

# Trends & issues in crime and criminal justice

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**Abstract** | A large body of literature has attempted to answer the question: what works in reducing youth reoffending? However, this literature often fails to provide specific guidance on program implementation. This review consolidates research on the practical implementation of tertiary youth offender programs to identify the design, delivery and implementation factors associated with positive changes in youth offending behaviours.

A systematic review of 44 studies revealed nine common components of effective programs. These components have been empirically associated with program effectiveness in methodologically diverse studies conducted in various contexts, suggesting they may contribute to reduced reoffending among young people who come into contact with the criminal justice system.

### What are the characteristics of effective youth offender programs?

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There is a growing body of literature concerned with 'what works' in reducing youth reoffending. This literature aims to identify approaches, programs, interventions or elements thereof that are empirically associated with reductions in criminal behaviour. While there is a considerable amount of information on various approaches and programs, there is very little support for practitioners on how to design, deliver and implement programs that are likely to be effective in reducing reoffending. When evidence-based interventions are replicated at a local level, they may be altered to best fit local conditions. Although these changes may be necessary, they can reduce the effectiveness of the intervention.

While there is a strong consensus within the literature that no one intervention will work for all young offenders in all contexts, there are common features of effective programs that are consistently associated with reductions in reoffending (Prior & Mason 2010). Identifying and describing these program components would make a valuable contribution to our understanding of how to make sure new and existing youth offender programs align with evidence-based principles of program design, delivery and implementation.

This is particularly important when developing new responses to youth offending, including for emerging crime problems and trends. In the absence of a strong evidence base to guide policymakers and practitioners in the selection of initiatives to reduce reoffending, having a baseline against which the development of new programs can be benchmarked is important.

This systematic review consolidates the findings from recent research to identify the common components of effective tertiary youth offender programs relating to design, delivery and implementation. The review addresses the research questions:

- What are the design, delivery and implementation characteristics of tertiary prevention programs that have been associated with reductions in reoffending among young people?
- How can these program components be applied to enhance the effectiveness of tertiary programs targeted at young offenders?

In this paper, 'program' will be used to refer to youth offender programs implemented to reduce reoffending among young people who have come into contact with the juvenile or criminal justice system, and 'components' to the design, delivery and implementation characteristics of these programs.

### Methodology

#### Search strategy

This study emerged from a larger systematic review of literature concerned with 'what works' in reducing youth offending. Studies were included if they contained information about tertiary prevention programs implemented in Australia or other developed countries for young people aged 10–25 years who had come into contact with the juvenile or criminal justice systems. Included studies reported at least one quantitative or qualitative outcome measure related to reoffending such as prevalence, frequency, seriousness, versatility, or time to first reoffence. Contemporary literature was targeted by including studies published in English between January 2009 and October 2019 in scholarly journals or evaluation reports. Literature was excluded if it was a review or evaluation of a primary or secondary prevention program, was not published in English or was published prior to 2009. Theoretical articles, audio/visual files and newspaper and magazine articles were also excluded.

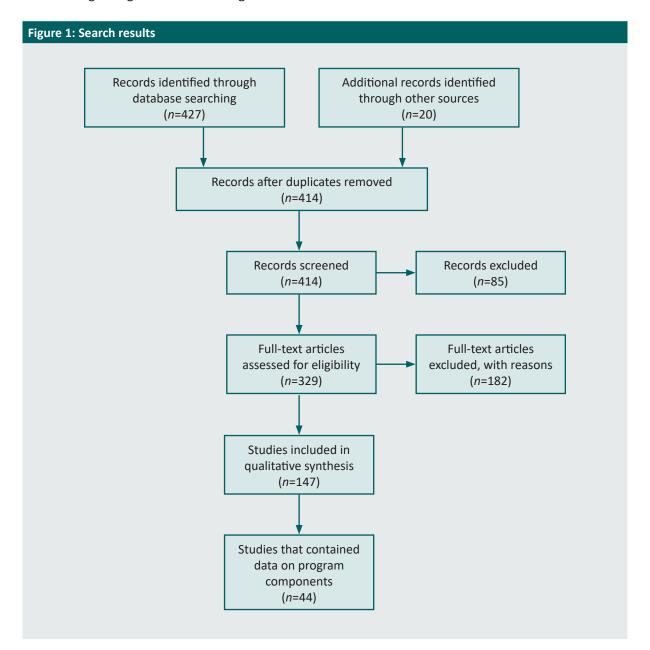
Multiple searches of the Australian Institute of Criminology's JV Barry Library catalogue, EBSCO Discovery, ProQuest, PubMed, Campbell Collaboration and Cochrane Library databases were conducted with the following search terms:

- Target: (youth OR juvenile OR young person OR child\* OR adolescen\*) AND
- Intervention: (what works OR program OR evaluation OR prevent\* OR reduc\* OR respond\*) AND
- Outcome: (offend\* OR crim\* OR reoffend\* OR recidivism).

Database searches were conducted independently by the researcher and an Australian Institute of Criminology librarian to ensure search term reliability and replicability.

#### Study selection and analysis

As shown in Figure 1, the search terms identified a total of 447 books, journal articles and government reports. Thirty-three duplicates were removed. After preliminary screening that involved a review of titles and abstracts/executive summaries, 85 studies were excluded because they contained reviews or evaluations of primary or secondary prevention programs, or were audio/visual files or newspaper/magazine articles. The remaining 329 studies were sourced for further analysis. Secondary screening was conducted by reviewing the studies in full. During this process, an additional 182 studies were excluded because they were explanatory or theoretical, they did not report findings for 10–25 year olds, or because they were evaluations of a specific program and had been superseded by an evaluation of the same program, often by the same authors, with greater methodological rigour. The remaining 147 studies were included in the review.



The studies underwent thematic analysis. This involved a review of the studies to identify information about program implementation, design and delivery; coding of the data to identify common elements; the establishment of general themes; and the refinement of these themes through further analysis (Miller 2018).

Of the 147 studies included in the systematic review, 44 (30%) contained information about program implementation, design and delivery. The final sample of 44 studies formed the basis of the analysis for this study.

## Identifying program components associated with reductions in youth reoffending

Three primary measures were used to identify program components related to the effectiveness of tertiary youth offender interventions:

- statistical analyses identified direct and/or mediated associations between program component(s) and youth reoffending outcomes (bivariate and multivariate models);
- practitioners involved in the delivery and implementation of the tertiary program identified a
  relationship between program component(s) and youth reoffending outcomes (and provided
  evidence of this); and
- thematic or content analyses identified a strong link between perceptions or experiences of effectiveness and program components, as described by study authors.

Critically, while in many studies the effectiveness of programs was associated with the presence of particular implementation, design and delivery principles, in others the ineffectiveness of programs was associated with the absence of these program components. In this way, the focus of the study was not only on positive findings, but negative or null findings as well.

#### Limitations

There are limitations to this study. The aim of the systematic review was to consolidate contemporary evidence related to what works in reducing youth offending. This review emerged from the thematic analysis of that data. Search terms specific to program design or implementation are likely to produce more studies. Further, only those studies that used measures of reoffending to operationalise program effectiveness were included in the review. This was to ensure comparability and ease of data extraction; however, it limits the number and types of studies included. There may be some gaps in knowledge as a result. The findings of this review should be considered in this context.

#### Results

#### **Study characteristics**

As shown in Table 1, the studies included in the review related to a diverse range of tertiary programs, the most common being direct evaluations and meta-analyses of tertiary youth offender programs implemented in the United States and evaluated using quasi-experimental or experimental design and quantitative analysis. Given the diversity within the sample (see Table 1), these findings may contribute to the broader evidence base on what works for young people who offend.

All 44 studies provided evidence that one or more program components were associated with program effectiveness. When programs were found to be effective, program components were associated with reductions in reoffending. When programs were found to be ineffective, the absence of program components was associated with increases in reoffending. The primary measure of reoffending used was prevalence.

Table 1: Study character			0/
		n	%
Program type			
	Youth offender <sup>a</sup>	21	48
	Community supervision/programs	5	11
	Transition	4	9
	Mentoring	3	7
	Multi-dimensional <sup>b</sup>	3	7
	Education, employment and training	2	5
	Cognitive-behavioural	1	2
	Detention	1	2
	Diversion	1	2
	Family-based	1	2
	Prison visitation	1	2
	Speciality courts	1	2
Source type			
	Direct evaluation	21	48
	Meta-analysis	10	23
	Literature review	7	16
	Systematic review	4	9
	Rapid evidence assessment	2	4
Research design			
	Quasi-experimental or experimental	17	39
	Post-test only	15	34
	Narrative review	6	14
	Pre- and post-test	2	4
	Other <sup>c</sup>	4	9
Data analysis methods			
	Quantitative	24	55
	Mixed methods	8	18
	Qualitative	6	14
	Narrative review	6	14

Table 1: Study characteristics (continued)									
	n	%							
Jurisdiction									
United States	18	41							
Multiple <sup>d</sup>	11	25							
Australia	9	20							
Europe	3	7							
Canada	1	2							
Singapore	1	2							
Not reported	1	2							

- a: Studies that evaluated/meta-analysed/systematically reviewed multiple tertiary prevention youth offender programs
- b: Multi-model, multi-disciplinary, multi-agency programs that addressed multiple risk factors simultaneously
- c: Analytical decision tree, cohort, Maryland Scientific Methods Scale, and weight of evidence process
- d: More than one jurisdiction including a combination of Australia, Canada, Europe, New Zealand, Scandinavian countries and the United States

Note: Percentages may not total 100 due to rounding

#### **Program components**

In all 44 studies, the authors associated at least one program component with effectiveness. Nine program components that were positively related to program effectiveness were identified in the literature:

- program theory (n=4);
- risk of reoffending (n=8);
- risk, needs and responsivity assessment (n=17);
- cultural sensitivity (n=5);
- fidelity (n=15);
- dosage (n=13);
- practitioner-client relationship (n=7);
- intra- and inter-agency coordination (*n*=5); and
- evaluation (n=11).

These design, delivery and implementation characteristics are not mutually exclusive; each can inform and contribute to the others. The components should therefore be considered collectively.

#### **Program theory**

Four studies (9%) identified a link between an evidence-based theory of change with program effectiveness. Program theory, or a theory of change, explains how program activities will achieve program outcomes (Meadowcroft, Townsend & Maxwell 2018). Programs that based their logic on existing evidence were more likely to implement activities that attained intended reductions in reoffending (Braga 2016; Klenowski, Bell & Dodson 2010; Meadowcroft, Townsend & Maxwell 2018; Welsh & Rocque 2014).

When program design and implementation are not underpinned by a strong theory of change, negative outcomes can result. In a systematic review of youth offender programs, Welsh and Rocque (2014) found that, when programs were not informed by theory, they produced harmful effects regardless of program type. Similarly, Klenowski, Bell and Dodson's (2010) systematic review of prison visitation programs found that these interventions were generally ineffective in reducing reoffending. The authors attributed this to a failure to apply program theory to program design and implementation, particularly the strong theoretical consensus that severity of punishment does not deter and fear-arousal educational approaches do not change behaviour. Finally, Braga (2016) evaluated the impact of gang outreach programs and found they increased reoffending. He argued that these outcomes emerged due to program designers' failure to account for literature that has clearly explained that group-based programming reinforces gang identity and cohesion, strengthening group processes and dynamics that support criminality (Braga 2016). To effectively prevent youth offending, an empirically supported theory of change should be ingrained within the design and implementation of a program to inform program activities and aims.

#### Risk of reoffending

Eight studies (18%) reported on the association between program effectiveness and risk of reoffending, all of which found that programs produced greater reductions in reoffending among high-risk young offenders compared to low-risk young offenders (Lipsey 2009; Morales, Garrido & Sánchez-Meca 2010; Strom et al. 2017). Although they only account for the minority of young offenders, those assessed as high risk are involved in the majority of contacts with the juvenile and criminal justice systems and, as such, account for a disproportionate number of offences and costs associated with youth offending and reoffending overall (Cohen & Piquero 2009). Targeting high-risk young people produced the greatest net benefit in the studies reviewed (Cohen & Piquero 2009; McGuinness, Tuohy & Rowney 2017; Skeem, Scott & Mulvey 2014).

Although these findings imply that interventions that target high-risk offenders are more effective at reducing reoffending than those that target low-risk offenders, this relationship requires deeper analysis. In particular, it is important to recognise that high-risk young offenders are less likely to reduce their offending or desist without intervention. As such, programs targeted at these cohorts are more likely to detect an effect than those focused on low-risk offenders, who are likely to stop reoffending of their own accord (Adler et al. 2016; Strom et al. 2017).

To prevent youth offending, the risk of reoffending and capacity to detect reoffending should be considered when evaluating programs.

#### Risk, needs and responsivity

Seventeen studies (39%) linked a risk–need–responsivity (RNR) assessment with program effectiveness. An RNR assessment matches services to a young offender's unique circumstances based on their:

- risk of reoffending;
- physical, psychological and psychosocial needs that are associated with offending but amenable to change; and
- responsivity shaped by their strengths, abilities, motivation, personality, learning styles and demographic characteristics (Adler et al. 2016; Cramer, Esthappan et al. 2019; Murphy, McGuinness & McDermott 2010; Roy et al. 2011; Skeem, Scott & Mulvey 2014; Spiranovic et al. 2015).

Interventions that used RNR assessments to classify and allocate resources to young offenders were more likely to reduce reoffending (Adler et al. 2016; Calleja et al. 2016; Chan & Boer 2016; Cramer, Esthappan et al. 2019; Day, Zahn & Tichavsky 2015; Koehler, Losel et al. 2013; Lipsey & Howell 2012; Luong & Wormith 2011; McGuinness, Tuohy & Rowney 2017; Roy et al. 2011; Shlonsky et al. 2017; Skeem, Scott & Mulvey 2014; Spiranovic et al. 2015). RNR assessments are effective because they apply an objective and replicable approach to identifying those programs that best meet the needs of young people (Knight et al. 2017). Programs that use the RNR model can ensure that those who are most vulnerable, such as Indigenous, LGBTIQ+, mentally ill or disabled young people, have their needs addressed (Roy et al. 2011).

Despite strong consensus in the literature that interventions implemented based on an RNR assessment are effective at targeting the underlying causes of offending, and thus reducing reoffending, issues with the model have also been identified. Sampson and Themelis (2009) stated that many risk factors for offending are also indicators of victimisation, while some risk factors may promote resilience rather than offending. Further, risk assessment tools may produce false positives, incorrectly classifying an individual as at risk or belonging to a class of risk, when that risk does not exist. A false negative occurs when an assessment tool fails to identify risk, and the individual proceeds to engage in criminal behaviour (Lind 2011; Norris, Griffith & Norris 2017). Although it is important to assess risk, needs and responsivity, it is also necessary to ensure that valid and reliable assessment tools are used to measure RNR and match individuals to interventions (Norris, Griffith & Norris 2017).

To enhance the tertiary prevention of youth offending, rigorous RNR assessments should be conducted with valid and reliable assessment tools prior to allocating a young person to a program. Thereafter, the assessments should be repeated regularly to evaluate the continued suitability of programs and to adapt interventions to address the dynamic needs of young people.

#### **Cultural sensitivity**

A review of the literature suggests that cultural sensitivity is critical to program effectiveness when young people maintain strong cultural ties. This is especially true in Australia, where five of the nine (56%) Australian studies reviewed identified the importance of cultural sensitivity to programs for young Indigenous Australians. These studies found that programs designed for Indigenous Australians were more effective than mainstream programs at reducing reoffending among Indigenous young people (McGuinness, Tuohy & Rowney 2017). Culturally sensitive programs incorporated culturally appropriate activities in interventions, engaged service providers from the same cultural backgrounds to design and deliver programs, used young people's preferred languages and embedded traditions and norms within interventions (Fazal 2014; Roy et al. 2011). Fazal (2014) found that when interventions were implemented by someone with shared place, language, histories or beliefs, Indigenous young people were more likely to perceive the intervention or practitioner as credible. When culturally sensitive programs were identified as equally effective as traditional processes, they were still preferred because they also had the capacity to empower and strengthen Indigenous communities (Borowski 2010).

To reduce reoffending among young Indigenous people, programs should incorporate culturally appropriate interventions and the active participation of cultural leaders in designing, developing, implementing and evaluating programs for Indigenous Australians (Murphy, McGuinness & McDermott 2010). Further, matching young people with practitioners from similar cultural backgrounds has the potential to reduce institutional racism and systemic biases that contribute to the over-representation of Indigenous Australians in the criminal justice system (Fazal 2014). Where the majority of Australian sources identified cultural sensitivity as a pertinent consideration, Australian program design, delivery and implementation must be informed by, and sensitive to, Indigenous Australian culture.

#### **Fidelity**

Fifteen studies (34%) associated reductions in youth offending with program fidelity, or adherence to program implementation protocols. Research suggests that programs that are implemented according to protocols are more likely to achieve intended outcomes (Alder et al. 2016; James et al. 2013; Lipsey 2018; Meadowcroft, Townsend & Maxwell 2018; Shlonsky et al. 2017; Weaver & Campbell 2015). When the practitioners involved in the design, implementation and monitoring of programs had the capacity, knowledge and resources to ensure high fidelity, the programs were more likely to be effective in reducing youth reoffending (Lipsey 2018; Schwalbe et al. 2012).

Low levels of program fidelity have also been associated with harmful outcomes (Welsh & Rocque 2014). Program fidelity can affect program outcomes independent of the individual characteristics of young people and is as important as program type in reducing youth reoffending (Adler et al. 2016).

Although high fidelity is critical to effectiveness, program delivery must be flexible enough to support the engagement of young people and accommodate their different and dynamic circumstances. As discussed above, programs that can adapt to the risks, needs and responsivity of young people are more likely to be effective (Fazal 2014; Meadowcroft, Townsend & Maxwell 2018). Flexibility in program structure has been found to support engagement among young people and reduce attrition and reoffending (Cramer, Esthappan et al. 2019; Cramer, Lynch et al. 2019; Meadowcroft, Townsend & Maxwell 2018; Strnadová, O'Neill and Cumming 2017).

These findings highlight the tension between program fidelity and adaptability. Taken together, they indicate that adaptability should not allow program implementation to deviate from its protocol. Rather, program delivery should comply with specifications while being shaped by individual and contextual considerations (Prior & Mason 2010). To enhance the tertiary prevention of youth offending, programs must be implemented with high fidelity while maintaining flexibility to meet the different and dynamic needs of young people.

#### Dosage

Thirteen studies (30%) identified a link between program dosage and effectiveness, although there were differences in the relationships found. Dosage, also referred to as intensity, contact or length, is the number of hours per session and the number of sessions per intervention that a young person may receive. While most studies found that dosage influenced program effectiveness (Adler et al. 2016; Calleja et al. 2016; de Vries et al. 2015; Fazal 2014; James et al. 2013; Klenowski, Bell & Dodson 2010; Lipsey 2009; McGuinness, Tuohy & Rowney 2017), one identified no moderating effects (Weaver & Campbell 2015).

Among the studies that identified a positive association, results differed by offender and program type. For example, de Vries et al. (2015) found that lower dosage was more effective at reducing reoffending among low-risk offenders, with higher dosages being counterproductive even after controlling for the characteristics of the offender (age, gender, cultural background, offending behaviour) and the type of program (one-on-one, group, family, multimodal). In contrast, higher dosages are more effective than lower dosages for programs that are therapeutic in nature, such as mentoring (James et al. 2013; Miller et al. 2013). Here, young people were less likely to reoffend when they received support and therapy more frequently and for longer periods. Conversely, higher dosages were found to produce higher rates of reoffending in behavioural control programs such as bail (Bouchard & Wong 2018; McGuinness, Tuohy & Rowney 2017). Although heightened supervision theoretically deters young offenders, frequent supervision increased the likelihood that a young person would be detected engaging in offending behaviour, thus increasing detected rates of reoffending (Bouchard & Wong 2018). The type of program, and the nature of the supervision involved, appears to mediate the effectiveness of dosage.

To enhance the tertiary prevention of youth offending, the dosage of an intervention should be based on the type of program and characteristics of the young person, taking into account predetermined lengths of sentences or programs (Calleja et al. 2016; Fazal 2014; Strnadová, O'Neill & Cumming 2017). The literature highlights the need to ensure that program dosage matches the risks, needs and responsivity of individual participants, as well as the logic underpinning the program.

#### Practitioner-client relationships

The literature suggests that the development of positive and collaborative working relationships between practitioners and young people is critical to program effectiveness. Seven studies (16%) attributed program effectiveness in part to the quality of the practitioner—client relationship. The literature revealed that programs that built warm, open and non-judgemental relationships between the practitioners and young people were more likely to reduce reoffending (Adler et al. 2016; Prior & Mason 2010; Sampson & Themelis 2009). A collaborative working alliance between practitioner and client has been found to increase:

- the likelihood of young people responding positively to treatment;
- perceptions that the intervention is fair and reasonable; and
- program completion (Adler et al. 2016; Cramer, Esthappan et al. 2019; Prior & Mason 2010).

To enhance the effectiveness of tertiary youth offender programs, the practitioner—client relationship must be based on clarity, openness, humour and respect, where the main purpose of the interaction is to reinforce protective factors that enable a young person to desist from offending (Prior & Mason 2010; Sampson & Themelis 2009). When practitioners and young people have similar interests, experiences and backgrounds, young people perceive practitioners as credible and program outcomes are enhanced (Cramer, Esthappan et al. 2019; Hanham & Tracey 2017; Miller et al. 2013). Evidence suggests that young people want to work with practitioners who believe in them, empathise with them and recognise their strengths. Conversely, young people are dissuaded from participating in and completing programs when practitioners do not treat them with respect, place too much pressure on them or overstate their failures (Moore, McArthur & Saunders 2013).

#### Intra- and inter-agency coordination

Coordinated and accountable service delivery that reflects the multifaceted and complex needs of young people has been associated with program effectiveness (Adler et al. 2016; Cramer, Esthappan et al. 2019; Unnithan & Johnston 2012). Five (11%) studies associated intra- and inter-agency coordination with program effectiveness, all of which found that effective coordination contributed to reductions in reoffending. Inter- and intra-agency coordination facilitates the sharing of information to inform program referral and provides young people with access to a broader range of services (Unnithan & Johnston 2012). More broadly, interconnectedness and integration within and between services facilitates:

- better understanding of young people and the context of their offending;
- the sharing of resources, expertise and values; and
- the delivery of 'wraparound' responses to youth offending (Roy et al. 2011).

Service providers also benefit from inter- and intra-agency working arrangements as they provide opportunities to confer, learn, share, and collaborate to overcome challenges and obstacles within and across program delivery sites (Cramer, Esthappan et al. 2019; Cramer, Lynch et al. 2019).

To enhance the tertiary prevention of youth offending, inter- and intra-agency coordination should be achieved through regular face-to-face meetings, training sessions, conference calls, or other means of communication that facilitate information sharing (Cramer, Esthappan et al. 2019). Partnership protocols and strategic leadership may help with this coordination (Adler et al. 2016).

#### **Evaluation**

Eleven studies (25%) identified a link between evaluation mechanisms and program effectiveness, all of which found that evaluation contributed to better outcomes. Youth offending interventions cannot be implemented or replicated without ongoing evaluation that both measures effectiveness and provides information that can support program development or modification (Cramer, Lynch et al. 2019; Meadowcroft, Townsend & Maxwell 2018; Roy et al. 2011; Skeem, Scott & Mulvey 2014). Through frequent and rigorous evaluation and performance monitoring, programs can become more effective over time as they are adapted according to findings. Increasing the effectiveness of programs is an incremental and continuous process of reflection and redesign (Welsh, Rocque and Greenwood 2018). This iterative approach enables programs to be adapted to the changing needs of stakeholders or changes in the conditions within which the program operates (Cramer, Esthappan et al. 2019).

Recidivism, or the rate of reoffending, is perceived as the benchmark against which to measure the effectiveness of youth offender programs. Measures of short-term reoffending carry the greatest weight when governments decide whether a program should continue (Stout, Dalby & Schraner 2017). Although intended outcomes usually involve a reduction in risk or criminogenic need, recidivism measures in isolation cannot tell practitioners how this change was achieved, or how effective a program is at bringing about change in a young person's life that may influence their likelihood of reoffending (Cramer, Esthappan et al. 2019; Spiranovic et al. 2015; Stout, Dalby & Schraner 2017). Measuring other program outcomes in addition to recidivism—including program completion, readiness to change, psychological/behavioural change, education, employment,

relationships and prosocial engagements—may provide a more sensitive, comprehensive and nuanced consideration of what assists young people along their winding path to desistence (Spiranovic et al. 2015; Stout, Dalby & Schraner 2017).

To enhance the tertiary prevention of youth offending, programs should include evaluations assessing their effectiveness using multiple measures of reoffending, while placing equal emphasis on other outcomes that contribute to long-term desistence.

#### Discussion

In Australia and overseas, a huge number of programs have been trialled and implemented to respond to young people who come into contact with juvenile and criminal justice systems for a range of offending behaviours. Although there is a strong evidence base supporting some of these program types (eg restorative justice conferencing), there is limited research that consolidates information about the design, delivery and implementation of these programs, and program characteristics related to effectiveness.

This study identified nine components of effective programs that are supported by evidence. These components were empirically associated with program effectiveness by methodologically diverse studies conducted in various contexts, suggesting they reveal broad, overarching principles to guide the design, delivery and implementation of youth offender programs.

The program components are inter-related. Considered collectively, the findings suggest that tertiary youth offender programs are most effective when they are implemented as intended, and are underpinned by a clearly articulated and evidence-based theory of change. This theory of change helps program designers identify how a program will reduce reoffending behaviours, and the mechanisms underlying this change. However, the way in which the program is delivered should be flexible enough to meet the individual needs and circumstances of the young people involved. This includes conducting RNR assessments, matching young people with appropriate practitioners with whom they can develop positive working relationships, tailoring activities to suit the cultural backgrounds of young people, and ensuring that young people spend enough time with practitioners to experience a benefit. In Australia, programs will need to be sensitive to the needs and circumstances of young Indigenous Australians. Here, cultural relevance must be at the forefront of program design, delivery and implementation. Finally, tertiary programs are better able to meet the individual needs of young people where there are strong and ongoing inter- and intra-agency working relationships, and where programs are adapted and refined in accordance with the findings from ongoing evaluations.

While there is no 'one size fits all' approach to preventing youth offending, programs that have a strong theoretical basis, consider the individual needs of young people, are culturally sensitive to Indigenous Australians where relevant, and reflect on practice through iterative evaluation will be best placed to address the underlying causes of offending.

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URLs correct as at June 2020

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### **Appendix**

Study	Jurisdiction	Type of review	Number of studies	Program type	Program target	Unit of analysis	Sample size	Research design	Data source	Data analyses	Program components
Adler et al. 2016	United States	Rapid evidence assessment	164	Youth offender programs	10–22 year old males	Young offenders	Not reported	Weight of evidence process	(Un)published studies	Quantitative	Dosage Fidelity Intra- and inter-agency coordination Practitioner— client relationship Risk of reoffending Risk—needs—
Borowski 2010	Australia	Direct evaluation	1	Speciality courts	10–17 year olds, mostly male	Indigenous young offenders	62	Post-test	Administrative data Reoffending data	Quantitative	Cultural sensitivity
Bouchard & Wong 2018	Multiple	Meta-analysis	27	Community- based supervision	12–18 year olds, mostly male	Program sites	42	Quasi- experimental and experimental	(Un)published studies	Quantitative	Dosage
Braga 2016	United States	Direct evaluation	1	Multi- dimensional	14–24 year old males	Gangs	20	Quasi- experimental	Administrative data Reoffending data	Quantitative	Program theory
Calleja et al. 2016	United States	Direct evaluation	1	Transition	13–18 year old males	Young offenders	273	Quasi- experimental	Administrative data Reoffending data	Quantitative	Dosage Risk–need– responsivity
Chan & Boer 2016	Singapore	Direct evaluation	1	Detention	12 to 25 year old males	Young offenders	25	Post-test	Interviews	Qualitative	Risk–need– responsivity

Table A1: Summar	y of included s	tudies									
Study	Jurisdiction	Type of review	Number of studies	Program type	Program target	Unit of analysis	Sample size	Research design	Data source	Data analyses	Program components
Cohen & Piquero 2009	United States	Direct evaluation	1	Youth offender programs	Individuals born in 1958, mostly male	Young offenders	27,186	Cohort	Secondary data	Quantitative	Risk of reoffending
Cramer, Esthappan et al. 2019	United States	Direct evaluation	3	Mentoring	13–24 year olds, gender not reported	Young offenders	Not reported	Quasi- experimental	Multiple	Mixed methods	Evaluation Fidelity Intra-and inter-agency coordination Practitioner— client relationship Risk—need— responsivity
Cramer, Lynch et al. 2019	United States	Direct evaluation	1	Education, employment and training	18–24 year olds, mostly male	Young offenders Practitioners Program sites	424	Post-test	Multiple	Mixed methods	Evaluation Fidelity Intra- and inter-agency coordination
Day, Zahn & Tichavsky 2015	United States	Direct evaluation	1	Youth offender programs	10–17 year old males and females	Young offenders	288	Quasi- experimental and experimental	Administrative data Reoffending data	Quantitative	Risk–need– responsivity
de Vries et al. 2015	Multiple	Meta-analysis	39	Youth offender programs	6–20 year olds, gender not reported	Young offenders	9,084	Quasi- experimental and experimental	(Un)published studies	Quantitative	Dosage Evaluation Risk of reoffending
Fazal 2014	United States	Direct evaluation	1	Community- based program	10–18 year olds, gender not reported	Young offenders	300	Post-test	Interviews and surveys	Mixed methods	Cultural sensitivity Dosage Fidelity
Hanham & Tracey 2017	Australia	Direct evaluation	1	Mentoring	16–19 year old males	Young offenders	15	Pre- and post- test	Interviews	Qualitative	Practitioner— client relationship

Table A1: Summary	able A1: Summary of included studies										
Study	Jurisdiction	Type of review	Number of studies	Program type	Program target	Unit of analysis	Sample size	Research design	Data source	Data analyses	Program components
James et al. 2013	Not reported	Meta-analysis	22	Transition	10–25 year olds, mostly male	Young offenders	5,764	Quasi- experimental and experimental	(Un)published studies	Quantitative	Dosage Fidelity
Klenowski, Bell & Dodson 2010	United States	Systematic review	12	Prison visitation	10–17 year olds, mostly male	Program sites	10	Maryland Scientific Methods Scale	(Un)published studies	Quantitative	Dosage Program theory
Knight et al. 2017	Australia	Direct Evaluation	1	Multi- dimensional	14–21 year olds, mostly male	Young offenders Program sites	55	Post-test	Multiple	Quantitative	Evaluation Risk–need– responsivity
Koehler, Hamilton & Losel 2013	Europe	Direct evaluation	1	Youth offender programs	10–25 year old males and females	Practitioners	112	Post-test	Interviews and surveys	Quantitative	Evaluation
Koehler, Losel et al. 2013	Europe	Meta-analysis	25	Youth offender programs	25 years and younger, mostly male	Young offenders	7,940	Quasi- experimental and experimental	(Un)published studies	Quantitative	Evaluation Risk–need– responsivity
Lind 2011	Australia	Direct evaluation	1	Diversion	10–17 year olds, mostly male	Young offenders	8,537	Post-test	Administrative data Reoffending data	Quantitative	Risk–need– responsivity
Lipsey 2018	Multiple	Literature review	22	Youth offender programs	10–17 year olds, gender not reported	Not reported	Not reported	Narrative review	(Un)published studies	Narrative review	Fidelity
Lipsey 2009	Multiple	Meta-analysis	548	Youth offender programs	12–21 year olds, mostly male	Not reported	Not reported	Quasi- experimental	(Un)published studies	Quantitative	Dosage Fidelity Risk of reoffending
Lipsey & Howell 2012	Multiple	Meta-analysis	548	Youth offender programs	12–21 year olds, gender not reported	Not reported	Not reported	Quasi- experimental	(Un)published studies	Quantitative	Risk–need– responsivity

Table A1: Summary	Table A1: Summary of included studies										
Study	Jurisdiction	Type of review	Number of studies	Program type	Program target	Unit of analysis	Sample size	Research design	Data source	Data analyses	Program components
Luong & Wormith 2011	Canada	Direct evaluation	1	Community- based supervision	10–17 year olds, mostly male	Young offenders	192	Post-test	Administrative data Reoffending data	Quantitative	Risk–need– responsivity
McGuinness, Tuohy & Rowney 2017	Multiple	Literature Review	175	Youth offender programs	10–17 year olds, gender not reported	Young offenders	Not reported	Narrative review	(Un)published studies	Narrative review	Cultural sensitivity Risk of reoffending Risk–need– responsivity
Meadowcroft, Townsend & Maxwell 2018	Multiple	Literature Review	1	Youth offender programs	10–17 year old males and females	Young offenders	Not reported	Post-test	(Un)published studies	Mixed methods	Evaluation Fidelity Program theory
Miller et al. 2013	United States	Direct evaluation	1	Mentoring	10–17 year olds, mostly male	Young offenders	1,197	Post-test	Surveys	Quantitative	Dosage Practitioner— client relationship
Moore, McArthur & Saunders 2013	Australia	Direct evaluation	1	Transition	16–18 year olds, mostly female	Young offenders	11	Pre- and post- test	Interviews	Qualitative	Practitioner— client relationship
Morales, Garrido & Sánchez-Meca 2010	United States	Meta-analysis	31	Youth offender programs	12–21 year old males	Young offenders	7,757	Quasi- experimental and experimental	(Un)published studies	Quantitative	Risk of reoffending
Murphy, McGuinness & McDermott 2010	Multiple	Systematic review	244	Youth offender programs	10–17 year olds, gender not reported	Young offenders	Not reported	Quasi- experimental and experimental	Multiple	Mixed methods	Cultural sensitivity Risk–need– responsivity
Norris, Griffith & Norris 2017	Multiple	Literature review	1	Youth offender programs	10–17 year olds, gender not reported	Not reported	Not reported	Narrative review	(Un)published studies	Narrative review	Risk–need– responsivity

Table A1: Summa	Table A1: Summary of included studies											
Study	Jurisdiction	Type of review	Number of studies	Program type	Program target	Unit of analysis	Sample size	Research design	Data source	Data analyses	Program components	
Prior & Mason 2010	Multiple	Literature review	1	Youth offender programs	10–17 year olds, gender not reported	Young offenders	Not reported	Narrative review	(Un)published studies	Narrative review	Fidelity Practitioner– client relationship	
Roy et al. 2010	Australia	Direct evaluation	1	Youth offender programs	10–17 year olds, gender not reported	Young offenders Stakeholders	295	Post-test	Multiple	Mixed methods	Dosage Cultural sensitivity Evaluation Risk–need– responsivity	
Sampson & Themelis 2009	Europe	Direct evaluation	1	Community- based program	8–17 year olds, mostly male	Young offenders Practitioners	35	Post-test	Multiple	Qualitative	Practitioner— client relationship Risk–need— responsivity	
Schwalbe et al. 2012	United States	Meta-analysis	28	Youth offender programs	18 years and younger, mostly male	Young offenders	19,301	Quasi- experimental and experimental	(Un)published studies	Quantitative	Fidelity	
Shlonsky et al. 2017	Multiple	Rapid evidence assessment	27	Family-based	10–17 year olds, mostly male	Young sex offenders	Not reported	Quasi- experimental and experimental	(Un)published studies	Quantitative	Fidelity Risk–need– responsivity	
Skeem, Scott & Mulvey 2014	United States	Literature review	156	Youth offender programs	10–18 year olds, gender not reported	Young offenders	Not reported	Narrative review	(Un)published studies	Narrative review	Evaluation Risk of reoffending Risk–need– responsivity	
Spiranovic et al. 2015	Australia	Systematic review	3	Youth offender programs	10-20 year olds, gender not reported	Young Indigenous offenders	Not reported	Narrative review	(Un)published studies	Narrative review	Evaluation Risk–need– responsivity	

Table A1: Summary	y of included s	tudies									
Study	Jurisdiction	Type of review	Number of studies	Program type	Program target	Unit of analysis	Sample size	Research design	Data source	Data analyses	Program components
Stout, Dalby & Schraner 2017	Australia	Literature review	3	Community- based supervision	10–17 year olds, gender not reported	Young offenders	24	Post-test	Multiple	Mixed methods	Evaluation
Strnadová, O'Neill & Cumming 2017	Australia	Direct evaluation	1	Education, employment and training	10–17 year old males and females	Practitioners	44	Post-test	Interviews	Qualitative	Dosage Fidelity
Strom et al. 2017	United States	Direct evaluation	1	Cognitive behavioural program	10–17 year olds, mostly male	Young offenders	258	Quasi- experimental	Multiple	Quantitative	Risk of reoffending
Unnithan & Johnston 2012	United States	Direct evaluation	1	Multi- dimensional	10-17 year olds, gender not reported	Practitioners	19	Post-test	Interviews and observations	Qualitative	Evaluation Intra- and inter-agency coordination
Weaver & Campbell 2015	United States	Meta-analysis	30	Transition	10–17 year olds, mostly male	Young offenders	Not reported	Quasi- experimental and experimental	(Un)published studies	Quantitative	Dosage Fidelity
Welsh & Rocque 2014	United States	Systematic review	574	Youth offender programs	10–18 year olds, mostly male	Young offenders	Not reported	Quasi- experimental and experimental	(Un)published studies	Mixed methods	Fidelity Program theory
Welsh, Rocque & Greenwood 2016	United States	Meta-analysis	3	Youth offender programs	10–18 year olds, gender not reported	Young offenders	Not reported	Analytic decision tree model	Administrative data	Quantitative	Evaluation Fidelity

### Australian Institute of Criminology Trends & issues in crime and criminal justice

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