and young people referred to the project by prosecutors and judges.		symbolic rather than substantive adoption. Feasibility: Despite procedural frameworks, the program's feasibility was limited by staff deference to court authority, professional beliefs favouring intensive intervention, and internal prestige dynamics that reinforced system entrenchment.	
Gaby and Magnus (2023)	USA	PE	Explored two Teen Courts implemented in the US. Teen courts centre adolescents as both the defendants and arbiters of justice, with peers determining the outcomes associated with children and	Moderate	Acceptability: While teen courts were generally accepted by participants as preferable to traditional juvenile justice, their acceptability was undermined by inconsistencies in access to promised benefits like record expungement and perceptions of unfair treatment based on race and class	Children and young people demonstrated deep insight and critical awareness, clearly articulating their experiences and concerns

			young people's offending behaviour.		Appropriateness: The appropriateness of teen courts as diversionary alternatives was questioned, as punitive practices and systemic inequalities mirrored those in formal courts, particularly in the treatment of youth of colour and those from lower socioeconomic backgrounds.	about fairness, racial and class bias within the teen court system.
Haines et al. (2012)	UK	QED and PE	Youth Justice Liaison and Diversion Pilot Scheme aimed to identify and support children and young people with mental health, learning, and developmental needs at an early stage in the CJS, facilitating	Moderate	<p>Acceptability: Mixed acceptability among stakeholders, particularly where police performance measures conflicted with diversion aims.</p> <p>Adoption: Adoption varied, some sites benefited from existing partnerships and referral systems, while others struggled to embed the model.</p> <p>Appropriateness: Perceived as appropriate by most staff, especially</p>	One-to-one contact with practitioners was praised by children and young people as enabling them to feel heard and influence their

			access to appropriate services and diverting them from further justice involvement.		<p>where strong links with CAMHS were in place, although limited understanding of youth mental health among some police was a challenge.</p> <p>Feasibility: Barriers included inconsistent police engagement, communication gaps, and difficulty accessing and sustaining contact with young people.</p> <p>Reach/Penetration: Limited engagement in some sites, particularly among young people with additional cognitive or behavioural needs; delivery was uneven across pilot sites.</p> <p>Cost: Short-term costs were higher due to complexity of needs, but potential long-term savings through reduced reoffending were noted.</p>	own journeys, although some expressed a continued sense of confusion, uncertainty and lack of understanding in respect to the programme itself.
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HMIP and HMICFRS (2018)	UK	PE	Evaluated out-of-court disposal (OoCD) work in UK Youth Offending Teams. Options for OoCD's included community resolutions, youth cautions, and youth conditional cautions.	Very low	<p>Acceptability: Diversion was found to be very acceptable both to senior leaders in YOTs and to children and their parents/carers, due to the focus on the best interests of the child and the opportunity to better understand their behaviour.</p> <p>Appropriateness: Having a separate child decision-making panel with community volunteers included on the panel was found to be most appropriate for guiding out-of-court disposal work. Assessments were not always appropriate, either being too time-consuming, or not sufficiently capturing risks and broader context. There was not sufficient inclusion of children, their families, and victims in the planning process. The interventions offered were</p>	Children and young people were generally happy with the service that they received from the YOT. However, the inspection found that children and young people's views were rarely sought during the planning process, which could impact on degree of engagement.
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					<p>appropriate for addressing children's needs.</p> <p>Feasibility: It was challenging for YOT workers to balance both out-of-court and post-court caseloads, with high-risk post-court work taking priority. Achieving early assessment was made possible in some areas through efficient administrative processes.</p> <p>Fidelity: Most areas followed the national guidance on out-of-court disposals. Some areas went above and beyond with joint working and victim engagement, providing examples of best practice which could be adopted across all areas. Referring cases to the YOT within a short timeframe was challenging. Sometimes children were not fully informed of their rights and the</p>	
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					<p>consequences of accepting an out-of-court disposal.</p> <p>Reach / penetration: There was strong commitment to out-of-court disposal work across all areas, with all areas reporting good partnership working between the YOT and the police, and all representatives recognising the importance and benefits of out-of-court disposals.</p> <p>Sustainability: A lack of local evaluation and evidence gathering limited the opportunities for service improvement. The time commitment for assessments prevented some areas from taking on additional cases.</p>	
Kuch (2017)	USA	PE	Evaluated the use of civil citations in Florida, where attempts are	Low	<p>Acceptability: Civil citations were felt to be an acceptable alternative to children and young people entering the juvenile</p>	N/A

			made to balance the best interests of children and young people with accountability for offending behaviour.		<p>justice system by stakeholders, preventing barriers which might be introduced through a criminal record.</p> <p>Adoption: Of Florida's 67 counties, eight did not participate in civil citations. It was suggested that education about how civil citations can hold children and young people accountable could support uptake in non-participating counties, with the implication that civil could be seen as "soft on crime" by those with less knowledge of the process.</p> <p>Appropriateness: Civil citations were generally felt to be being used fairly, although "blanket policies" did prevent officers from using their discretion. Busy officers were more likely to use civil citations as the most expedient form of processing, and that there were instances of net-widening, with civil</p>	
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					<p>citations issued in cases where officers would have normally “look[ed] the other way”.</p> <p>Reach / penetration: In some areas, civil citations had become a “blanket policy”, and all eligible young people were expected to receive one.</p>	
Nadel et al. (2018)	USA	PE	<p>Evaluated the use of civil citations in Florida, US. Civil citations were used as a form of pre-arrest, whereby police officers have the discretion to arrest or divert children and young people for non-serious offences.</p>	Moderate	<p>Acceptability: Civil citation was more acceptable in urban, high-crime counties with strong stakeholder buy-in, where it aligned with local values and infrastructure.</p> <p>Adoption: Although most counties adopted civil citation in name, only high-use counties especially those adopting after the 2011 mandate demonstrated meaningful implementation that led to significant reductions in juvenile arrests</p>	N/A

					Fidelity: Fidelity to the civil citation program's intent was strongest in high-use counties with stakeholder alignment while a few counties showed net-widening effects by using civil citation alongside, rather than instead of, arrest.	
Penman (2007)	Scotland	QED and PE	<p>The Children's Hearings System is a national diversion scheme in Scotland for 8–17-year-olds referred on welfare or offence-related grounds. Referrals, mostly from police, can also come from schools, health, or social work.</p> <p>A Children's Reporter reviews each case to</p>	Moderate	<p>Acceptability: Young people interviewed expressed mixed views about the Hearings system. While some appreciated the support offered, particularly from individual social workers, many described feeling confused, stigmatised, or unheard during the process. The informal setting of the panel was intended to reduce intimidation, but several participants still felt that their voices weren't adequately included or respected. This affected their sense of fairness and legitimacy.</p> <p>Acceptability among professionals</p>	<p>The study includes the voices and perspectives of 26 young people (19 males and 7 females) who had been referred to the programme. Some felt confused, labelled, or not</p>

			<p>decide if compulsory measures are needed. If so, a panel of trained volunteers meets with the children and young people and key adults. Where necessary, a Supervision Requirement is imposed, with support delivered at home or in care. Cases not requiring compulsory measures may be diverted with a warning, advice, or voluntary support. Rooted in welfare principles, the system prioritises early,</p>		<p>appeared stronger, but with noted frustrations about the system's inconsistency and follow-through.</p> <p>Adoption: The Children's Hearings System is nationally mandated and widely adopted across Scotland, embedded in statutory frameworks. Police, schools, health services, and social work routinely refer young people into the system.</p> <p>Appropriateness: The programme is designed as a child-centred, welfare-first response, and is viewed as a more appropriate alternative to formal youth justice processes. However, the study raises concerns about over-inclusion, particularly of low-risk youth referred due to their social disadvantage, suggesting that while the model may be conceptually appropriate, its practical</p>	<p>listened to, while others highlighted instances of positive support, especially from social workers.</p>
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			proportionate help while avoiding criminalisation.		<p>application may dilute its targeting effectiveness.</p> <p>Feasibility: The infrastructure for the programme is well-established in Scotland, with dedicated staff in place. However, feasibility challenges do persist, especially regarding the capacity of required social workers, consistency in the provision, and how variable delivery can be. Barriers noted included limited access to specialist services and panel members noted frustration that their decisions were not always actioned.</p>	
Searle and Spier (2006)	New Zealand	QED & PE	Evaluated the use of Youth Drug Courts in Christchurch, an enhanced youth court process aiming to address alcohol and drug dependency	Moderate	<p>Acceptability: children and young people and parents/carers had broadly favourable views of the approach and felt inclusion of young people's families and the multidisciplinary team of</p>	Children and young people praised their relationship with the judge as a particular highlight.

			issues amongst children and young people.		<p>professionals were particular strengths of the Youth Drug Court.</p> <p>Appropriateness: The approach was broadly considered appropriate by children and young people and families. However, some children and young people felt the judge was too lenient, whilst others considered the approach too restrictive due to high levels of supervision.</p> <p>Reach / penetration: Findings suggest that the programme would have benefitted from extending the eligibility criteria so that more children and young people could access the much-needed support.</p> <p>Cost: The average cost for a youth advocate was \$4,607 per young person, which was four times higher than the</p>	<p>Children and young people felt expanding the eligibility for the court would open access to others in similar circumstances who need support. However, children and young people varied in their attitudes, with some finding the programme to be too restrictive, whilst others</p>
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					average cost of a youth advocate in the standard Youth Court.	perceived it as too lenient.
Smith et al. (1979)	USA	QED	Evaluation of juvenile diversion programmes funded by the Office of Criminal Justice Planning in the US. Programmes varied in their structure and components.	Low	Cost: The average diversion project cost per client was \$195, slightly less than the cost incurred by processing via the justice system at \$269 on average per client.	N/A
Soppitt and Irving (2014)	UK	PE	Evaluated the implementation of a triage scheme by one Youth Offending Team in the northeast of England. Triage schemes, based in police custody suites, assess the needs of	Very Low	Acceptability: The triage programme was generally well-received by young people and families, seen as a supportive and less severe alternative to court. Appropriateness: Stakeholders found the triage programme suitable for early	Children and young people engaging with the Triage programme were able to meaningfully express their views, showing

			children and young people at their first point of contact with the justice system, providing them with appropriate support based on their needs.		<p>intervention, though some felt it was excessive for low-level offences</p> <p>Feasibility: The programme was deliverable but hindered by police confusion, poor inter-agency communication, and unmet support needs.</p> <p>Reach / penetration: Despite moderate uptake, awareness among police and the public was low, limiting referrals and broader impact.</p>	remorse and thoughtful reflection, though some faced practical barriers like literacy challenges, impeding their ability to engage fully with the programme.
Stewart (2008)	USA	QED and PE	Evaluated two community diversion programmes in Ohio, US. Activities differed across programmes and can include hearings with	Low	Acceptability: The programme appeared to be broadly acceptable to parents and staff, with parent respondents highlighting positive interactions and the perceived fairness and compassion of programme personnel. However, the qualitative	Only two children and young people shared their views, restricting confidence in wider youth

			volunteer magistrates deciding on outcomes for the children and young people.		<p>sample was limited, only two children shared their views and only six parents returned questionnaires (15% response rate).</p> <p>Appropriateness: The programmes were viewed as theoretically appropriate for non-serious offenders, aligning with restorative justice and reintegrative shaming models. However, quantitative findings did not show differential impact between status and delinquent offenders</p>	<p>perspectives. However, children and young people interviewed held positive views of the programme.</p>
Stickle et al. (2008)	USA	RCT & PE	Evaluated the use of a Teen Court programme, designed to prevent formal processing of children and young people who have offended for the first time. Teen Courts	Low	<p>Acceptability: Strong stakeholder and youth engagement indicated high acceptability of the Teen Court intervention across participating counties.</p> <p>Fidelity: The Teen Court intervention was delivered with high fidelity overall, though the low rate of substance abuse service</p>	N/A

			utilise informal processing and sanctions to prevent future offending.		delivery revealed a key area for improvement.	
Sullivan et al. (2010)	USA	QED & PE	A Civil Citation program to address school-based offences and provides an alternative to school-based justice referrals. children and young people must agree to complete service hours within the required time frame. The school resource officer meets with the children and young people and parents to discuss	Moderate	<p>Acceptability: Early engagement of key decision-makers, cross-sector collaboration, and a unified focus on youth outcomes fostered broad stakeholder acceptance of the Civil Citation (CC) program.</p> <p>Fidelity: Strong initial fidelity was maintained through a commitment to preventing youth failure, though emerging variations in sanctions and concerns about academic discipline highlight areas needing closer monitoring</p> <p>Sustainability: Continued sustainability efforts focus on securing funding,</p>	N/A

			appropriate community service options and if these are completed within a specified time frame, no legal sanctions are imposed.		expanding program eligibility, engaging the business community, and addressing overlapping school sanctions to maintain the program's impact and credibility.	
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Appendix 6. Availability of evidence according to each of Proctor et al. (2011)'s implementation outcomes

Authors (Year)	Acceptability	Adoption	Appropriate-ness	Feasibility	Fidelity	Reach/ penetration	Sustainability	Cost
Amdur (1987)	No	No	No	No	Yes	No	No	No
Beck et al. (2006)	Yes	No	Yes	No	No	Yes	No	No
Benbow (2019)	Yes	Yes	Yes	Yes	No	Yes	Yes	No
Bohnstedt (1978)	No	No	No	No	No	No	No	Yes
Brown (2019)	Yes	No	No	No	No	No	No	No

Brownlee (1995)	No	No	No	No	No	No	No	Yes
Curran et al. (1977)	No	Yes	No	Yes	No	No	No	Yes
Davidson et al. (2011)	Yes	No	Yes	Yes	Yes	Yes	No	No
DeFosset et al. (2017)	Yes	No	Yes	No	Yes	Yes	No	No
DeMarco et al. (2021)	Yes	Yes	No	Yes	Yes	Yes	No	Yes
Dembo, Wareham, Schmeidler, et al. (2005)	No	No	No	No	No	No	No	Yes
Dembo, Wareham, Chirikos, et al. (2005)	No	No	No	No	No	No	No	Yes
Dembo et al. (2008)	No	No	No	No	Yes	No	No	No
Dunford et al. (1982)	No	No	No	No	Yes	No	No	Yes
Frazier and Cochran (1986)	No	Yes	No	Yes	No	No	No	No

Gaby and Magnus (2023)	Yes	No	Yes	No	No	No	No	No
Haines et al. (2012)	Yes	Yes	Yes	Yes	No	Yes	No	Yes
HMIP and HMICFRS (2018)	Yes	No	Yes	Yes	Yes	Yes	Yes	No
Kuch (2017)	Yes	Yes	Yes	No	No	Yes	No	No
Nadel et al. (2018)	Yes	Yes	No	No	Yes	No	No	No
Penman (2007)	Yes	Yes	Yes	Yes	No	No	No	No
Searle and Spier (2006)	Yes	No	Yes	No	No	Yes	No	Yes
Smith et al. (1979)	No	No	No	No	No	No	No	Yes
Soppitt and Irving (2014)	Yes	No	Yes	Yes	No	Yes	No	No
Stewart (2008)	Yes	No	Yes	No	No	No	No	No
Stickle et al. (2008)	Yes	No	No	No	Yes	No	No	No



Sullivan et al. (2010)	Yes	No	No	No	Yes	No	Yes	No
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Appendix 7. Moderator categories

Funding category

Category	Description	Examples
1. National Government – Health / Social Science	National-level public health or research funding bodies	NIH (National Institute of Mental Health); Public Health Service grant
2. National Government – Justice / Criminal Justice	National criminal justice departments or agencies	U.S. Dept. of Justice, Law Enforcement Assistance Administration
3. State / Local Government – Justice or Youth Services	State or local justice agencies, youth justice bodies	California Council on Criminal Justice; Florida Dept. of Juvenile Justice; State Office of Criminal Justice Programs
4. Local Authority / Youth Offending Team (UK-specific)	Local UK public bodies focused on youth offending	Northamptonshire Youth Offending Team
5. Academic / University-Sourced	University centres, internal grants, or consortia	Collaborative on Children, Families, and Communities at University of South Florida



6. Federal Grants (General/Unspecified)	U.S. federal grant support not clearly linked to a specific agency	"Funded by a federal grant" (e.g. Boise, Idaho case)
7. Mixed / Shared Funding	Where both a university and a government body contribute	Florida DJJ + University of South Florida (Sullivan, 2010)
8. Not Reported / Unclear	No funding info available or unclear source	

Intensity of intervention

Category	Description	Examples
Low	Up to 1 month/ One-time/ or infrequent sessions	Brief interventions with minimal engagement.
Medium	1 to 3 months/ Regular sessions (e.g., weekly)	Moderate-term programs with consistent participation.
High	Over 3 months/ Frequent sessions (e.g., multiple times per week)	Long-term programs requiring substantial commitment.

Intervention components

Category	Included components
Accountability & Restoration	<p>Definition:</p> <p>Programs that seek to hold children and young people accountable for their actions through reparative measures, aiming to restore harm to victims and the community.</p> <p>Included Components:</p> <ul style="list-style-type: none"> • Community Service • Restitution to victims • Restorative justice practices
Developmental Interventions	<p>Definition:</p> <p>Programs designed to promote skills, personal development, mentoring, and behavioural growth in children and young people.</p> <p>Included Components:</p> <ul style="list-style-type: none"> • Skill-Building / Education • Mentoring / Coaching

Supportive Casework	<p>Definition:</p> <p>Structured case management including assessments, tailored plans, referrals, and check-ins, often described as the system's 'soft-touch' alternative to legal processing.</p> <p>Included Components:</p> <ul style="list-style-type: none"> • Case Management / Referral • Assessment / Intake & Planning
Therapeutic Support	<p>Definition:</p> <p>Direct interventions focused on family and individual counselling, crisis response, mental health support, and problem-solving.</p> <p>Included Components:</p> <ul style="list-style-type: none"> • Counselling & Family Support • Crisis Response / Immediate Intervention • Parent-Focused Interventions

Intervention setting

Category	Description
Justice System-Based Settings	<p>Definition: Interventions delivered at or near police stations, juvenile halls, or within court-affiliated facilities.</p> <p>Examples:</p> <ul style="list-style-type: none"> • "Wing of the juvenile hall near intake facilities" • "Truancy Unit" • "Police station"
Community-Based Settings	<p>Definition: Delivered through community locations such as schools, parks, recreation departments, and nonprofit centers.</p> <p>Examples:</p> <ul style="list-style-type: none"> • "City Parks and Recreation" • "Community service sites" • "Recreational and employment referrals"

Home or Hybrid Settings	<p>Definition: A mix of home visits, phone check-ins, or flexible arrangements combining home, community, and agency touchpoints.</p> <p>Examples:</p> <ul style="list-style-type: none"> • "Check-ins at young person's home and via phone" • "MST intensive home- and community-based program"
Clinical or Therapeutic Settings	<p>Definition: Delivered in outpatient clinics, psychiatry centers, or therapeutic environments focused on mental health or behavioral treatment.</p> <p>Examples:</p> <ul style="list-style-type: none"> • "Child and adolescent psychiatry outpatient clinic" • "Therapeutic youth service bureau"

Inclusion criteria

Category	Description
FTE only	<p>Definition: Where the intervention only includes children and young people with no prior offences/ describe them as FTE</p>

Minor offences only	<p>Definition: Where the intervention only includes children and young people committing 'minor' offences (e.g., shoplifting, underage drinking) and are referred by the school or agency.</p> <p>Please note – this may also include FTE children and young people but the intervention does not describe this clearly</p>
Discretionary Referral	<p>Definition: Cases where referral to the intervention is based on practitioner, agency, or system discretion rather than strict eligibility criteria (e.g., prior record, offence severity). These referrals may include a mix of youth (first-time, repeat, minor, or moderate offences), but eligibility is not clearly defined in terms of offence history or type.</p>

Ethnicity

Category	Description
Majority white Sample	Definition: >85% of sample identified as white
Some Diversity	Definition: Between 15–49% of participants identified as Black and Global Majority (i.e., Black, Hispanic/Latinx, Asian, Indigenous, etc.)

Diverse / Balanced	Definition: 50% or more Black and Global Majority youth in the sample
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Sex/Gender

Category	Description
Majority Female Sample	Definition: >60% of the sample is female May also include completely Female samples
Majority Male Sample	Definition: > 70% of the sample is male May also include completely Male samples
Some Gender Balance	Definition: 40–70% male and 30–60% female