A Police Partnership Targeting Truancy: Study Protocol for a Cluster Randomised Controlled Trial

Lorraine Mazerolle^{1,2} · Sarah Bennett^{1,2} · Stephanie M. Cardwell^{2,3}

Published online: 24 August 2020
© The Author(s) 2020

Abstract

Research Question How can an Australian police agency best test its role in a truancy prevention programme that can help to prevent crime?

Data Operational and analytic planning for testing the Ability School Engagement Partnership (ASEP) programme in Queensland that aims to increase school attendance and reduce anti-social behaviour, including offending.

Methods Fulfilling the requirements for registering a randomised trial protocol with the [Clinicaltrials.gov](https://clinicaltrials.gov) Registry (NCT04281966; date registered 24 February 2020).

Findings A protocol deploying a cluster randomised trial offers sufficient statistical power to detect a moderately large effect size as statistically significant with 80% probability.

Conclusion Implementation of this protocol as planned would provide an internally valid test of the effectiveness of the ASEP programme in real-world conditions.

Keywords Truancy · Crime prevention · Police partnerships · Schools · Delinquency · School attendance · Antisocial behaviour · Protocol · Randomised controlled cluster trial

Introduction

Truancy is a problematic behaviour associated with negative outcomes including antisocial behaviour. The current study involves the scaling up and evaluation of the

✉ Lorraine Mazerolle
l.mazerolle@uq.edu.au

¹ Australian Research Council Centre of Excellence for Children and Families over the Life Course, Indooroopilly, Queensland, Australia

² School of Social Science, The University of Queensland, St Lucia, Australia

³ Department of Criminology & Criminal Justice, The University of Texas at San Antonio, San Antonio, TX, USA

Ability School Engagement Partnership (ASEP) programme, a partnership between police and schools designed to increase parental knowledge of the education laws as a means to help young people re-engage with school and reduce their antisocial behaviour. The ASEP programme involves a series of scripted communications between police, school representatives, parents and their child who is truanting. The communications culminate in an ASEP conference designed to identify the underlying causes for a child's non-attendance at school and communicate, in a procedurally fair way, the legal requirements for parents to ensure their child attends school.

This scientific communication presents the study protocol for evaluating ASEP in a cluster randomised trial. The protocol provides the ground rules for testing the effectiveness of the ASEP programme among high school-aged young people with less than 85% school attendance (ages 12 to 16) in South East Queensland. The protocol proposes a randomised controlled cluster trial in which high schools are randomly assigned to either experimental or control status.

Students from the control schools will receive the business-as-usual approach to handling school non-attendance, which involves legislated post hoc sanctions to parents of children who truant. Recruited students from the experimental schools will continue to receive the legislated business-as-usual approach to school non-attendance but, in addition, they will receive the ASEP programme.

The protocol proposes that primary outcomes of the trial include school attendance (by measuring official school records) and offending (by measuring official police histories). It also proposes to provide improved understanding on the impact of the ASEP programme on experimental participants' perceptions of police, schools and families. Finally, it includes a plan to assess the feasibility and sustainability of delivering the ASEP programme at a State level.

Background

Truancy, defined as school non-attendance with no reasonable excuse, is a prevalent issue among young people in Australia. Estimates indicate approximately 25% of students in Australia miss school around 10% of the time (Australian Curriculum, Assessment and Reporting Authority (ACARA) [n.d.](#); Australian Institute for Teaching and School Leadership (AITSL) [n.d.](#); Hancock et al. [2013](#)). In Queensland, nearly 24% of secondary school students (grades 7–12) missed 30 or more days of school per year in 2018 (Department of Education (DoE) [2019](#), p. 77). In 2019, there were 2,023,992 absences reported among all secondary state schools in Queensland. Approximately 29% of these absences were classified as unexplained or unauthorised, meaning that there was no legitimate excuse for these absences (e.g. ongoing medical issue) (DoE [2019](#)).

Not attending school is a problematic behaviour that is linked to a host of negative life outcomes (Garry [1996](#); Mazerolle et al. [2019a](#); [b](#); Roque et al. [2017](#); Heerde et al. [2018](#)), including long-term welfare dependence and criminal behaviour. Using data from the Household, Income and Labour Dynamics in Australia (HILDA) Survey, a study by Collingwood et al. ([2019](#)) shows that youth who skip school receive, on average, higher amounts of welfare from the Australian government. Using a sample of 787 respondents followed up from mid-adolescence into early adulthood, those who reported skipping school without a valid excuse had over four times greater odds of receiving welfare relative to those who did not skip school (Collingwood et al. [2019](#)).

Not only does skipping school cost the government in future welfare payments, but it can also incur significant costs from any involvement in crime. Not attending school is a well-known “stepping stone” to later criminal behaviour (Garry 1996; Mazerolle et al. 2019a; b; Roque et al. 2017). Between 2011 and 2012, Australia spent \$640 million dollars on juvenile justice services (Steering Committee for the Review of Government Service Provision (SCRGSP) 2013; Smith et al. 2014). Research shows school problems are linked to significantly higher odds of incarceration and intimate partner violence by age 25 (Heerde et al. 2018). Given the average cost of incarcerating one person in Australia is \$109,821/year (Bushnell 2018), investing in programmes that seek to reduce truanting behaviour can provide substantially reduced costs to the Commonwealth for both welfare dependence and the criminal justice system.

The Ability School Engagement Partnership Programme: a Police-School Partnership Approach for Targeting Truant Behaviour

The Ability School Engagement Partnership (ASEP) programme is targeted towards young people who reside in socioeconomically disadvantaged communities or attend socioeconomically disadvantaged schools and who attended school less than 85% of the time without a valid explanation. The programme is designed to re-engage such young people in school and/or facilitate transitions to work, reduce antisocial behaviour (e.g. delinquency) and improve future life outcomes, such as reduced future welfare dependence.

The ASEP programme is grounded in the theory of Third-Party Policing (TPP). TPP interventions focus on police controlling negative behavioural outcomes through partnerships that use a third party’s legal power. In the ASEP programme, the third party partner is the Queensland Department of Education (DoE) and the intervention draws on the legal powers of the *Queensland Education (General Provisions) Act* (2006) requiring young people attend school up to age 16, holding parents legally responsible for their child’s school attendance. The centrepiece of the ASEP programme involves communicating the laws pertaining to school attendance to participating parents and children in a procedurally fair way within the context of the ASEP-scripted conference. The ASEP conference is especially designed to incorporate fair communication of the laws and consequences of not attending school through a script that seeks to increase willingness of both parents and young people to comply with the law.

Past research shows that the procedurally just dialogue communicating parental legal obligations is likely to increase school engagement and reduce antisocial behaviour (Mazerolle et al. 2019a; b; Antrobus et al. 2019). Procedural justice research shows that compliance with the legal system is gained through fair and just interaction with legal authorities (Mazerolle et al. 2013a; b). It suggests that individuals are more likely to view the justice system as legitimate when they have positive interactions with those in the justice system (e.g. police). Increased perceptions of legitimacy, in turn, increase the likelihood of complying with the law (Tyler 1990; Tyler and Trinker 2017). Interventions that use procedurally just dialogue place emphasis on treating participants in a fair manner, allowing participants to have a voice and say in decision making, being transparent in decision making, and also impartial and neutral in decision making (Mazerolle et al. 2012; Mazerolle et al. 2013a; b).

In the ASEP programme, increased legitimacy is hypothesised to lead in increasing school attendance and lowering antisocial behaviour. The ASEP conference participants include a trained facilitator, the young person who is not regularly attending school, their parent or carer, a uniformed police officer¹ and a school representative (e.g. teacher or counsellor). During the ASEP conference, participants develop an individually tailored Action Plan that stipulates “actions” over the subsequent 2 months to assist the young person to re-engage with school and/or transitions into paid work.

The ASEP programme shows promise as a policing intervention that can work in productive ways with schools to engage with young people who do not regularly attend school to increase school attendance and reduce negative life outcomes (Mazerolle et al. 2017a; b; Mazerolle et al. 2019a; b; Cardwell et al. 2019; Bennett et al. 2018). At present, there is good evidence that participation in the ASEP programme is associated with a range of beneficial outcomes. The initial proof of concept randomised field trial of ASEP ran from 2011 to 2015 and included 102 young people whose attendance was frequently less than 85% from 11 schools in Queensland ($n = 51$ for the Experimental group and $n = 51$ for the Control group). Results from the proof-of-concept trial showed that young people allocated to the experimental condition reported more willingness to attend school and had increases in official school attendance relative to the young people in the control group (Mazerolle et al. 2017a; b;). The parents of the young people in the trial reported higher perceptions of prosecution likelihood for skipping school, which increased young peoples’ willingness to go to school (Mazerolle et al. 2017a; b;).

Evidence also indicates that young people in the ASEP trial reported significantly lower official offending (Bennett et al. 2018) and self-reported antisocial behaviour (Mazerolle et al. 2019a; b). In line with hypothesised expectations, parents in the experimental relative to the control group reported more legitimate perceptions of police post-ASEP conference (Antrobus et al. 2019). Similarly, young people who participated in the ASEP trial had significantly better perceptions of police legitimacy post-intervention than the control group. These changes in perceptions were related to subsequently lower antisocial behaviour 2 years later (Mazerolle et al. 2019a, b).

Objectives of the Proposed Upscaling Trial

While evidence from the proof-of-concept ASEP trial showed positive outcomes, the programme cannot be considered an intervention that works at scale until it is tested with a much larger sample size in a broader context to assess its generalisability across age, sex, ethnicity and other social contexts (such as family structure, neighbourhood structure, school environment etc.). Upscaling the ASEP programme to include a large sample of young people who do not regularly attend school will help determine the efficacy and feasibility of such a programme at a community or state level. The upscaled ASEP programme also allows for a comparison of initial findings from the original ASEP trial and generalisability of the results to a wider population of such youth (demographically and culturally).

¹ Police officers recruited into the ASEP Program will either be school-based police officers at located within experimental schools or police officers in departments near the school.

The primary objectives and outcome measures (see Appendix A) for the proposed upscaling trial are these:

To assess the impact of the ASEP programme on:

- a. Official school absences, disciplinary records and academic achievement (English and Maths).
- b. Official arrest, victimisation and move-on² records.
- c. To determine whether or not the effectiveness of the ASEP programme varies by different demographic measures.

The secondary objectives and outcome measures (see Appendix B) are as follows:

To examine the effect of the ASEP programme on experimental group participants'

- a. Perceptions of police legitimacy and procedural justice
- b. Perceptions of school legitimacy and procedural justice
- c. Perceptions of family legitimacy and procedural justice
- d. Mental well-being
- e. Knowledge of the education laws
- f. Perceptions of the ASEP conference processes.

The upscaled trial will also seek to determine the impact of the intervention across different demographic groups (see Appendix C) and seeks to assess the feasibility and sustainability of delivering the ASEP programme at the Queensland State level.

Methods and Design

Ethics Approvals

This project has received approval from the University of Queensland's (UQ) Human Research Ethics Committee (#2019000782), the Queensland DoE's Research Services, and the Queensland Police Service's (QPS) Research and Evaluation Unit. Protocol amendments will be submitted through these organisations throughout the life of the project.

Trial Design

While students are the main units of all the analyses for the ASEP trial, there is reason for us to believe that students within any given school might have different outcomes from students in another school. This may be the result of a variety of factors such as the school staff, school practices, school environment or geographic location. We sought to account for the potential variability between schools and between students within our target schools in order to gain more accurate estimates of the effect of ASEP

² Queensland's move-on powers enable police to issue a direction to individuals and groups to move away from a certain public place for a certain period of time, in circumstances where they are about to commit an offence, are creating an obstruction, or are causing 'anxiety' to those around them.

on the outcomes of interest. To account for these variations, the current study is designed as a cluster randomised controlled trial (Donner et al. 1981; Campbell et al. 2000; Togerson n.d.) in which young people (level 1) are nested within high schools (level 2). Half of the eligible schools are randomly allocated to the experimental condition and half are randomly allocated to the control condition. Students will then be recruited from within these schools.

Across experimental and control conditions, the primary outcome measures will be young people's official attendance records, academic (English and Maths) achievement and disciplinary records following the intervention through to project completion (at least 1 year following the finalisation of ASEP interventions); these quantitative data will be requested from the DoE. These DoE outcomes will be compared with their respective pre-measures which cover a period of eight school terms (2 years) prior to the intervention. Linked quantitative data from the police will be requested on all young peoples' official police histories (contacts with police including arrests, move-ons and victimisation) following the intervention through to project completion. The post-intervention police contacts will be compared with the entire police histories for the children and consenting parents prior to the intervention. The collection of official data about young people in both conditions allows for comparison to determine the effectiveness of the ASEP programme (experimental) relative to the "business-as-usual"-only (control) approach to handling school absences. Table 1 presents the different phases of the study and the timeline in accordance with the Standard Protocol Items: Recommendations for Interventional Trials (SPIRIT) guidelines.

To answer the secondary research questions, both quantitative and qualitative data will be collected with consent from young people and their parents or carers in the experimental Intent-to-Treat (ITT) groups 5 and 6. Quantitative survey data will be collected at three time points: pre-conference, immediately post-conference and 2 months post-conference. Qualitative data will be collected through ASEP facilitator case notes and through the semi-structured interviews with young people and their parents or carers 72 h post-conference. Quantitative surveys will also be collected from police officers, school representatives and conference facilitators immediately post-conference to obtain their perceptions of the ASEP conference.

Study Setting

The study will be conducted in Queensland State High Schools (grades 7 to 10) in three regional areas across broader South East Queensland. The high schools are in either socially disadvantaged areas or have students who reside in socially disadvantaged catchment areas. Two common indices collected from DoE measure different aspects of social disadvantage as a means to identify high schools for the study: the Social Disadvantage Index (SDI) and the Index of Community Socio-Educational Advantage (ICSEA). The SDI is the average Index of Relative Socio-economic Disadvantage (IRSD) scores among all students at any given school. IRSD data are culled from the Australian Bureau of Statistics (ABS) and include items tapping the economic and social conditions of students' communities (e.g. the income of households, percentage of unemployment and one or single parent households) (Australian Bureau of Statistics (ABS) 2018). This scale addresses the level of disadvantage in the student body's surrounding neighbourhood/community. IRSD scores are aggregated so that 1000 is

Table 1 Participant timeline for the ASEP programme: SPIRIT table

Timepoint	Pre-intervention	Intervention period			Post-intervention	
		Baseline	Conference	72 h post-conference	2 months post-conference	1 year post-intervention
Enrolment						
High school eligibility screening	X					
Cluster randomisation of high schools	X					
High school principal informed consent experiment	X					
Recruitment and training of facilitators for experimental arm	X					
Student eligibility screen	X					
Consent for release of control student data	X					
Parental informed consent experiment groups 5 and 6		X				
Child assent experiment groups 5 and 6		X				
Experimental and control						
Overall experimental group	X					X
Experimental group 1: school consented	X					X
Experimental group 2: eligible students	X					X
Experimental group 3: eligible referral	X					X
Experimental group 4: intent-to-treat-intake	X					X
Experimental group 5: intent-to-treat-recruited	X					X
Experimental group 6: intent-to-treat-completed	X					X
Control group: business-as-usual	X					X
Assessments						
Primary outcome for both experimental and control groups	Pre-intervention					
Official school absences, school disciplinary records, Maths and English	X					X

Table 1 (continued)

Timepoint	Pre-intervention	Intervention period				Post-intervention	
		Enrolment	Baseline	Conference	72 h post-conference	2 months post-conference	1 year post-intervention
Official contacts with police: offences, victimisations, move-ons	X						X
Official demographic data	X						X
Secondary outcomes for experimental groups 5 and 6 only							
Knowledge of education laws			X			X	
Family legitimacy			X			X	
Family procedural justice			X			X	
School legitimacy			X			X	
School procedural justice			X			X	
Police legitimacy			X			X	
Police procedural justice			X			X	
Well-being			X			X	
Post-conference/action plan perceptions				X	X		
Programme evaluation data collection							
Cost-effectiveness	X		X	X	X	X	X
Feasibility/scalability processes	X		X	X	X	X	X

the base score. SDI scores above 1000 indicate *less disadvantage* while scores below 1000 equate to *more disadvantage*.

Similarly, ICSEA allows for comparisons of educational advantage or disadvantage between schools based upon two individual student-specific factors (parents' occupation and education level) and two school-specific factors (geographic location and the proportion of Indigenous students). ICSEA is measured by the Australian Curriculum, Assessment and Reporting Authority (ACARA). Like the SDI, the base value is 1000 and schools with scores lower than 1000 have *more disadvantaged students* while scores above 1000 indicate a school has *more advantaged students*. For the current study, high schools with SDI or ICSEA scores below 1000 were considered eligible for inclusion.

Experimental Condition

For eligible students enrolled in experimental schools, a specially trained and designated ASEP facilitator will organise and lead the ASEP programme. The ASEP programme starts with a scripted recruitment process undertaken by a trained facilitator. Upon consent, the ASEP facilitator works with the family (parent/carer and their child who is truanting from school), a school representative and a school-based police officer to prepare all of the participants for the ASEP conference.

The centrepiece of the ASEP programme is the ASEP *conference* which includes the young person who is truanting from school, their parent (or carer), a school representative and a school-based police officer as conference participants. The police and school representatives are trained by the facilitator prior to the conference to utilise the established ASEP conference script to engage the young person and their parent/carer in procedurally just dialogue during the entirety of the ASEP conference. The ASEP conference script utilises procedurally just dialogue (Mazerolle et al. 2019a; b; Mazerolle et al. 2012; Mazerolle et al. 2013a; b) with the goal to increase both the young person and their parents' perceptions of legitimacy of the education laws, police and schools in order to gain willing compliance to follow the rules (see Appendix D for a summary of the ASEP conference script). The ASEP conference culminates in an action plan. The ASEP facilitator then checks in with the family 72 h post-conference and then monitors compliance with the action plan for 2 months, concluding the ASEP intervention with an exit letter 2 months following the ASEP conference.

There are five main stages of the ASEP conference. The first stage involves the facilitator introducing all participants. The facilitator attempts to uncover the reasons behind why the young person is missing a lot of school. The second stage moves into a discussion about how not-attending school affects people's lives. The parent or carer, school representative and police officer explain how they are impacted by the young person not attending school and show concern for the young person's future. In the third stage, the consequences of not regularly attending school are discussed. The school representative is coached by the facilitator to discuss the legal consequences of continued non-attendance and describe the processes of the school attendance laws in the *Queensland Education (General Provisions) Act*. The police officer then discusses other legal consequences of not-attending school.

In the fourth stage of the ASEP conference, the facilitator explores what actions should be taken to ensure that the young person attends school. Parties discuss what

they would like to come out of the conference and discuss various prevention efforts. The fifth and final stage of the conference involves the development of a young person-centred action plan, which specifically details the “actions” that all parties are to take over the next 2 months to ensure that the young person re-engages with school and/or transitions into paid work. The action plan is monitored over the subsequent 2 months by participants. Two months post-conference, young people and their parents are sent a letter thanking them for participating in the study. This letter also includes a link for them to complete a post-intervention survey.

Control Condition

Eligible students enrolled in the schools in the control group are subject to the “business-as-usual” approach to handling school non-attendance. The students are handled in the usual manner for not regularly attending school through the requirements depicted in the *Queensland Education (General Provisions) Act* (2006) by the schooling system. Under these laws, schools are required to respond to young people who miss more than three consecutive days of school or following a period of unexplained or unauthorised absences. Schools first send a letter to the parents of the young person in which they are reminded of their legal requirements to attend school regularly. If the young person continues not attending school, the school then requests a meeting with the parent to discuss the young person’s non-attendance. Should parents fail to attend this meeting, or the young person continues not going to school, the school then sends another letter to the parents detailing that they are likely to be prosecuted should the young person continue in not going to school. Continued school non-attendance after this stage requires that the school initiate prosecution of the parents for not ensuring that their child attends school, potentially resulting in fines to the parents. Our research and proof of concept ASEP trial shows that the application of the school attendance laws across schools in Queensland is ad hoc and episodic (Acutt 2018).

As with the proof of concept trial, in this upscale trial of ASEP, the experimental group students and their parents are subjected to these legal provisions as required by Queensland law and DoE policies and procedures (DoE n.d.).

Sample Size and Power Analyses

Cluster randomised controlled trials, while statistically powerful, require large samples at the different levels of a model. We provide a detailed account of the power analysis for the trial in Appendix E. We conclude that we need, at minimum, at least 753 participants in our study (376 participants in each group). With a desired average cluster size of 15, this translates to around 50 schools total, with half of the schools being randomly allocated into the experimental group and half into the control group.

Randomisation of High Schools

In 2019, the DoE provided researchers with an anonymised list of the population of 119 high schools across the three regions in South East Queensland where the trial is being implemented. We identified a total of 69 eligible high schools from this list with SDI or ICSEA values below 1000. We then randomly assigned these 69 schools into either

experiment or control utilising Stata Statistical Software, version 15.1 (StataCorp 2017) and the *Randomize* package in Stata (Kennedy and Mann 2015). The *Randomize* package is beneficial for random assignment because it allows users to achieve statistical equivalency between experimental groups on specified variables and replicate results until statistical equivalency is achieved on these variables.

The first stage of the random assignment process was to identify a random number that would be used to ensure that not only schools are randomly assigned to conditions with an equal likelihood but also that results could be replicated. We obtained a random number from an online number generator and then set the seed in Stata to be this random number. A random number variable that contained values between 0 and 1 was then generated, and data were sorted in ascending order by this variable. We used the *Randomize* package to then randomly assign schools to experimental and control conditions. Specifically, we used statistical code to ensure that schools would be randomly assigned to two groups and that they were balanced on SDI and ICSEA scores and the number of students in each school. Of the 69 schools, 34 were randomly assigned to the experimental group and 35 were randomly assigned to the control group.

A series of *t* tests indicated that there were no significant differences between the conditions on the requested balance variables of ICSEA ($t = 0.9872$), student count ($t = 1.1323$) or SDI ($t = 0.1479$). These results show that we achieved equivalency between the experimental and control high schools based upon measures of community and social disadvantage and the number of students within each school. Results of the mean levels of these variables stratified by conditions are presented in Fig. 1.

Consent Strategy

In the initial design of the study, the researchers sought to obtain consent from all eligible schools prior to randomisation. However, DoE regional directors in the three

Fig. 1 ICSEA, SDI and student count means between control and experimental groups. Results from *t* tests comparing the mean values of Index of Community Socio-Educational Advantage (ICSEA), Social Disadvantage Index (SDI) and student count between experiment (dark grey) and control (light grey) high schools (35 in the control and 34 in the experiment)

study catchment areas decided that schools should be randomised prior to recruitment as a way to manage the potential disappointment for not being able to participate in the ASEP programme. Additionally, the regional directors requested that no contact be made with school principals or eligible students in the control schools. Thus, consent will only be obtained from schools and students in the experimental group. This type of design is referred to as Zelen single consent (Zelen 1979; Adamson et al. 2006; Homer 2002) and is used in situations where obtaining consent from control participants and sites is not feasible.

The University of Queensland Human Research Ethics Committee approved a waiver of consent for the control group schools, young people and their parents/carers. Justification for the waiver included the low risk nature of the study and the fact that all data from the control group (schools, young people and parents/carers) will be de-identified. It was also argued that obtaining consent from the control group would cause a disappointment for the control group schools and that there would be sufficient protection and confidentiality of data, both at the school and individual student and parent/carer levels of analysis. This justification is in line with the National Statement on Ethical Conduct in Human Research (National Health and Medical Research Council (NHMRC) 2007).

Recruitment of Experimental Schools

One of the most important aspects of this project is to test the ASEP programme's scalability: that is, the research is partly being conducted as a means to assess how feasible the programme is to implement at the State level. In order to assess this, it is essential to include DoE personnel in the recruitment of schools and participants. Nominated DoE personnel, titled regional nominees (RNs), in the three study catchment areas will conduct the initial stages of recruitment of both schools and families in the experimental condition. To ensure that these personnel can manage large recruitment numbers for the study, the private provider overseeing training for all ASEP facilitators (Restorative Outcomes Australia (ROA)) provides training to the RNs to prepare them for school and family recruitment. This training includes an overview of the ASEP programme and all steps in the intervention including the steps and ethical requirements for recruitment as well as preparation for and implementation of the ASEP conference processes, including all role-playing exercises.

Phase 1 of school recruitment for the 34 schools randomly assigned to the experimental condition started in late 2019. In late 2019, RNs began calling the school Principals of the experimental schools to provide them with an overview of the study and asked for verbal consent for their school to take part in the trial. Principals indicating initial interest in the study (experimental group 1: *school consent*) were emailed an information pack that provided an overview of the project. See Table 2 for a summary description of the recruitments into the experimental condition, now described.

Experimental Group Recruitment

After the recruitment of schools, RNs will liaise with the DoE head office and provide a spreadsheet with the consent status of experimental schools. For the consenting

Table 2 Estimates of the number of eligible students in the trial schools for the analysis of the primary outcomes

Group name	Estimated <i>N</i> of eligible students	Estimated <i>N</i> of refusers/ principal non- participation	Estimated <i>N</i> of participation per recruitment stage	<i>N</i> intent to treat	Notes
Control group:					business-as-usual
3089		3089			Includes all students in the control schools ($n = 35$) identified as eligible by DoE
Overall eligible students in experimental group	3089				Includes all students in the experimental schools ($n = 34$) identified as eligible by DoE
Randomised selection of eligible students in experimental group	1198				Includes all eligible students in the experimental schools, with approximately 40% randomly selected for recruitment
Experimental group 1: school consent	1198	91	1107		Students from experimental schools whose principals agreed to participate in the trial. Estimated to be 33 schools
Experimental group 2: eligible students	1107	370	737		Students from experimental schools whose principals indicated to the RN the student was eligible for the study (i.e. there was no reasonable excuse for their absences). estimated to be 66%
Experimental group 3: eligible referral	737	221	516		Students/parents/carers who agreed for RN to refer to ASEP facilitators. Estimated to be 70%
Experimental group 4: intent-to-treat—intake	516	52	464	464	Students/parents/carers who commenced recruitment in ASEP. Estimated to be 90%
Experimental group 5: intent-to-treat—recruited	464	46	418	418	Students/parents/carers who consented to take part in the ASEP conference. Estimated to be 90%
Experimental group 6: intent-to-treat—completed	418	42	376	376	Students/parents/carers who completed the full ASEP intervention. Estimated to be 90%

experimental schools, staff in the DoE head office will then generate a randomised list of students within these schools who meet the study eligibility criteria and securely deliver this list to the RNs and the recruitment of eligible young people begins. Appendix F describes the details of the steps in the recruitment process.

Eligibility Estimates for Primary Outcome Analyses

To ensure that our trial is high powered, our estimates (above) show that we need a total of 753 eligible young people across 69 eligible schools in the trial, with a minimum of 376 young people in each condition. Recent estimates from the DoE on absence rates in Queensland schools informed how many eligible students we would have for the trial. In 2018, 23.9% of secondary students (those in grades 7–12) in state schools in Queensland attended school less than 85% of the time (DoE 2019, p. 77). DoE provided the researchers with a list of the number of students in the experimental and control group schools in mid-2019. Among the 69 schools included in the trial, there were 62,397 students enrolled in these high schools.

While the estimated percent of secondary students who attended school less than 85% of the time in Queensland is 23.9%, Queensland is a large state covering an area of roughly 1.72 million square kilometres. There is variability in school attendance within the different schools across the state, with more rural areas comprising higher percentages of school absences relative to more metropolitan regions included in the trial. Past DoE data indicate more rural areas and remote schools have a greater number of students who attend school less than 85% of the time (Department of Education, Training and Employment 2013, pp. 8–9). Because of this, we were conservative in our eligibility estimates of students in the current trial and used an estimate of 15% of students who miss school 85% or more of the time. If we take the number of students in the trial schools and multiply it by this proportion:

$$62,397 * 0.15 = 9359.55.$$

we have 9360 students that potentially attend school less than 85% of the time in the study schools.

Recall that the study is only eligible for students aged 12 to 16. The number of enrolled students provided by the DoE includes young people outside of this age range with ineligible students primarily being in grades 11 and 12. We then estimated that about 2/3rds (i.e. 66%) of these students will meet the eligibility criteria. Thus, we take the previous estimated number of eligible students and multiply it by this proportion:

$$9360 * 0.66 = 6177.60.$$

finding that approximately 6178 students would be likely to meet the study eligibility criteria. Approximately half of these students would be in the experimental condition (~3089) with the remainder in the control (~3089).

Collaborative planning discussions with the funders of the project (Department of Social Services (DSS)) and the trial partners (including both DoE and QPS) led us to consider several factors in designing the recruitment strategy for the trial. The factors included the timeframe for the project (1 year of programme implementation funding), forecast case management funding and limits on QPS and DoE staff time allocated to both the recruitment and implementation of ASEP. In consideration of these

constraints, alongside the original ASEP trial data that indicated an attrition rate for each stage of the recruitment process, we established estimations of non-participation and refusals for each recruitment step, as discussed next and summarised in Table 2. These factors informed the estimation that 1198 randomly selected eligible students were sufficient for recruitment out of the 3089 eligible students in the experimental group, about a 40% sample. A summary of the recruitment attrition is described in Appendix G.

Primary Participants

Young People

Primary data for the project will come from high school aged young people in Southeast Queensland who meet the primary and secondary study objectives, both for the control group and for all six categories of the experimental group. To be included in the study, young people have to meet the following criteria:

1. be high school age: between 12 and 16 years old;
2. have 15% or more of school days recorded as unexplained absences over each of the previous two school terms;
3. have no known legitimate explanation for those absences (e.g. ongoing medical issue);
4. have at least one responsible adult in their lives (e.g. parent or carer) who provides social and/or financial support; and
5. attend a school randomly assigned to the experimental or control conditions.

Primary outcome data from young people in the experimental and control groups will be collected from the DoE and Queensland Police Service (see Appendix A). These data will be provided to the researchers in two different data pulls expected at the end of the project in 2020–2021. Secondary outcome data (see Appendix B) will also be obtained from young people who assent and whose parents/carers consent for their data release. Secondary data sources include self-reported surveys, qualitative interviews and audio recordings of the ASEP conferences. For young people in the experiment, the researchers aim to conduct at least 376 conferences to ensure statistical power within the experiment.

Secondary Participants

Parents or Carers

Secondary outcome data will be collected from parents or carers of the young people in the experiment who are recruited into the study. The researchers will recruit approximately 376 parents or carers from the experimental condition to partake in the study and the ASEP conferences. Secondary data sources for parents/carers in the experiment include self-reported surveys, qualitative interviews and ASEP conference audio recordings.

Police Officers

School-based police officers will be recruited to take part in the ASEP conferences where they are linked to schools in the experimental group. Where high schools in the experimental condition do not have a school-based police officer, police officers from police units and divisions located near the schools will be recruited. These police officers might be involved in multiple ASEP conferences. Data from police officers will be used for addressing secondary outcomes. Secondary data collected from police officers includes post-conference self-reported surveys and ASEP conference audio recordings.

School Representatives

School representatives will be recruited to take part in the ASEP conferences. These may include, but are not limited to, Principals, teachers or guidance counsellors. The decision of which school representative will partake in the conference will be decided through input from the young person, ASEP facilitator and school principal. For example, the young person might request to nominate a representative they are close to or the principal might nominate someone at the school to take part in the ASEP conferences. Data from school representatives will be used for addressing secondary outcomes. Secondary data collected from school representatives includes post-conference self-reported surveys and ASEP conference audio recordings.

ASEP Conference Facilitators

Facilitators will also be asked to participate in the project data collection. They will be invited to complete surveys after each ASEP conference to assess their perceptions. These data will be used to analyse secondary data outcomes. Secondary data collected from ASEP facilitators includes post-conference self-reported surveys, ASEP conference audio recordings and their collected case notes from working with experimental participants who take part in the ASEP conference.

Research Activities and Data Collection for Secondary Data from the Experimental Group

Time 1: Pre-intervention Measures

Following ASEP facilitators' recruitment of young people and their parents/carers in each case identified in the experimental condition, they will participate in an intake meeting prior to the ASEP programme intervention. This intake meeting will include obtaining informed consent and assent of parents/carers and young people, and completion of an intake survey (Time 1). This intake survey will include demographic information (e.g. gender, Indigenous status, age, grade, disability status, marital status, employment status and living situation) and pre-intervention perceptions of police, schools and family legitimacy and procedural justice, knowledge of the Queensland education laws, and mental well-being. Time 1 surveys will be taken through a variety of methods, depending on respondents' preferences, either electronically (e.g. computers, tablets or mobile devices) or through pen and paper surveys.

Time 2: Post-intervention Measures

Immediately following participation in the ASEP conference, conference participants (young people, their parents or carers, police officer, school representatives and ASEP facilitators) will be given a survey (either electronically or through paper and pen/pencil). The time 2 survey will ask these participants to denote their perceptions of the family group conference. At this time, the ASEP facilitator will type up the action plan denoting what respondents are to do over the coming 2 months. All participants will sign a copy of the action plan as a means to signal they agree to comply with it.

Time 3: 72-h Well-Being Check

At 72 h after the ASEP conference, the assigned ASEP facilitator will call the young person and their parent or carer for a qualitative semi-structured interview. The ASEP facilitator will ask both respondents for their perceptions of the ASEP conference, action plan and the other participants (e.g. police and school representatives). This interview will be audio recorded for later transcription.

Time 4: 2-Month Exit Follow-up

Approximately 2 months after the ASEP conference, young people and their parents or carers will be sent an exit letter informing them of their official completion of the ASEP programme. In this letter (to be sent by email or mail), a link to complete the time 4 survey will be sent. This survey will capture post-measures and perceptions of police, schools and family legitimacy and procedural justice, knowledge of the Queensland education laws and mental well-being. At this time, exit letters will also be sent to the police officers and school representatives to denote the conclusion of their involvement with the ASEP programme.

The four time points of intervention are collectively referred to as the ASEP programme intervention. The post-intervention period for the fully treated experimental group 6 will be considered a year following the exit follow-up.

Secondary Outcome Data for Young People and Parents or Carers in Experimental Groups 5 and 6

Secondary data will be collated from all participants in the experimental condition only who take part in the ASEP conferences (experimental groups 5 and 6). To ensure a statistically powerful experimental trial, we aim to conduct the 376 ASEP conferences that are required based upon the power analyses. These data include four different time points of measurement for young people and their parents/carers in the experiment: (1) at intake with ASEP facilitator (time 1), (2) immediately post-conference (time 2), (3) 72 h post-conference (time 3) and (4) 2 months post-conference (time 4). Other ASEP conference participants (school representatives, police officers and ASEP facilitators) will complete surveys at time 3. Appendix B includes a detailed list of secondary study variables.

The manner in which we will manage the trial data including our data management plan, data storage, managing data use and access, disclosures, and managing the risks in data collection are described in Appendix H.

Study Risks

Risks to Young People and Their Parents or Carers

Some of the risks to participants include the potential for them to feel discomfort in either answering questions in surveys or during the ASEP conferences. There is also the possibility that participants might provide information regarding specific illegal activities.

Risk to ASEP Facilitators and Other Conference Participants

There is the possibility that ASEP facilitators may be put at risk in situations such as when they meet in-person with participants to obtain informed consent for participation during intake. There is also the possibility that participants could become distressed during ASEP conferences.

Managing Risks

To Young People and Their Parents or Carers

If participants become distressed or upset in either the ASEP conference or while completing surveys, they will be provided with a list of supportive resources (e.g. social services). Additionally, the ASEP facilitator or the school representative can refer young people and their parents or carers to their school counsellor should they need assistance. The ASEP conferences are not focused on the discussion of specific illegal behaviours. Past discussions of illegal behaviours that are non-specific will be protected by confidentiality. However, in cases where specific details emerge that place respondents, conference participants or others in danger of harm, school and police representatives have mandatory reporting requirements.

To ASEP Facilitators and Other Conference Participants

To manage risks to facilitators when conducting study recruitment or when meeting with potential participants, a range of strategies will be employed. For example, if there are indicators that ASEP facilitators might be at risk when meeting with families, strategies include ensuring two facilitators attend the intake meeting, and relocating the intake from higher risk locations, such as homes, to public, neutral places. All facilitators are covered under UQ's liability insurance. To counter any risks that may arise during the ASEP conference or data collection, ASEP facilitators will be trained in conflict management and de-escalation techniques.

Analyses of Primary Data

For the analysis of the primary outcomes of interest and for those assessing whether the effects of the experiment differ based on demographic measures (see Appendix C), the researchers will follow the ITT principle. This means that students who were offered the opportunity to participate in the ASEP programme (experimental groups 4–6, see Table 2) are included in the analyses (Luca and Cole 2017). All analyses of the primary

outcomes will thus include all ITT categories of students in the experimental group compared with all eligible students in the control group. Both the DoE and QPS will provide researchers with these de-identified data at the completion of the study.

The analyses of the primary outcomes will proceed in a series of steps. First, we will assess descriptive statistics for the control group and all participants in the six experimental group categories to assess the equivalency of the two groups at the baseline point of random assignment. We will conduct *t* tests between experimental and control on the pre-measures of the main outcomes of interest, focusing on all six of the experimental groups and also the ITT experimental groups 4–6. Pre-measure data from the DoE will include attendance, disciplinary records and Maths and English grades two terms prior to the intervention. Pre-intervention measure data from QPS will include all prior contacts with police as offenders, victims and move-ons. Additionally, we will compare the ITT experimental and control groups on the different demographic measures using either *t* tests or chi-square statistics.

Second, we will conduct the same analyses as in the previous step but compare statistics and measure equivalence on pre-measures and the demographics for the control group compared with each of the six sub-groups of the experiment. These analyses will be able to determine if there are significant differences between the six experimental group categories and will be able to assess potential selection effects of experimental participant sub-groups. We will also compare pre-measures and demographics between the different sub-groups of the experiment to assess selection effects. This will be important for determining whether there are similarities or differences between in those who fully participate in the ASEP intervention relative to those who chose not to or only completed certain parts of the programme.

Third, we will assess model assumptions for the main multivariate analyses, including tests for multicollinearity, linearity between predictors and outcomes (for linear model outcomes), the presence of outlier respondents in the data and assessments of the patterns of missing data.

Fourth, we will conduct a series of multivariate analyses that account for the hierarchical structure of the data. These models will account for the clustering of students within schools to reduce bias in parameter estimates. All models will include the respective pre-measures as predictors and a condition variable assessing membership in either the ITT experimental group (coded as 1) or control (coded as 0), with the various post-intervention measures as the outcomes. These models will assess whether there are significant differences between the two groups on the primary outcomes.

Fifth, we will assess whether the results from the previous models vary by the demographics of students. This will involve using interaction terms between the condition variable and the different demographic measures. These analyses will assist in determining whether the ASEP intervention works better for different sub-groups of participants.

Sixth, we will assess the possibility of selection bias in the ASEP intervention. Because there are four of the six different sub-groups of respondents in the experiment who will not participate in all aspects of the intervention, we want to be able to distinguish between these subgroups and assess whether they vary on outcomes. To do this, multivariate analyses that account for the clustering of these data in which respective pre-measures and a categorical variable with the control group (0) and each sub-group of respondents in the experimental group (1–6) are included. These analyses will compare the specific parameter estimates for each sub-group of experimental respondents with those in the control. This procedure will be

able to assess whether there are significant differences between the different experimental groups and control group on the outcomes.

Seventh, we will examine the impact of the variations in the intervention review periods (or treatment period) on the primary outcomes. That is, for some families in the trial, their review periods will be relatively short (a minimum of 2.5 months from RN first contact to Exit letter) whereas for others, the review periods could be quite long, especially for hard-to-reach parents. We will therefore examine both the lengths of the review periods as well as the school and police activities during these intervention review periods to assess their impacts on our primary outcomes. Finally, we will also explore the impact of the degree of participation in the ASEP intervention to the control group and whether there are variations in these relationships based upon the different demographic measures.

Analyses of Secondary Data

Secondary data analyses will incorporate both quantitative and qualitative data. To examine sub-group variability in effects of experimental participants' perceptions of police legitimacy, police procedural justice, school legitimacy, school procedural justice, family legitimacy, family procedural justice, knowledge of the education laws and mental well-being, paired *t* tests and regression analyses will be used. *t* Tests will compare whether there are mean differences in these variables at time 1 (baseline) and time 4 (2 months post-conference). Regression analyses will incorporate demographic measures (from self-report and official) to assess whether change in these measures varies between certain sub-groups of participants.

Qualitative data will come from audio recordings of the ASEP conferences, open-ended questions in the time 2 surveys, and audio recordings of the time 3 phone calls. The audio recordings of the ASEP conferences and phone calls will be transcribed for analysis. Data will be analysed using NVivo software to identify broad themes in the transcripts. Further, inductive coding techniques will be used to gain an in-depth understanding of parents/carers and young people's perceptions of the ASEP intervention processes.

Assessing the Feasibility and Scalability of the ASEP Programme

One primary focus of this project is to assess how feasible and scalable the ASEP programme is at a State of Queensland level of implementation. This portion of the analysis is important for determining whether the ASEP programme is a long-term alternative to the business-as-usual approach to handling school non-attendance within the DoE. This analysis will involve a mixed methods approach utilising a variety of quantitative and qualitative study data from all respondents as well as case notes and information stored on the REDCap case management system. Among the quantitative data, post-conference surveys of young people, parents/carers, police officers, school representatives and conference facilitators will be analysed to assess consistency in delivery across the conferences. Quantitative data will also be collated from the DoE and REDCap to provide an overview of the duration of case management (from recruitment through to completion). Data will be obtained from case notes and call logs collected by the DoE RNs and the ASEP facilitators' case notes in REDCap to determine the average amount and time it takes to recruit participants in the study and the amount of time RNs and facilitators spend on an individual case.

Quantitative data will also be important for conducting a cost-benefit analysis of the ASEP process compared with the business-as-usual approach to handling school non-attendance. Broadly, we will be able to understand the average cost spent on each individual case in ASEP. More specifically, we will also be able to assess whether the cost of the ASEP programme leads to financial benefits in terms of increasing school attendance and reducing criminal behaviour. The researchers will assign monetary costs to school non-attendance (e.g. its financial impact on welfare dependence) and criminal behaviour (e.g. its impact on criminal justice system costs) to then determine if the benefits of the intervention outweigh the monetary costs relative to the business-as-usual approach.

A textual analysis will be used in the experimental group to examine case notes by DoE RNs and ASEP facilitators, as well as the action plans. Analyses of these data will predominantly focus on understanding whether any presenting issues and reasons young people in the intervention were missing school were properly addressed in the action plans. This analysis will assist in understanding whether the ASEP programme processes are targeting the specific needs of each case.

Dissemination of Results

Aggregate findings of the study will be disseminated to participants and schools in the project. Technical reports will be submitted to the collaborating agencies on the project: DoE, QPS, Department of Social Services and University of Queensland. Primary and secondary results will be disseminated through peer-reviewed journals and national and international conference presentations. Further, the overarching goal of the project is to take the results and use them to refine and implement the programme at a broader scale.

Discussion

Truancy, or missing school without a valid excuse, is a behaviour that is related to a host of negative life outcomes (Garry 1996; Mazerolle et al. 2019a; b; Roque et al. 2017; Heerde et al. 2018). Typical responses to truancy involve punitive procedurally unjust post hoc punishments that target young people and their parents or carers (Dembo and Gullledge 2009). Research shows such punishments do not discourage young people from engaging in future truancy and can ensnare young people and families into further disadvantage (Dembo and Gullledge 2009). The current study involves an experimental test of an alternative approach to the prevention and control of truancy by bringing together families, police and schools to address the underlying reasons and causes for truancy in young people. The intervention being tested, the ASEP programme, is a theoretical test of Third-Party Policing utilising a procedurally just conference script to convey the legal requirements of school attendance to parents and carers so that they may in future ensure their child regularly attends school. Evidence from the proof-of-concept experimental ASEP trial show positive outcomes for young people and their parents and carers relative to the business-as-usual control participants (Mazerolle et al. 2017a; b; Mazerolle et al. 2019a; b; Bennett et al. 2018). However, the original ASEP trial involved a small number of participants, limiting the generalisability of the findings to a broader population.

The protocol in this Scientific Communication present the design of an “upscaling” test of the ASEP policing partnership intervention. The protocol uses a more statistically powerful research design and methodology than the original, smaller scale trial. The ASEP programme upscaling trial involves a collaboration between researchers, the DoE, the QPS and ROA to assess the impacts of the programme at a State level. The broader goal of the ASEP programme is to assess the effectiveness of the ASEP intervention compared with the business-as-usual approach. The protocol allows for assessing the scalability and feasibility of delivering the intervention at the State level. The project has important policy implications for understanding effective methods for addressing truancy in Australian adolescents.

Acknowledgements We acknowledge the support and collaborative efforts of the Australian Department of Social Services, Queensland Department of Education, the Queensland Police Service and Restorative Outcomes Australia. We thank Ms. Peta Colbert and Ms. Zainab Darbas for their assistance in editing and proof reading the manuscript.

Availability of Data and Materials The data that support the findings of this study are available from the Queensland Department of Education, but restrictions apply to the availability of these data, which were used under licence for the current study, and so are not publicly available. Data are however available from the authors upon reasonable request and with permission of the Queensland Department of Education.

Author Contributions LM and SB developed the ASEP programme. LM, SB and SC developed the study design and research methodology. SC conducted the sample size analysis, randomised schools into experimental and control groups and assessed equivalency of schools. LM, SB and SC developed the research analyses and data management strategies. All authors wrote, read and approved the final manuscript.

Funding Information The project is funded by two grants from the Australian Government Department of Social Services Try, Test and Learn Fund (4-BJ403EB and 4-A968Q67). The findings and conclusions from this project are those of the authors and do not represent the official position of the funding agency.

Compliance with Ethical Standards

Competing Interests The authors declare that they have no competing interest.

Ethics Approval and Consent to Participate This study has received ethical approval from the University of Queensland’s (UQ) Human Research Ethics Committee (approval number: 2019000782), the Queensland Department of Education’s (DoE) Research Services, and the Queensland Police Service’s (QPS) Research and Evaluation Unit. All bodies approved the waiver of consent for control group schools and students. Verbal consent was obtained from experimental school Principals for their schools’ participation in the trial. Verbal and written consent will be obtained from Parents/Carers in experimental groups 4–6 who participate in the ASEP conference processes while assent will be obtained from their children or child in their care. Written consent will be obtained from all other ASEP conference participants, including school representatives, police officers and facilitators. A list of all abbreviations is found at Appendix I.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article’s Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article’s Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

References

- Acutt, A. (2018). *Encouraging school re-engagement: Exploring the operation of the legal mechanisms of a third party policing school engagement intervention*. University of Queensland.
- Adamson, J., Cockayne, S., Puffer, S., & Torgerson, D. J. (2006). Review of randomised trials using the post-randomised consent (Zelen's) design. *Contemporary Clinical Trials*, 27(4), 305–319.
- Antrobus, E., Bennett, S., Mazerolle, L., & Eggins, E. (2019). Parental and student perceptions of procedural justice and legitimacy in the context of truancy: Results from a randomized field trial. *The Australian and New Zealand Journal of Criminology*.
- Australian Bureau of Statistics (ABS). (2011). Australian and New Zealand Standard Offence Classification (ANZSOC), 2011. <https://www.abs.gov.au/ausstats/abs@.nsf/mf/1234.0>. Accessed 1 March 2020.
- Australian Bureau of Statistics (ABS). (2018). Census of population and housing: Socio-economic indexes for areas (SEIFA), Australia, 2016. <https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/2033.0.55.001~2016~Main%20Features~IRSD~19>. Accessed 1 March 2020.
- Australian Bureau of Statistics (ABS). (2019). Recorded crime – victims, Australia, 2018. <https://www.abs.gov.au/Ausstats/abs@.nsf/0/85675DED435DD208CA257A1500190545>. Accessed 1 March 2020.
- Australian Curriculum, Assessment and Reporting Authority (ACARA). (n.d.). Student attendance. <https://www.acara.edu.au/reporting/national-report-on-schooling-in-australia/national-report-on-schooling-in-australia-data-portal/student-attendance>. Accessed 1 March 2020.
- Australian Institute for Teaching and School Leadership (AITSL). (n.d.). Spotlight: Attendance matters. https://www.aitsl.edu.au/docs/default-source/research-evidence/spotlight/11319-aitsl_spotlight_attendance_web-fa.pdf?sfvrsn=5bb0ff3c_6. Accessed 1 March 2020.
- Bennett, S., Mazerolle, L., Antrobus, E., Eggins, E., & Piquero, A. R. (2018). Truancy intervention reduces crime: Results from a randomized field trial. *Justice Quarterly*, 35(2), 309–329.
- Bloom, H.S. (Ed.). (2005). *Learning more from social experiments: Evolving analytic approaches*. Russell Sage Foundation.
- Bushnell, A. (2018). Australia's criminal justice costs: An international comparison. Institute of Public Affairs Research.
- Campbell, M., Grimshaw, J., & Steen, N. (2000). Sample size calculations for cluster randomised trials. *Journal of Health Services Research & Policy*, 5(1), 12–16.
- Campbell, M. K., Mollison, J., & Grimshaw, J. M. (2001). Cluster trials in implementation research: Estimation of intracluster correlation coefficients and sample size. *Statistics in Medicine*, 20(3), 391–399.
- Cardwell, S. M., Mazerolle, L., & Piquero, A. R. (2019). Truancy intervention and violent offending: Evidence from a randomized controlled trial. *Aggression and Violent Behavior*, 49, 1–11.
- Carver, C. (1997). You want to measure coping but your protocol is too long: Consider the brief COPE. *International Journal of Behavioural Medicine*, 4(1), 92–100.
- Carver, C. S., Scheier, M. F., & Weintraub, J. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology*, 4(1), 267–283.
- Chinn, S. (2000). A simple method for converting an odds ratio to effect size for use in meta-analysis. *Statistics in Medicine*, 19(22), 3127–3131.
- Cohen, J. (1988). *Statistical power analysis for the behavioural sciences*. Lawrence Earlbaum Associated.
- Cohn, E. S., Trinkner, R. J., Rebellon, C. J., Van Gundy, K. T., & Cole, L. M. (2012). Legal attitudes and legitimacy: Extending the integrated legal socialization model. *Victims and Offenders*, 7(4), 385–406.
- Collingwood, P., Mazerolle, L., & Cardwell, S.M. (2019). School truancy and welfare receipt dynamics in early adulthood: A longitudinal study. The University of Queensland Institute for Social Science Research.
- Dembo, R., & Gullledge, L. M. (2009). Truancy intervention programs: Challenges and innovations to implementation. *Criminal Justice Policy Review*, 20(4), 437–456.
- Department of Education (DoE). (2019). 2018–2019 annual report.
- Department of Education (DoE). (n.d.). Managing student absences and enforcing enrolment and attendance at state schools. <http://ppr.det.qld.gov.au/education/management/Procedures%20Attachments/Managing%20Student%20Absences%20and%20Enforcing%20Enrolment%20and%20Attendance%20at%20State%20Schools/Managing-student-absences-and-enforcing-enrolment-and-attendance-at-state-schools.pdf>. Accessed 1 March 2020.
- Department of Education, Training and Employment. (2013). Performance insights: School attendance. <https://education.qld.gov.au/initiativesstrategies/Documents/performance-insights-report.pdf>. Accessed 1 March 2020.

- Donner, A., Birkett, N., & Buck, C. (1981). Randomization by cluster: Sample size requirements and analysis. *American Journal of Epidemiology*, 114(6), 906–914.
- Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, 39, 175–191.
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A. G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, 41, 1149–1160.
- Garry, E.M. (1996). Truancy: First step to a lifetime of problems. Office of Juvenile Justice and Delinquency Prevention.
- Hancock, K.J., Shepherd, C.C., Lawrence, D., & Zubrick, S.R. (2013). Student attendance and educational outcomes: Every day counts. Department of Education, Employment and Workplace Relations.
- Harris, P. A., Taylor, R., Thielke, R., Payne, J., Gonzalez, N., & Conde, J. G. (2009). A metadata-driven methodology and workflow process for providing translational research informatics support. *Journal of Biomedical Informatics*, 42(2), 377–381.
- Harris, P. A., Taylor, R., Minor, B. L., Elliott, V., Fernandez, M., O’Neal, L., McLeod, L., Delacqua, G., Delacqua, F., Kirby, J., & Duda, S. N. (2019). The REDCap consortium: Building an international community of software partners. *Journal of Biomedical Informatics*, 95, 1–10.
- Haver, A., Akerjordet, K., Caputi, P., Furunes, T., & Magee, C. (2015). Measuring mental well-being: A validation of the short Warwick–Edinburgh mental well-being scale in Norwegian and Swedish. *Scandinavian Journal of Public Health*, 43(7), 721–727.
- Heerde, J., Toumbourou, J.W., Hemphill, S.A., Le, H., Herrenkohl, T.I., & Catalano, R.F. (2018). Prevent crime and save money: Return-on-investment models in Australia. Australian Institute of Criminology.
- Homer, C. S. (2002). Using the Zelen design in randomized controlled trials: Debates and controversies. *Journal of Advanced Nursing*, 38(2), 200–207.
- Kennedy, C.J., & Mann, C.B. (2015). Randomize: Stata module to create random assignments for experimental trials, including blocking, balance checking, and automated rerandomization. Boston College Department of Economics.
- Luca, D.L., & Cole, R. (2017). Evaluation technical assistance brief. HHS Office of Adolescent Health. <https://www.hhs.gov/ash/oah/sites/default/files/estimating-program-effects-on-program-participants-brief.pdf>. Accessed 1 March 2020.
- Maxson, C. L., Matsuda, K. N., & Hennigan, K. (2011). “Deterability” among gang and nongang juvenile offenders: Are gang members more (or less) deterrable than other juvenile offenders? *Crime & Delinquency*, 57, 516–543.
- Maynard, B. R., McCrea, K. T., Pigott, T. D., & Kelly, M. S. (2013). Indicated truancy interventions for chronic truant students: A Campbell systematic review. *Research on Social Work Practice*, 23(1), 5–21.
- Maynard, B. R., Heyne, D., Brendel, K. E., Bulanda, J. J., Thompson, A. M., & Pigott, T. D. (2018). Treatment for school refusal among children and adolescents: A systematic review and meta-analysis. *Research on Social Work Practice*, 28(10), 56–67.
- Mazerolle, L. (2014). The power of policing partnerships: Sustaining the gains. *Journal of Experimental Criminology*, 10, 341–365.
- Mazerolle, L., Bennett, S., Antrobus, E., & Eggins, E. (2012). Procedural justice, routine encounters and citizen perceptions of police: Main findings from the Queensland Community Engagement Trial (QCET). *Journal of Experimental Criminology*, 8, 343–367.
- Mazerolle, L., Antrobus, E., Bennett, S., & Tyler, T. (2013a). Shaping citizen perceptions of police legitimacy: A randomized field trial of procedural justice. *Criminology*, 51(1), 33–63.
- Mazerolle, L., Bennett, S., Davis, J., Sargeant, E., & Manning, M. (2013b). Procedural justice and police legitimacy: A systematic review of the research evidence. *Journal of Experimental Criminology*, 9(3), 245–274.
- Mazerolle, L., Antrobus, E., Bennett, S., & Eggins, E. (2017a). Reducing truancy and fostering a willingness to attend school: Results from a randomized trial of a police-school partnership program. *Prevention Science*, 18(4), 469–480.
- Mazerolle, L., Bennett, S., Antrobus, E., & Eggins, E. (2017b). The coproduction of truancy control: Results from a randomized trial of a police-schools partnership program. *The Journal of Research in Crime and Delinquency*, 54(6), 791–823.
- Mazerolle, L., Antrobus, E.R., Cardwell, S.M., Bennett, S., & Piquero, A.R. (2019a). Harmonizing legal socialization to reduce antisocial behavior: Results from a randomized field trial of truanting young people. *Justice Quarterly*, 1–28.
- Mazerolle, L., Bennett, S., Antrobus, E., Cardwell, S., Eggins, E., & Piquero, A. R. (2019b). Disrupting the pathway from truancy to delinquency: A randomized field trial test of the longitudinal impact of a school engagement program. *Journal of Quantitative Criminology*, 35(4), 663–689.

- Murphy, K., & Mearns, M. (2009). The public safety and security in Australia survey: Survey methodology and preliminary findings [doctoral dissertation]. ARC Centre of Excellence in Policing and Security.
- National Health and Medical Research Council (NHMRC). (2007). National Statement on ethical conduct in human research. Australian Government (Australian Research Council) <https://www.nhmrc.gov.au/about-us/publications/national-statement-ethical-conduct-human-research-2007-updated-2018#>. Accessed 1 March 2020.
- Queensland State Archives. (2018). Disposal freeze for records that may become relevant to an allegation of child sexual abuse. Queensland Government. <https://www.forgov.qld.gov.au/news/2018/disposal-freeze-records-may-become-relevant-allegation-child-sexual-abuse>. Accessed 1 March 2020.
- Roque, M., Jennings, W. G., Piquero, A. R., Ozkan, T., & Farrington, D. P. (2017). The importance of school attendance: Findings from the Cambridge study in delinquent development on the life-course effects of truancy. *Crime & Delinquency*, 65(5), 592–612.
- Smith, R., Jorna, P., Sweeney, J., & Fuller, G. (2014). Counting the costs of crime in Australia: A 2011 estimate. Australian Institute of Criminology. <https://aic.gov.au/publications/rpp/rpp129>. Accessed 1 March 2020.
- StataCorp. (2017). Stata statistical software: Release 15. StataCorp LLC.
- Steering Committee for the Review of Government Service Provision (SCRGP). (2013). Report on government services 2013. Productivity Commission. <https://www.pc.gov.au/research/ongoing/report-on-government-services/2013/2013-government-services-2013-volume2.pdf>. Accessed 1 March 2020.
- Stewart-Brown, S., Tennant, A., Tennant, R., Platt, S., Parkinson, J., & Weich, S. (2009). Internal construct validity of the Warwick-Edinburgh mental well-being scale (WEMWBS): A Rasch analysis using data from the Scottish health education population survey. *Health and Quality of Life Outcomes*, 7(1), 1–15.
- Sunshine, J., & Tyler, T. (2003). The role of procedural justice and legitimacy in shaping public support for policing. *Law and Society Review*, 37(3), 513–548.
- Taggart, F., Stewart-Brown, S., & Parkinson, J. (2015). Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS) user guide version 2. NHS Health Scotland.
- Tankebe, J. Public cooperation with the police in Ghana: Does procedural fairness matter?, 47(4), 1265–Criminology, 1293.
- Tennant, R., Hiller, L., Fishwick, R., Platt, S., Joseph, S., Weich, S., Parkinson, J., Secker, J., & Stewart-Brown, S. (2007). The Warwick-Edinburgh mental well-being scale (WEMWBS): Development and UK validation. *Health and Quality of Life Outcomes*, 5(63), 1–13.
- Thastum, M., Johnsen, D. B., Silverman, W. K., Jeppesen, P., Heyne, D. A., & Lomholt, J. J. The Back2School modular cognitive behavioral intervention for youths with problematic school absenteeism: Study protocol for a randomized controlled trial. *Trials*, 20(1), 1–29.
- Togerson, D. (n.d.). Sample size and analytical issues for cluster trials. <https://www-users.york.ac.uk/~dj66/NIcourse/samplecluster.ppt>. Accessed 1 March 2020.
- Trinker, R., & Cohn, E. S. (2014). Putting the “social” back in legal socialization: Procedural justice, legitimacy, and cynicism in legal and nonlegal authorities. *Law and Human Behavior*, 38(6), 602–617.
- Trinkner, R. (2012). Testing the procedural justice model of legal socialization: Expanding beyond the legal world. Doctoral dissertation, ProQuest Dissertations Publishing.
- Trinkner, R., & Tyler, T. (2016). Legal socialization: Coercion versus consent in an era of mistrust. *Annual Review of Law and Social Science*, 12(1), 417–439.
- Trinkner, R., Cohn, E., Rebellon, C., & Gundy, K. (2012). Don’t trust anyone over 30: Parental legitimacy as a mediator between parenting style and changes in delinquent behavior over time. *Journal of Adolescence*, 35(1), 119–132.
- Tyler, T. (1990). Why people obey the law. Yale University Press.
- Tyler, T., & Trinker, R. (2017). Why children follow rules: Legal socialization and the development of legitimacy. Oxford University Press.
- University of Queensland. (n.d.). Research Data Manager (RDM). <https://research.uq.edu.au/rmbt/uqrdm>. Accessed 1 March 2020.
- Walsh, T., & Taylor, M. (2007). You’re not welcome here: Police move-on powers and discrimination law. *University of New South Wales Law Journal*, 30, 151–173.
- Zelen, M. (1979). A new design for randomized clinical trials. *The New England Journal of Medicine*, 300(22), 1242–1245.

Appendices A, B, C, D, E, F, G, H and I are all posted at the Cambridge Centre for Evidence-Based Policing website at www.cambridge-ebp.co.uk/journal/supplementmaterial

Lorraine Mazerolle is an Australian Research Council Laureate Fellow (2010–2015), a Professorial Research Fellow at The University of Queensland, School of Social Science, and a Chief Investigator with the ARC Centre of Excellence for Children and Families over the Life Course. Her research interests are in experimental criminology, policing, drug law enforcement, regulatory crime control, and crime prevention. She is the co-chair Crime and Justice Group, Campbell Collaboration, , immediate past Editor-in-Chief of the Journal of Experimental Criminology, past Chair of the American Society of Criminology's (ASC) Division of Experimental Criminology, an elected Fellow and past president of the Academy of Experimental Criminology (AEC), and an elected fellow of the Academy of the Social Sciences, Australia and the American Society of Criminology (ASC). Professor Mazerolle is the recipient of the ASC Division of Experimental Criminology Jerry Lee Lifetime Achievement Award (2019), Partners in Research Excellence Award The University of Queensland (2019), CEBCP Distinguished Achievement Award of the Center for Evidence Based Crime Policy at George Mason University (2019), ASC Sellin-Glueck Award (2018), the ASC Division of Policing Distinguished Scholar Award (2016), the AEC Joan McCord Award (2013), and the ASC Division of International Criminology Freda Adler Distinguished Scholar Award (2010).

Dr Sarah Bennett is a Senior Lecturer in Criminology at the University of Queensland. Her research interests include evidence-based policing, procedural justice and legitimacy and experimental criminology. These interests are interwoven within three research aims to 1) understand the role of protective and developmental risk factors in future life outcomes, 2) advance the role of police and police training in improving outcomes for victims, offenders and communities and 3) innovate rigorous research methods in real world settings. Sarah is a Fellow of the Academy of Experimental Criminology with significant international expertise in conducting complex trials to inform policy and practice.

Stephanie M. Cardwell is an Assistant Professor in the Department of Criminology & Criminal Justice at the University of Texas at San Antonio and an honorary research fellow in the School of Social Science at the University of Queensland in Brisbane, Australia. Her research is focused on understanding how interventions can modify the effects of risk factors on antisocial behavior outcomes in young people.