

# **Prison Awareness Programmes**

# **Toolkit technical report**

Hannah Gaffney, Darrick Jolliffe and Howard White

June 2021







This report is produced in collaboration with staff from the Campbell Collaboration Secretariat. It is a derivative product, which summarises information from Campbell systematic reviews, and other reviews, to support evidence-informed decision making'.

*The Campbell Collaboration thank Suchi Malhotra for the AMSTAR coding of included reviews (second coder).* 

#### **Plain Language summary**

This technical report reviews the evidence on the effect of prison awareness programmes on children's involvement in crime and violence.

Prison awareness programmes may be either children and young people visiting prison or prison inmates presenting to children in a school or community setting. Prison awareness programmes are targeted interventions. They recruit a specific group of children and young people who have committed an offence or are considered at risk of doing so. Recruitment is often via referral by probation agencies, social services and others who work with at-risk youth.

The rationale for prison awareness programmes is based on deterrence theory. They aim to deter children from offending by providing an insight into the difficulty of prison life.

This report is based on two systematic reviews: (i) Petrosino et al. (2013) which summarized evidence from nine programmes where children and young people visited prisons, and (ii) van der Put et al. (2020) which included 13 studies. The reviews have an evidence rating of 3 and 4 respectively for their estimate of the effect on offending.

Both reviews find that prison awareness programmes had an adverse effect and increased offending. However, the best available estimate suggests this effect is small (a 3 percent increase). In addition, Van der Put et al. (2020) reports a positive effect on intermediate outcomes, specifically risk factors for delinquency, attitudes towards delinquency, and attitudes towards punishment. Van der Put et al. also found a more positive relationship in more recent studies than older ones, self-reported outcomes rather than official records, and longer follow up periods. Moderator analysis on programme design features (e.g. including confrontational sessions, prison tours versus community-based, or parental involvement) did not find significant effects.

#### Process evaluations of three prison visit programmes in the

early 1990s reported that all three programmes were initiated by inmates with support from the prison governor and the chaplain. These evaluations emphasized the importance of establishing good working relationships with prison officers, police, and referral agencies. Comparing the process evaluations suggests that having smaller groups allowed maintaining control and discipline in the session compared to the programme which had larger groups. There were mixed views about the confrontational element, but participating adults generally thought it was appropriate if it targeted youth who had already offended. The lack of follow-up support in two of the programmes was seen as a failing, as it was a challenge to sustain the programme once the founding inmates moved on.

The current evidence does not support the use of prison awareness programmes to reduce offending. If these programmes are funded, research should investigate what can be done to strengthen the link between changing youth attitudes and actual offending.

#### **Objective and approach**

This technical report reviews the evidence on the effect of prison awareness programmes on children's involvement in crime and violence. Prison awareness programmes may involve either children and young people visiting prison or prison inmates presenting to children in a school or community setting. The rationale is to provide an insight into prison life being hard and unpleasant, and so deter children from offending.

This technical report is based on two systematic reviews: Petrosino et al. (2013) and van der Put et al. (2020). Both reviews are systematic reviews and include meta-analyses of the effect of prison awareness programmes on juvenile delinquency.

The following inclusion criteria were used to inform the selection of systematic reviews.

#### Inclusion criteria

To be included in this report, a systematic review must have evaluated the impact of prison awareness programmes for children and young people on outcomes relating to their later involvement in crime and violence. Reviews of programmes colloquially known as 'Scared Straight' were considered for inclusion, along with systematic reviews and metaanalyses of other forms of prison awareness programmes for children and young people.

#### Outcomes

Both reviews examined the effectiveness of prison awareness programmes on juvenile delinquency. Petrosino et al. (2013) reported that their primary outcome of interest was involvement in crime, such as arrests, convictions, reoffending, or self-reported offences. The review by van der Put et al. (2020) included a broader range of outcomes such as measures of delinquent behaviour as well as other associated measures, such as risk factors for delinquency, attitudes towards delinquency, and attitudes towards punishment.

#### **Description of interventions**

The current report includes all forms of prison awareness programmes, including those in which adult prisoners and adults who have offended in the past run sessions for young people in schools, and programmes in which children and young people visited prisons. The main purpose of these sessions is to convey the reality of life in prison. They may include other messages about crime and violence "not being cool", and the effects of crime on victims. Petrosino et al. (2013) only included programmes in which children and young people visited prisons, while van der Put et al. (2020) included both programmes which took this form, but also those that involved ex-prisoners visiting schools.

The core intervention component of prison awareness programmes is contact between prisoners and children and young people considered at-risk for involvement in crime and violence. In some instances, these programmes involve a "confrontational rap session", described by Petrosino et al. (2013) as sessions where adult inmates shared graphic stories about their lives in prison. The aim of these sessions is for prisoners to provide a depiction of life in prison to children and young people. The portrayal of prison provided by prisoners can range from describing the the boredom of prison life to detailing more shocking and violent incidents in prison. Some approaches may even have involved intimidation, taunting, or showing children and young people 'pictures depicting prison violence' (Petrosino et al., 2013). Van der Put et al. (2020, p. 69) outline that juvenile awareness programmes that take place in schools involve ex-prisoners sharing their "life stories and describe the choices they

made that led to imprisonment". These more educational elements can also be included in programmes where children and young people visit the prison.

The more confrontational prison awareness programmes are often known as 'Scared Straight'. 'Scared Straight' first began as a way to reduce/prevent offending amongst children and young people in the USA during the 1960s (Petrosino et al., 2013). Scared Straight gained some notoriety and media attention after it was featured in a television documentary. It has been associated with harmful effects and increases in offending (Petrosino et al., 2002).

#### Targeted or Universal

Prison awareness programmes are targeted interventions. They work with a specific group of children and young people considered at risk for involvement in crime and violence, or have already offended. Children are recruited to participate through referral by probation agencies, social services and others who work with such youth.

#### Implementation setting and personnel

The implementation of prison awareness programmes is likely to be a collaboration between prison staff, inmates, referral agencies and possibly a research team. The personnel who deliver the intervention are either adults serving a prison sentence at the time of the intervention or adults who have previously served a prison sentence. Van der Put et al. (2020) describe that these programmes can take place either in prisons or in schools.

#### Duration and Scale

No specific information about the duration of prison awareness programmes is provided by either review, but these are likely to be short and brief interventions. Prison awareness programmes are unlikely to involve more than one prison visit or educational session in schools.

#### Theory of change/presumed causal mechanisms

Deterrence theory is the primary theory of change underpinning 'Scared Straight' programmes (van der Put et al., 2020). The presumed causal mechanism is that children and young people who participate in prison awareness programmes are deterred from involvement in crime and violence after they have been faced with the potential consequences and the reality of life in prison.

Some research has shown that knowing one will be punished for an offence and that the punishment will be severe are important factors when preventing crime and violence (Paternoster, 2010). Thus, in 'Scared Straight' programmes when young people are exposed to the reality of the consequences of offending, either through realistic depictions, prison visits, or presentations by prisoners (Petrosino et al., 2013), they will be deterred from offending in the future (van der Put et al., 2020).

It is also possible that young people take these lessons more seriously as they are delivered by inmates who can appeal to 'having once been like you are now'.

Scared straight programmes rely heavily on an authoritarian principle, harsh punishment, intimidation and provoking an emotional and fearful response from children and young people.

There are also plausible theories which suggest prison awareness programmes could have a harmful effect on children and young people. Participation in the 'rap sessions' in 'Scared Straight' programmes could retraumatise children and young people who have previously experienced abuce. Researchers have noted specific concerns that if a child exposed to Scared Straight later receives a custodial sentence, they may contemplate suicide (Lloyd, 1995). There are further concerns with regards to the 'contagion effect' of grouping several 'at-risk' children and young people together on these programmes (Dishion and McGord, 1999).

#### **Evidence base**

#### Descriptive overview

The van der Put et al. (2020) review included 13 evaluations published between 1967 and 1992 of prison awareness programmes in their meta-analysis, representing data from approximately 1,536 youth. All evaluations were conducted in the United States of America. The age of participants ranged from 7 to 20 years old, with a mean age of 15.5 years old. The majority of participants were male (mean percentage = 92%). No information about the ethnicity of participants is provided in the review.

Petrosino et al. (2013) included 9 evaluations of prison awareness programmes, all conducted in the USA. The average age of participants ranged from 15 to 17 years old and only one study included female participants. Across all studies, the ethnicity of participants ranged from mostly White participants (i.e., 84%) to mostly Black participants (i.e., 64%).

#### Assessment of the strength of evidence

We have confidence that, at the time of writing, the reviews by Petrosino et al. (2013) and van der Put et al. (2020) are the best available evidence on the effectiveness of Scared Straight.

Two independent coders used a modified version of the AMSTAR2 critical appraisal tool to appraise the reviews by Petrosino et al. (2013) and van der Put et al. (2020). According to this tool, the review by Petrosino et al. (2013) was rated high confidence in study findings and the review by van der Put et al. (2020) was rated medium confidence. The results are summarised in Annex 3.

Both reviews adequately specified the research questions and the inclusion/exclusion criteria. The inclusion criteria included components relating to the population, intervention, comparison group and outcome of interest. Petrosino et al. (2013) included evaluations of prison awareness programmes that were evaluated using a randomised or quasi-randomised design with participants aged 17 years old or younger, considered at-risk for delinquent behaviour. Only programmes that involved children and young people visiting prison were included. The review by van der Put et al. (2020) included evaluations of programmes where children and young people visited prisons, and also programmes where prisoners or exprisoners visited schools and were implemented with participants aged 12 to 20 years old at-risk of delinquent behaviour.

van der Put et al. (2020) did not state that they created a review protocol before undertaking the review or whether the protocol was published. Petrosino et al. (2013) refer to a protocol and includes information on how their finished review differed from the protocol.

Petrosino et al. (2013) only included randomised or quasi-randomised (with matching) trials and van der Put et al. (2020) restricted their inclusion criteria to only include randomised controlled trials or "high-quality" quasi-experimental studies.

Both reviews reported a comprehensive literature search strategy including several different databases, designated keywords, and search strategies. van der Put et al. (2020) included both published and unpublished reports, but only those published in English. The authors do not specify who carried out searches and two authors double coded a random subset of included studies. Petrosino et al. (2013) outlined that two of the authors screened search results for published and unpublished reports and did not implement any language restrictions.

Petrosino et al. (2013) clearly identify sources of funding for their review and van der Put et al. (2020) declared that no funding was received.

The review by Petrosino et al. (2013) provide a direct estimate of the effect on delinquency based on 7 studies. However, the results are not very heterogeneous ( $I^2 = 29\%$ ) and the review rated 'high' as per the AMSTAR tool, so the overall evidence rating for the impact is 3, marked down due to the small number of studies.

van der Put et al. (2020) present a direct estimate for delinquency based on 13 studies. The authors do not report the heterogeneity for delinquency outcomes independently, but overall, when a three-level meta-analysis was conducted there was a substantial amount of variance both within-studies ( $I^2$ = 31%) and between-studies ( $I^2$ = 29%). Thus, the evidence rating for the impact is 4, marked down for the unclear heterogeneity for delinquency outcomes independent of other outcomes included in the model. This is our preferred headline estimate for effects on violence and crime outcomes.

### Impact

# Summary impact measure

Based on the two meta-analyses that inform the current technical report, the findings suggest that prison awareness programmes have an undesirable impact on delinquency. The mean effect sizes for reviews by Petrosino et al. (2013) and van der Put et al. (2020) are summarised in Table 1. Both studies report adverse effects, but the effect is smaller and not statistically significant in the case of van der Put et al. (2020).

Table 1

inedin ejjeet oize	s joi cinne ana vi		,	
Review	ES ( <i>d</i> and OR)	CI (ES)	% change	Evidence rating for
				crime and violence
				outcomes
Petrosino et	al.OR = 0.581	1.13, 2.62	45.8% increase	3
(2013)	d = -0.299			
van der Put et	al. <i>d</i> = -0.019	-0.211, 0.172	2.6% increase	4
(2020)	OR = 0.966			

Mean effect sizes for crime and violence outcomes

*Note:* ES = the weighted mean effect size; CI = 95% confidence intervals for the mean ES; p = the statistical significance of the mean ES; n.s. = not significant; OR = odds ratio; d = Cohen's d; g = Hedges' g; OR > 1 represents a desirable intervention effect (i.e., a decrease in delinquency); OR = 1 represents a null intervention effect; OR < 1 represents an undesirable intervention (i.e., an increase in delinquency); Petrosino et al. (2013) reported a mean effect

of OR = 1.72 and indicated an undesirable intervention effect. We inverted this to be consistent with the review by van der Put et al. (2020).

In order to convert the *d* effect sizes to a percentage reduction, we first used the equation: Ln(OR) = d / 0.5513 (Lipsey & Wilson, 2001, p. 202). Then we assumed that there were equal numbers (n = 100) in the experimental and control conditions, and that 50% of young people in the control condition were involved in crime or violence behaviours. With these assumptions, the OR of 0.581 for Petrosino et al. (2013) translated to a 45.8% relative increase in delinquency. For van der Put et al. (2020), the OR of 0.966 translates into a 2.6% relative increase in delinquency.

#### Moderators and mediators

Petrosino et al. (2013) did not conduct a moderator analysis beyond three sensitivity analyses to examine how the results changed when particular studies were excluded from the metaanalysis. The overall mean effect did not vary greatly and remained indicative of an undesirable intervention effect (i.e., an increase in delinquency).

van der Put et al. (2020) conducted a three-level meta-analysis to examine the effectiveness of prison awareness programmes. This allowed the authors to include multiple outcomes from the same evaluation so that a total of 88 effect sizes were eligible for inclusion. These outcomes included delinquent behaviour, risk factors for delinquency, attitudes towards delinquency, and attitudes towards punishment. Overall, the mean effect size showed that prison awareness programmes may have a desirable effect (d = 0.099, 95% CI -0.040, 0.238; p = 0.159). Following analysis for potential publication bias, van der Put et al. (2020) conducted a sensitivity analysis that excluded four effect sizes. This sensitivity analysis indicated a lower mean effect (d = 0.020, 95% CI -0.146, 0.186; p = 0.810) when these effects were excluded from the analysis.

This review also reported the mean effect for each of the outcomes included in their metaanalysis. The mean effects suggest that prison awareness programmes reduced delinquency risk factors (d = 0.197), attitudes toward delinquency (d = 0.460), and attitudes toward punishment (d = 0.347). van der Put et al. (2020) did conduct moderator analysis to compare effect sizes across dimensions of several variables, but the results are not reported independently for only delinquency outcomes. When all outcomes were included, van der Put et al. (2020) found that:

- More recent studies were associated with greater effectiveness ( $\beta = 0.038$ , p < .05).
- Evaluations that used official records as a measure of outcomes were associated with lesser effectiveness (d = -0.055) in comparison to evaluations that used self-report measures of outcomes (d = 0.320).
- For all outcomes, greater effectiveness was seen for longer follow-up periods (i.e., longer than 6 months).
- There were no significant differences between specific intervention characteristics, such as the presence of confrontational sessions, prison tours, or parental involvement.

#### Implementation and Cost analysis

We summarize the findings from evaluations of three UK prison awareness programmes in the early 1990s. The three studies, reported in the same Home Office research paper (Lloyd, 1995), are the Garth Prison Inmate Encounter Scheme, the Risley Car-Related Crime Scheme, and the Maidstone Prison Youth Project. See Annex 2 for brief programme descriptions.

All three projects were initiated by inmates, with support from the prison governor. In all cases, the chaplain was also supportive, with the chapel providing the venue for sessions and in one case providing an office for project management (taking referrals, etc.). The three schemes were generally welcomed by probation services and social services, with a more mixed reception from prison officers and the police. Support from prison management was important for securing the cooperation of prison officers and for connecting to other services including the police. In the end, all programmes report good working relations between those involved in running the programme.

Whilst the core of each programme is a single prison visit by young people in which they get presentations by inmates, the three schemes were different in their style and target group. The Garth Prison Inmate Encounter Scheme, inspired by the US 'Scared Straight' documentary, was the most confrontational with inmates speaking of violence and rape in prison. The Risley Car-Related Crime Scheme had a confrontational component, modelled on Garth, but this was made more moderate after some months. The Maidstone Prison Youth Project was more educational, describing prison life through music rather than confrontation.

The different styles were seen to be appropriate to the audience. Garth was intended for youth who had already offended so received most of its referrals from the probation service. The Risley scheme was targeted specifically to those involved in car crime, notably joy riding. And Maidstone was more broadly targeted including school children with no history of offending, though those deemed most at risk were encouraged to attend.

Professionals in referral agencies had mixed views about the ethics and effectiveness of the confrontational component. Since it was only used with offenders it was generally felt to be appropriate. In the case of the Garth programme, probation officers could also refer cases to a less confrontational prison awareness programme at HMP Nottingham and reported that having the choice between the two was beneficial.

In Garth and Risley the inmates making the presentations had information on the participants and so targeted their interactions based on this information. More sensitive individuals, and those thought likely to respond aggressively, were not confronted directly.

The schemes at Garth and Ridley were seen by staff in referral agencies as being professionally run. Both programmes worked with small groups of children in each session. The Maidstone project catered to much larger groups of over 100, and consequently was seen as disorganized and not having the same control of participants as the other two programmes.

The intervention was generally a one-off event, not integrated into a broader programme of activities. Only Ridley allowed for follow up in which inmates visited participants in a community setting and answered questions. This lack of follow up in the other programmes was seen as a shortcoming, though there were problems in getting youth to attend the follow

up sessions. Another challenge was sustaining the programmes once the inmates who initiated the programme were moved or left prison.

#### Findings from UK/Ireland

None of the evaluations included by either Petrosino et al. (2013) or van der Put et al. (2020) were conducted in the UK or Ireland.

#### What do we need to know? What don't we know?

The evidence suggests that prison visits have at least a temporary affect on children and young people's views about prison and make them think twice about offending. However, they potentially have an adverse effect on actual offending. It is common to find a stronger effect on intermediate outcomes than final outcomes. The challenge for research is to understand why this is so, and so identify what might be done to strengthen the 'pass through' along the causal chain.

We may speculate that youth reframe their recollection of the visit over time, so the initial shock of what prison is actually like may be replaced by seeing the inmates as role models. Alternatively, or also, the views they hold personally after the visit are insufficient to withstand peer pressure from anti-social peers. Indeed, having been selected for the programme may have a labelling effect, either in their own eyes or those of their peers so peer pressure to offend increases.

**References** Lipsey, M.W., & Wilson, D. (2001). *Practical meta-analysis.* SAGE publications.

- Lloyd, C. (1995) 'To educate or to scare straight? The British experience of day visits to Prison for young people'. Home Office Research Study 149. London, U.K.: Home Office.
- Petrosino, A., Turpin-Petrosino, C., Hollis-Peel, M. E., & Lavenberg, J. G. (2013). 'Scared Straight' and other juvenile awareness programs for preventing juvenile delinquency. *Cochrane Database of Systematic Reviews*, *4.* https://doi.org/10.1002/14651858.CD002796.pub2
- van der Put, C. E., Boekhout van Solinge, N. F., Stams, G. J., Hoeve, M., & Assink, M. (2020). Effects of awareness programs on juvenile delinquency: A three-level metaanalysis. International Journal of Offender Therapy and Comparative Criminology, 65(1), 68 – 91. https://doi.org/10.1177/0306624X20909239

#### Annex 1: Example of effect size calculations

This annex shows the calculations based on the results and assumptions given in the text. We assume 200 youth, evenly divided between treatment and comparison groups. That means there are 100 youth in the control group and 100 youth in the treatment group. Assuming that 25% of youth in the control group reported delinquency, the mean effect sizes for both reviews can be easily transformed to a percentage change in the relevant outcome.

If the odds ratio for delinquency is 0.966 (van der Put et al., 2020), then using the table below and the formula for an OR, we can estimate the value of X. The odds ratio is estimated as: A\*D/B\*C, where A is the number of non-delinquents in the treatment group, B is the number of delinquents in the treatment group, C is the number of non-delinquents in the control group, and D is the number of delinquents in the control group. Therefore, the value of X is 25.65 in the case of van der Put et al. (2020).

	Non-		
	delinquent	Delinquent	Total
Treatment	100-x	х	100
Control	75	25	100

Therefore, the relative reduction in delinquency is (25.65 - 25)/25 = 2.6%. This reflects an increase in delinquency because of participation in prison awareness programmes. In relation to the review by Petrosino et al. (2013) the value of X is 36.46 and the relative change in delinquency is an increase of 45.84%.

The prevalence of delinquency and externalising behaviour is likely to vary between different studies and can be influenced greatly by the type of report (e.g., selfreport or parent-report), the survey used, the questions asked (e.g., frequency of delinquency in the past couple of months versus the frequency of delinquency in the past year, or ever), etc. If we were to adjust our assumption that 25% of the control group are delinquent, the relative change in the treatment group is not greatly affected.

For example, if we assume that 10% of the control group are delinquent, the 2x2 table would be as follows and the value of X would 10.32 for the van der Put et al. (2020) review. Therefore, the relative increase in delinquency is 3.2% (i.e., (10 - 10.32)/10]\*100).

	Non-		
	delinquent	Delinquent	Total
Treatment	100-x	х	100
Control	90	10	100

Similarly, if we assume that 40% of the control group are delinquent, the value of X is 40.83 for the van der Put et al. (2020) review, and the relative increase in delinquency is 0.83%. Given, the dramatic difference in the assumed prevalence of delinquency, the percentage relative increase does not vary greatly. Table 3 shows this further.

Table 3

Variation of the relative reduction in delinquency depending on different assumptions.

	Petrosino et al. (2013) OR = 0.581
OR = 0.966	

Assumed prevalence	Relative increase	
10%	3.2%	60.5%
25%	2.6%	45.8%
40%	2.1%	33.6%

# Annex 2: Implementation analysis

•

Intervention	Success factors	Challenges	Stakeholder views
Garth Prison Inmate Encounter	Prison Probation service involved in	Breakdown in relations including	Inmate theory of change: CYP more
Scheme (Lloyd, 1995). Referrals	scheme from the start helped number	-	likely to listen to prisoners as they were
from local probation service	of referrals. Later diversified agencies	evaluation purposes	like them.
	making referrals to sustain numbers.		
Initiated by inmate		Referral agencies questioned value of	Risk: If successfully show prison life to
who saw the US Scared	Support of chaplain provided project	component delivered by prison officers	be dreadful those who do get custodial
Straight documentary	office and space for sessions. Support of		sentences later may consider suicide.
	Governor helped professionalism.	Some staff in referral agencies had	
Two-three hour sessions		misgivings about the schemes but these	Support for confrontational approach:
delivered by prison guards and	Inmates have sufficient information on	were usually overcome once they	'in like a lion, out like a lamb'.
inmates on the toughness of	participants beforehand so treat	visited	
prison life delivered in a	particularly sensitive or more volatile		Young people remembered the session,
confrontational manner. Target	individuals with more care.	Lack of follow up	and some said contributed to stopping
group are males aged 14-22			offending. Younger people said no
who have offended or at risk of	Social services sent less serious cases to		effect as too young for prison anyway.
offending.	a less confrontational programme at		
	HMP Nottingham, saying it was good to		
	have these options.		
	Good working relationship with		
	feedback between inmates and staff of		
	referral agencies. Perceived by agency		
	staff as professionally run.		

Risley Car-Related Crime Scheme (Lloyd, 1995)	Governor's support necessary, especially for allowing inmates into the community.	Youth didn't turn up to probation office appointments (and sometimes prison appointment) – with New Approach follow up built in as expected.	Referral agency staff had mixed views on move to less confrontational approach. Also generally had view that of limited effectiveness.
collaboration with local	Follow up sessions seen as positive	Tonow up built in as expected.	of infilted effectiveness.
community in response to joy- riding related deaths	feature of the programme.	Focus on car crime resulted in low referral rate and meant may not deter other offences.	
Two stages: prison visit modelled on Garth (though			
'New Approach' introduced during project was less			
confrontational), then inmates			
visit probation offices to			
answer questions from			
offenders. Target audience:			
young people committing motoring offences.			
Maidstone Prison Youth	Took place in chapel, with Chaplain a	Large sessions (150 children) so overcrowded, and poorly organized	Presentation by police was poor, some found the confrontational element
Project (Lloyd, 1995)	keen supporter	with little control.	unconvincing, and the 1970s music was
(1070, 1999)		with fittle control.	not something children would relate to.
Inmate-initiated programme to		Maintaining continuity when founding	
divert offenders with playing		inmates leave prison (mentions is	The positive portrayal of inmates as
music. Broad target		common across the three projects)	'rock stars' may encourage them being
group including those who had			seen as role models
not offended (but referrers		Lack of follow up	

picked those who had been in		But general agreement that successful	
trouble with the police). Music		in showing prison is a worse place than	
sessions convey impressions of		people thought.	
prison life.			

# Annex 3: AMSTAR Rating

	Modified AMSTAR item	odified AMSTAR item Scoring guide		programmes
			van der Put et al. (2020)	Petrosino et al. (2013)
1	Did the research questions and inclusion criteria for the review include the components of the PICOS?	To score 'Yes' appraisers should be confident that the 5 elements of PICO are described somewhere in the report	Yes	Yes
2	Did the review authors use a comprehensive literature search strategy?	At least two bibliographic databases should be searched (partial yes) plus at least one of website searches or snowballing (yes).	Yes	Yes
3	Did the review authors perform study selection in duplicate?	Score yes if double screening or single screening with independent check on at least 5-10%	No	Yes
4	Did the review authors perform data extraction in duplicate?	Score yes if double coding	Yes	No
5	Did the review authors describe the included studies in adequate detail?	Score yes if a tabular or narrative summary of included studies is provided.	No	Yes
6	Did the review authors use a satisfactory technique for assessing the risk of bias (RoB) in individual studies that were included in the review?	Score yes if there is any discussion of any source of bias such as attrition, and including publication bias.	Partial Yes	Yes
7	Did the review authors provide a satisfactory explanation for, and discussion of, any heterogeneity observed in the results of the review?	Yes if the authors report heterogeneity statistic. Partial yes if there is some discussion of heterogeneity.	Yes	Yes
8	Did the review authors report any potential sources of conflict of interest, including any funding they received for conducting the review?	Yes if authors report funding and mention any conflict of interest	Yes	Yes

	Medium	High



www.youthendowmentfund.org.uk The Youth Endowment Fund Charitable Trust Registered Charity Number: 1185413