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Offenders’ perceptions of the sentencing process—A study of deterrence and stigmatisation
in the NSW Children’s Court

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Abstract

The criminal court system remains society’s pre-eminent response to criminal activity, despite recent innovations such as youth justice conferences. Little is known, however, about the impact of an appearance before court, and in particular, whether subjective reactions to the court process have any impact on recidivism. The current article reports the results of a longitudinal study conducted in the NSW Children’s Court. Two hundred and six young offenders were interviewed immediately after the conclusion of their sentencing hearing using a questionnaire designed to measure the extent to which they perceived the court hearing to be a deterrent, and the extent to which they felt either stigmatised or reintegrated by the experience of being sentenced. Other factors measured included the developmental background of the young person, their academic record, peer influence, and licit and illicit drug use. Participants with previous convictions and who felt stigmatised by the hearing were more likely to re-offend, while participants rating their likelihood of arrest in the event of future offending as high, and who reported that the sentence they received would prevent future offending, were less likely to re-offend. Some evidence was obtained, therefore, to support both deterrence and labelling theory.
Introduction

An appearance before court remains society’s pre-eminent response to criminal activity, regardless of the recent emergence of alternatives such as youth justice conferences (Chan, Bargen, Luke, & Clancey, 2004; Luke & Lind, 2002). Large numbers of people continue to be dealt with by the criminal courts every year. In 2005, for instance, there were 139,407 people dealt with by the NSW Local Court, while 8,428 young people were dealt with by the NSW Children’s Court (NSW Bureau of Crime Statistics and Research, 2006). What impact such contact with the criminal justice system has is a matter of some controversy.

It is clear what effect an appearance before court should have: it should deter future offending. However, it has also been suggested that court can have the counter-productive effect of increasing future offending, by labelling the defendant as deviant (H. S. Becker, 1966; Braithwaite, 1989; Lemert, 1972). It is also possible that court has little or no effect, and that any subsequent criminal activity by the sanctioned offender is determined by factors that precede the age of criminal responsibility.

These competing claims offer little assistance to either policy makers or researchers. The aim of the current research project is therefore twofold: firstly, to determine what impact, if any, an appearance before the criminal court has; and secondly, to test the relative merits of predictions made by deterrence and labelling theorists as explanatory accounts of offending subsequent to the court hearing. Specifically, the present article will report the results of a longitudinal study examining subjective reactions to an appearance before the NSW Children’s Court, and the extent to which variations in these reactions predict recidivism in the sample.
Deterrence theory

There has been a longstanding interest in deterrence theory and research in criminology (Beccaria, 1764/1995; Bentham, 1823/1948; Gibbs, 1975; Zimring & Hawkins, 1973). In the immediate aftermath of the revival of interest in deterrence theory in the 1960s, research focussed on the aggregate effect of sanctions on crime rates (G. S. Becker, 1968; Tittle, 1969). Since then, there has been a recognition that deterrence is as much a psychological as sociological phenomenon, and research has concentrated on investigating the relationship between individual perceptions of both sanction risk and severity, and criminal involvement (Grasmick & Bryjak, 1980; Paternoster, 1987; Paternoster, Saltzman, Waldo, & Chiricos, 1983b; Saltzman, Paternoster, Waldo, & Chiricos, 1982; Waldo & Chiricos, 1972).

Two conclusions follow from a review of this literature: firstly, there is general agreement that the operation of criminal justice system is a deterrent to criminal activity (Blumstein, Cohen, & Nagin, 1978; Cook, 1980; Nagin, 1998); and secondly, the evidence favours the deterrent effect of certainty, over severity, of punishment (Nagin, 1998; Von Hirsch, Bottoms, Burney, & Wikstrom, 1999; Williams & Hawkins, 1986).

Nevertheless, it is clear that much remains unknown about how the deterrence process operates. One reason for this is that empirical tests of the hypothesis that contact with the criminal justice system reduces subsequent criminal activity by the sanctioned offender have been have been marred by a number of methodological flaws. In particular, there has been controversy relating to five areas: research design, measurement of the dependent and independent variables, control for exogenous variance and sample composition.

Research design
There has been ongoing debate regarding the best way to test the perceptual deterrence thesis. Use of cross-sectional methodology led to the suspicion that negative correlations between perceived risk of punishment and self reported offending were an artefact of past experience of offending (the ‘experiential’ effect), rather than evidence for deterrence (Greenberg, 1981). Because of this, the preferred methodology for studying deterrence has been either longitudinal (i.e. comparing perceptions of deterrence at time $t$ with offending at time $t + 1$) or scenario based (where participants are asked to report what their behaviour would be in various hypothetical situations).

**Dependent variable**

A second concern relates to the outcome variable. The perceptual deterrence thesis states that perceptions of sanction risk and severity should inhibit subsequent offending. The measurement of subsequent offending is thus a key component in the deterrence process. Scenario type studies account for this by measuring stated intentions to offend, assuming (with little substantiation) that these stated intentions will correspond with actual behaviour (Piquero & Rengert, 1999). Other researchers have used self reported offending (Piliavin, Thornton, Gartner, & Matsueda, 1986) and successful completion of a supervision program (Maxwell & Gray, 2000; Pogarsky, 2007) as their outcome variable. An alternative is the use of court records to measure recidivism. This was, until recently, an alternative unavailable to researchers in NSW, because of the difficulty in obtaining these data. The development of a re-offending database by the NSW Bureau of Crime Statistics and Research, capturing all court appearances in NSW, now permits the use of official records in studies of recidivism in this state (Weatherburn, Lind, & Hua, 2003).

There has been a long-standing debate in criminology regarding the relative merits of self-reported and official measures of offending; it is sufficient to say that both have advantages
as well as disadvantages (Huizinga & Elliott, 1986; Payne, 2007). However, court records are well-suited to longitudinal studies as their use avoids the logistical problem of obtaining (potentially unreliable) retrospective self-reports from a transient group of juvenile offenders. In addition, as the date of re-offence is often available, a wider range of analytic techniques are available. In particular, perceptions of deterrence can be modelled in terms of time to re-offend.

*Independent variables*

A third concern relates to the operationalisation of key independent variables. The measurement of perceptions of sentence severity has been a point of contention (Grasmick & Bryjak, 1980; Paternoster & Iovanni, 1986). Past approaches have ranged from asking participants to estimate their likelihood of receiving the maximum penalty for an offence (Waldo & Chiricos, 1972), to ratings of how severe courts are in relation to illicit drug use (Meier & Johnson, 1977). An alternative has been to measure the personal cost of the sentence to the offender (e.g. ‘how big a problem will this sentence be to you?’). Individual assessments of this kind have been found to be negatively (albeit weakly) associated with self-reported offending or intentions to offend (Grasmick & Bryjak, 1980; Nagin, 1998; Paternoster & Iovanni, 1986).

Perceived certainty of arrest has been operationalised in a number of ways: the likelihood of an experienced offender being violated from a supervision program (Maxwell & Gray, 2000; Pogarsky, 2007) or ratings of the personal chance of being arrested for an offence (Carmichael & Piquero, 2006; Horney & Marshall, 1992; Piliavin et al., 1986). The latter approach is preferable as it measures offenders’ perceptions of their sanction and arrest risk more directly.

*Controls*
A further concern is that exogenous variance has been poorly controlled. As criminal behaviour is a multi-determined phenomenon, it is risky to rely on bivariate relationships. Factors such as informal sanctions, peer support, and moral beliefs have been shown to have an important role in the deterrence process (Paternoster, 1987; Paternoster & Iovanni, 1986). In addition, few deterrence studies have controlled for the developmental factors that have been shown to be important in the formation of anti-social behaviour (Loeber & Stouthamer-Loeber, 1986).

**Samples**

A final concern is that because of the traditional reliance on so-called samples of convenience of university and school students, little is known about how the deterrence process works among offenders (Carmichael & Piquero, 2006; Williams & Hawkins, 1986). This is not to say that this question has never been examined. A diverse range of (primarily) American studies, dating back some 20 years, has examined deterrence using offending samples.

Pogarsky (2007) used data from an American sample of offenders in an intensive supervision program ($n = 434$), to test whether perceptions of severity (operationalised as the degree to which the participants preferred the supervision program to prison) and certainty of punishment (operationalised as the likelihood of a street-smart person being expelled from the program if they used drugs) predicted successful completion of the supervision program. Both deterrence measures were related to the outcome measure, with participants reporting higher ratings of perceived sanction certainty and severity more likely to complete the program, controlling for covariates such as prior drug use and offending. Another study of offenders in a supervision program, by Maxwell and Gray (2000), using a similar measure of perceived certainty of arrest, also found higher ratings on this variable to be related to successful program completion.
Carmichael and Piquero (2006) examined the relationship between risk perceptions, offending rates and arrest ratios in a sample of convicted offenders in Colorado. They hypothesised that more experienced offenders would rate their risk of arrest as being lower, while offenders who were arrested more frequently would rate their risk of arrest as being higher. Higher rates of offending were related to lower certainty of arrest for assault and motor vehicle theft (in support of the first hypothesis), whereas higher perceived certainty of arrest for burglary was related to higher levels of offending. Higher arrest ratios were related to higher certainty ratings for four out of the nine offences tested. However, this study left untested the crucial question of what impact these perceptions had on future offending.

Using a series of hypothetical scenarios with a group of active burglars (n = 15), Piquero and Rengert (1999) found that the participants’ assessments of both the probability and degree of punishment were related to the likelihood of a burglary being committed.

Horney and Marshall (1992) found perceptions of the risk of apprehension and frequency of offending to be negatively correlated for the previous three years in a sample of 1046 incarcerated male offenders. An earlier, longitudinal study, involving convicted offenders, illicit drug users, and adolescent school drop-outs, by contrast, found little evidence for the deterrent effect of both formal and personal risk of punishment (Piliavin et al., 1986).

So while some mixed evidence exists to support the possibility that offenders perceive the criminal justice system to be a deterrent, a growing recognition remains that the comparative lack of studies testing the deterrence hypothesis in active offenders comprises a major weakness in the literature (Carmichael & Piquero, 2006). This is particularly so in the Australian context, where, regardless of levels of political and popular interest in deterrence, little scholarly interest has been shown in this topic. This is unfortunate, as sober scientific evidence could help inform popular debates about the deterrent effect of the criminal justice
system. The current research will comprise a longitudinal study of young people appearing before the NSW Children’s Court, to determine what deterrent effect, if any, such an appearance has. Consistent with deterrence theory, it is expected that those participants who believe themselves to be at greater risk of arrest in the event of subsequent offending, will be less likely to be reconvicted. Participants who feel they have received more severe sentences will also be expected to have lower recidivism levels.

However, these are not the only predictions that have been made about the possible impact of a court hearing. Labelling theory, by contrast to deterrence theory, holds that contact with the traditional legal system will have the counter-productive effect of increasing the likelihood of further offending.

**Labelling theory**

Labelling theory’s emergence coincided with the growth in interest in deterrence in the 1960s. Labelling theory asserts that contact with the criminal justice system has the counter-productive effect of increasing future offending, because of the stigmatising effects of traditional justice ceremonies (Braithwaite & Mugford, 1994; Lemert, 1972). Although this formulation of labelling theory has been described as simplistic (Paternoster & Iovanni, 1989), there remains a fundamental prediction that contact with the criminal justice system will lead to increased future offending—what has been termed the “deviance amplification effect” (Smith & Paternoster, 1990, p. 1110).

Efforts to test labelling theory initially involved comparing a group dealt with by court to a group diverted from court. Early studies, in most cases, found diversion superior to court in reducing recidivism, without considering the possibility that these findings were a selection artefact brought about by non-random allocation to the control and treatments groups, rather
than evidence for labelling theory (Smith & Paternoster, 1990). However, a number of randomised trials have been conducted to test labelling theory. Some of these found diversion to be superior to court when measured by subsequent offending (Davidson, Redner, Blakely, Mitchell, & Emshoff, 1987; Klein, 1986; Schneider, 1986), while some found no such difference (Patrick & Marsh, 2005; Severy & Whitaker, 1982). The Minneapolis experiments, which compared arrest, forced separation, and mediation as responses to domestic violence incidents, in fact found that formal processing (i.e. arrest) was the most effective method of reducing subsequent (short-term) offending by the perpetrator. The results of this experiment therefore provide evidence both against labelling theory, and for deterrence theory (Sherman & Berk, 1984). More recently conducted randomised trials have evaluated the impact of restorative justice programs such as youth justice conferences. The evidence here too is mixed, with some finding these programs reduce recidivism (McGarrell, 2001; Sherman, Strang, & Woods, 2000), and some finding no difference (McCold & Wachtel, 1998).

A different source of evidence for labelling theory has come from some well-known longitudinal studies. Data from the Cambridge cohort, for example, showed that being apprehended at the age of 14 predicted greater levels of future offending in a group of youths with similar levels of self-reported offending (Farrington, 1977). More recent studies coming out of the Rochester study have shown that public labelling can lead to poorer academic and professional outcomes, and more involvement with deviant peers, which in turn leads to greater involvement in criminal activity (Bernburg & Krohn, 2003; Bernburg, Krohn, & Rivera, 2006).

A major flaw in most of the research that has purported to test labelling theory is the failure to recognise that, like deterrence theory, labelling theory is a psychological account of
criminal activity. It predicts that contact with the criminal justice system will result in feelings of stigmatisation, which in turn will lead to increased recidivism. Two testable propositions arise here. The first is, if the assumptions made by labelling theory are true, offenders dealt with by the criminal justice system should feel stigmatised as a result. The second is, if it is true that feeling stigmatised is criminogenic, offenders who feel more stigmatised should also be more likely to re-offend. These propositions have remained largely untested because of the assumption made by most researchers that attending court is an inherently stigmatising experience.

This was recognised by Meade in 1974: “the labelling perspective requires subjective data for verification” (Meade, 1974, p. 88). The Canberra Reintegrative Shaming Experiment is one study that did test for subjective reactions to both court and youth justice conference, finding similar (and relatively low) levels of stigmatisation in both groups (Ahmed, Harris, Braithwaite, & Braithwaite, 2001). Unfortunately the researchers did not take the vital second step and test whether variations in these reactions had any impact on subsequent offending.

The current study will therefore test labelling theory by measuring subjective reactions to being sentenced by the NSW Children’s Court, and testing the extent to which these reactions predict subsequent offending. It will do so using the theoretical framework of Braithwaite’s theory of Reintegrative Shaming, which suggests that labelling is not inevitably damaging, but rather something that can be beneficial if done in a respectful or ‘reintegrative’ manner (Braithwaite, 1989). It is therefore predicted that the court hearing should, on the whole, be stigmatising for the young people experiencing it; that individuals who feel more stigmatised will be more likely to re-offend; and that individuals who feel more reintegrated will be less likely to re-offend.
The current study

In summary, the current study aims to determine the impact of subjective perceptions of a court hearing on subsequent offending, while controlling for a number of well-known risk factors for recidivism. It also aims to test whether assumptions made by theorists operating under the deterrence and labelling paradigms provide an explanatory account of offending subsequent to the court hearing. It will do so by reporting the results of a longitudinal study of the NSW Children’s Court, conducted in Sydney, Australia, between September 2004 and December 2005. The predictions of this study are as follows. Deterrence theory suggests that participants believing themselves to be at lower risk of arrest in the event of future criminal activity should be more likely to be reconvicted, while participants believing themselves to have received a more severe sentence will be less likely to be re-convicted. Reintegrative shaming theory suggests that the hearing will be stigmatising for the participants; that those more stigmatised will be more likely to be re-convicted; and those feeling reintegrated will be less likely to be re-convicted.

Methods

Interviews

Interviews were conducted at Bidura, Lidcombe and Campbelltown Children’s Courts between September 2004 and December 2005. Legal Aid solicitors introduced potential participants to the interviewer, who explained the nature and purpose of the study, and answered any questions about it. Interviews were conducted immediately after the participants’ sentencing hearings had concluded, often while court papers were being prepared. Interviews typically took between 10 and 20 minutes to complete. The response
rate was 65%, which was considered adequate. The participants received a movie ticket in return for their cooperation.

**Measures**

**Dependent variable**

The dependent measure of this study is recidivism, defined as time to be re-convicted. Recidivism data were obtained from the re-offending database (ROD), maintained by the NSW Bureau of Crime Statistics and Research. This database contains all finalised criminal appearances in NSW higher court (District and Supreme), NSW Local Courts and the NSW Children’s Court since 1994. Further information regarding the matching procedures used and their accuracy can be found in Hua and Fitzgerald (2006) and Weatherburn, Lind, and Hua (2003).

**Independent variables**

There are three groups of independent variables:

**Hearing and sentencing**

*Perceived certainty*. Participants were asked ‘if you commit a crime in future, how likely is it that you will be caught by police?’ Participants were also asked how likely it was that they would commit a crime in future. Answers to both questions were measured on a 4-point scale ranging from ‘very unlikely’ to ‘very likely’.

*Perceived severity*. Participants were asked ‘was the penalty softer or harder than you expected?’, with answers measured on a 5-point scale from ‘much softer’ to ‘much harder’. They were also asked ‘how big a problem will this penalty create in your life?’, with answers on a 5-point scale from ‘no problem at all’ to ‘a very big problem’.
To assess the impact of the penalty on the participants’ lives, they were also asked whether going to court had hurt their chances of having a good relationship with their family, their chances of having good friends, their chances of having a good education, and the chances of having a good job. Answers to these four questions were measured on a 4-point scale ranging from ‘not at all’ to ‘a lot’. In the final analyses, answers to these questions were combined to create one measure. The measures of sentence severity used in this study were adapted from Paternoster and Iovanni (1986).

Other measures of deterrence. Participants were also asked ‘do you think this penalty will stop you from offending in future?’ Answers to this question were measured on a 4-point scale ranging from ‘not at all’ to ‘a lot’. They were also asked ‘how likely is it that you will be locked up if you get caught again?’ Answers to this question were measured on a 4-point scale ranging from ‘very unlikely’ to ‘very likely’.

Sentence and offence variables. The following variables were obtained from court records: type of offence (classified as ‘violent’, ‘property’, ‘drug’, or ‘other’), principle sentence (which ranged in severity from a caution to a suspended control order), the number of concurrent offences the participant had before the court, and whether they had been convicted on a previous occasion.

Reintegrative Shaming

Stigmatisation. Stigmatisation was measured using six questions. Typical questions included ‘were you treated in court as though you were likely to commit another offence?’ and ‘during the court case, were you treated as though you were a bad person?’. Answers to these six questions were measured on a 4-point scale ranging from ‘not at all’ to ‘a lot’. One measure of stigmatisation was obtained by combining these answers.
Reintegration. Reintegration was measured using eight questions. Typical questions included ‘at the end of the court case did people make it clear to you that you could put the whole thing behind you?’ and ‘did people in the court case say that it was not like you to do something wrong?’ Answers to these eight questions were all measured on a 4-point scale ranging from ‘not at all’ to ‘a lot’. One measure of reintegration was obtained by combining these answers.

Procedural fairness. There were four question measuring this construct, which were combined in the final analyses to create one measure. Typical questions were ‘did you understand what your rights were?’ and ‘if the court had got things wrong, did you feel you could correct this?’. Answers to these questions were measured on the same scale as the stigmatisation and reintegration questions.

Shaming. Level of public shaming was measured by asking participants what people who knew about the offence thought of it. There were two other shaming variables: how many people knew about the offence, and whether one, both or neither of the participant’s parents attended the hearing.

All of the questions in this group of variables were derived from the questionnaire used in the Canberra Reintegrative Shaming Experiment (Sherman et al., 1997).

Background controls

Socio-demographic. Gender was coded 1 = female, 2 = male. Indigenous status was coded 1 = non-Indigenous, 2 = Indigenous. Other socio-demographic variables were the participants’ age at interview and their parents’ age.

Developmental. These were grouped according to the paradigms of family functioning suggested by Loeber and Stouthamer-Loeber (1986): the neglect paradigm (lack of
involvement between parents and children and poor supervision); the conflict paradigm (discipline style within the family and rejection, both by parents of children and vice versa); the deviant behaviours and attitudes paradigm (parental attitudes to delinquency); and the disruption paradigm (quality of parents’ relationship, household disadvantage\(^v\), and household crowding\(^vi\)). Question were derived from the *Manual on the measurement of adolescent social and personal adaptation in Quebec* (MASPAQ, Le Blanc, 1996).

**Social attachment.** There were two measures of social attachment, whether the participants believed the offence to be wrong, and the participants’ attitudes to conventional others, which was measured by asking them how much they cared about what their parents and teachers thought of them. Answers were on a 4-point scale from ‘not at all’ to ‘a lot’.

**Current social context.** Included here were variables relating to the marital status of the participants’ parents, how stable their living arrangements were, their academic performance, the influence of deviant peers in their lives, and their licit and illicit drug use. All were based on self-report.

**Analysis**

Analyses were conducted using survival analysis, with the Cox’s proportional hazard model used to identify multivariate predictors of recidivism. The reported statistic is the hazard ratio, which provides an estimate of the likelihood of an individual being a recidivist, while holding other variables in the model constant.

Survival analysis is a commonly used technique in studies of recidivism (for some recent examples see Dietrich, Smiley, & Frederick, 2007; Hartman, Listwan, & Shaffer, 2007; Hayes, 2005; Huebner, Varano, & Bynum, 2007; Pullmann et al., 2006; Theriot, 2006) and was used in this study for a number of reasons. It avoids the problems of censorship.
associated with set follow-up periods. In the Bethlehem conferencing study, for instance, some 20% of the data were censored as the participants were not at large for the entire 12 month follow-up period (McCold & Wachtel, 1998). Given that time at large in the current study ranged from 6 to 18 months, modelling the data in terms of time to re-offend avoids a similar loss of information. Time to re-offend can also be thought of as a proxy for frequency of offending, which is an inherently more informative measure than a simple offence/no re-offence dichotomy. The only assumption made about the underlying structure of the data is the proportional hazards assumption: that is, the model assumes the hazard rate for two individuals is parallel over time\textsuperscript{vii}.

\textit{Procedure}

The procedure utilised was to identify significant bivariate predictors of recidivism within each of the three groups identified above (i.e. the court, reintegrative shaming, and background groups). These bivariate predictors were used to identify a multivariate model for each group. The group predictors were then included in one multivariate model to identify the final recidivism model.

\textit{Results—descriptive}

\textbf{Sample}

Although a total of 206 interviews were conducted, only data from 193 interviews could be used in the recidivism analyses, as 13 individuals interviewed could not be identified in the re-offending data base. Eighty per cent ($n = 154$) of the final sample were males, and twenty-three were from an Indigenous background. These figures reflect the overall demographic makeup of defendants appearing before NSW Courts (NSW Bureau of Crime Statistics and Research, 2006). Mean age at interview was approximately 16, and ranged from 13 to 20.
Hearing and sentencing

Data in this group of variables came from two sources: court records and interview data. The type of offence was derived from court records and divided into four groups: violent (39%), property (33%), drug (6%) and other (22%). The principle sentence handed down was also derived from court records. This was included in the recidivism analyses as an independent measure of the severity of the sentence, ranging from 0 (dismiss/caution) to 10 (control order). The most common sentence were supervised probation orders (20%). Other common sentences were unsupervised (16%) and supervised (15%) bonds. Some 12% of the sample were referred to youth justice conferences. Two thirds of the sample were appearing before court for the first time, and on average, each participant had two concurrent offences before court.

Participants rated their risk of arrest as being reasonably high. They thought their sentence was neither soft nor hard, and perceived few problems ensuing from the penalty they received. Most did not intend offending again, and thought that they would get locked up if they did. Means and standard deviations for these variables are reported in Table 2.

Reintegrative shaming

Most individuals reported that the people they knew disapproved of what they had done. Forty per cent appeared alone, without parental support.

The participants reported moderate levels of reintegration ($m = 2.28$) and perceived the court hearing to have been relatively fair ($m = 2.68$). One noteworthy finding is that, contrary to the predictions of labelling theory, relatively low levels of stigmatisation were experienced by the participants ($m = 1.67$, where 1 = ‘not at all’ and 2 = ‘a bit’).
It is instructive to compare these results with those observed in the Canberra Reintegrative Shaming experiment, where a mean stigmatisation score of 2.04 was observed for those dealt with by court, and 1.96 for those dealt with by a youth justice conference. For reintegration, these scores were court = 2.13 and conference = 2.93 (Harris, 2001). In general, it appears that court does not have an inevitably stigmatising effect on offenders appearing before it. Means and standard deviations for these variables are reported in Table 3.

**Background controls**

Sixty-one per cent of the participants had parents who were either separated, single or divorced. Most reported positive developmental relationships. They did not feel neglected by their parents and reported positive discipline styles, low levels of mutual rejection, disapproving parental attitudes to deviancy, and relatively undisrupted households. Given the large literature implicating these factors in delinquency, these are somewhat surprising findings. The same pattern of findings is found in relation to the academic performance of the participants. There were also moderate levels of licit and illicit drug use reported. Means and standard deviations for these variables are reported in Table 4.

**Results—recidivism**

*Survival times.* The participants’ offending was followed until June 30 2006. Mean survival time was 260 days. For the recidivists (n = 51), mean survival time was 115 days, and for the non-recidivists (n = 142), it was 313 days. Survival data for the sample is reported in Table 1.

Insert Table 1 here
*Hearing and sentencing model:* Prior convictions, perceived certainty of arrest and reporting that the penalty would stop future offending emerged as the multivariate court group model. Table 2 reports all bivariate and multivariate hazards for this group of variables.

Insert Table 2 here

*Reintegrative shaming model:* Stigmatisation was the only predictor of recidivism to emerge from the reintegrative shaming group of variables. Table 3 reports all bivariate and multivariate hazards for this group of variables.

Insert Table 3 here

*Background controls model:* Two factors emerged from the background group of variables as significant predictors of recidivism: behaviour at school and illicit drug consumption. Table 4 reports all bivariate and multivariate hazards for this group of variables.

Insert Table 4 here

*Final model:* To identify the final recidivism model, these six variables (behaviour at school, illicit drug consumption, prior convictions, perceived certainty of arrest, reporting that the penalty would stop future offending and stigmatisation) were included in a multivariate model. When these six variables were included in one multivariate model, four remained significant: prior convictions, perceived certainty of arrest, reporting that the penalty would stop future offending and stigmatisation. Individuals with prior convictions and who felt stigmatised by the court hearing were more likely to re-offend. Individual who felt themselves to be at greater risk of arrest in the event of subsequent offending, and who reported the sentence they received would prevent future offending, were less likely to re-offend. None of the background variables were found to influence recidivism. The final recidivism model is reported in Table 5.
Discussion

The primary aim of this study was to investigate perceptions of an appearance before the NSW Children’s Court. Individual reactions to criminal justice interventions have been seen as an important determinant of subsequent offending behaviour by both deterrence and labelling theorists. However, past research has largely been based on presumptions about these individual reactions. This study has addressed this deficiency by measuring subjective perceptions of the court experience and then determining the extent to which variations in these perceptions predict re-offending in the sample. Evidence was observed to suggest both perceptions of deterrence and stigmatisation can play an important role in subsequent offending.

Deterrence

Two predictions suggested by deterrence theory were tested in this study. The first was that individuals rating their risk of arrest as being higher in the event of future offending would be less likely to re-offend. This hypothesis was supported. The second prediction was that individuals who felt the sentence they received was more severe, would be less likely to re-offend. This hypothesis was not supported. These findings are consistent with previous research (Doob & Webster, 2003; Nagin, 1998; Von Hirsch et al., 1999). The current study provides an important addition to this research, because in many respects it offers a strong test of the severity hypothesis: it is longitudinal in structure, includes a diverse range of controls, as well as a number of both subjective and objective measures of the severity of the sentence received by the participants. The failure to observe a relationship between any of these measures of severity and recidivism comprises strong evidence against the proposition.
that harsh punishments are an effective deterrent to future criminal activity. It is true that relatively few of the participants perceived their sentence to be harsh. Nevertheless, 20% of the participants thought the sentence was harder or much harder than they expected, while 15% said it would cause a big or very big problem in their lives. The fact these individuals were no less likely to re-offend is counter-evidence for the severity hypothesis.

In some respects this study offered a weaker test of the certainty hypothesis. It has been suggested that longitudinal investigations of this phenomenon are deficient as they fail to account for fluctuations in risk assessments; in other words, risk assessments at time $t$ will influence contemporary behaviour, not behaviour at time $t + 1$ (Nagin, 1998; Williams & Hawkins, 1986). While it is certainly plausible that judgements about the likelihood of apprehension would be dependent on situational factors such as the presence of police officers, such an observation does not invalidate the current findings. If it is true that risk assessments vary over periods as short as 6 months (Paternoster, Saltzman, Waldo, & Chiricos, 1983a), the effect of this would be to ameliorate the effect of risk perceptions, and increase the likelihood of observing null results. The fact that this relationship was observed without taking into account situational fluctuations in risk perceptions is good evidence to support the contention that perceptions about the risk of apprehension provide an effective deterrent to future criminal activity.

The question of how much of this deterrent effect can be ascribed to the court hearing remains open. It is true that perceptions of risk of arrest have been shown to be associated with a wide range of factors, including frequency of offending and apprehension, impulsivity and moral beliefs (Piquero & Pogarsky, 2002; Pogarsky, Kim, & Paternoster, 2005; Stafford & Warr, 1993; Williams & Hawkins, 1986). Nevertheless, two factors argue in favour of the court hearing having some deterrent value. The first is that ratings of the likelihood of future
apprehension were made directly after the sentencing hearing had concluded, making it likely that the Magistrate’s comments influenced the participants’ ratings to at least some extent. The second is that individuals who said that the sentence they received would prevent them engaging in further criminal activity, were in fact less likely to be reconvicted. Although this measure was associated with the objective severity of the sentence imposed ($r = 0.19, p < 0.01$), the tenuousness of this relationship makes it is unlikely that this latter finding is related to the sentence only. Perhaps it is more an expression of the global effect of the sentencing officer’s remarks. In any event, it gives good reason to believe that a court hearing can prevent future offending.

A finding that has possible implications for previous deterrence research is the observation that stated intentions to re-offend had no relationship to future offending patterns. This is relevant because a considerable amount of deterrence research uses stated intentions to offend as a dependent measure, assuming that intentions and actual behaviour will correspond closely enough for this to be valid (Bouffard, 2002; Fishbein & Ajzen, 1975; Nagin, 1998; Pogarsky et al., 2005). Whether these findings have any ramifications for the scenario-type studies conducted by these researchers is doubtful, however, in samples of active offenders it seems preferable to use actual offending behaviour as a dependent variable.

The weight of scholarly opinion remains supportive of the notion that the criminal justice system has a deterrent effect (Blumstein et al., 1978; Cook, 1980; Nagin, 1998). The current study offers additional support for this notion, with the important caveat that variations in sentence severity had no deterrent effect. It has been noted that a major deficiency in the deterrence literature is a lack of knowledge about how risk assessments are formed (Nagin, 1998; Pogarsky et al., 2005). This study answers this criticism to a certain extent by demonstrating that a court hearing can be a deterrent for a sample of convicted juvenile
offenders. It also leaves this question unanswered to the extent that it provides relatively little information regarding the factors associated with risk assessments in the current sample. Future avenues of investigation could focus on quantitative analyses of the factors associated with the significant deterrence variables. Qualitative analysis of court transcripts might also be useful in answering some of the unresolved questions of this study.

In conclusion, some evidence was obtained to support the notion that the court hearing could prevent future offending. However, there was also evidence that some participants felt considerably stigmatised by the hearing, and were subsequently far more likely to re-offend.

**Labelling**

A number of predictions were made in relation to labelling theory. It was firstly anticipated that individuals appearing before the Children’s Court would feel stigmatised by the experience; secondly, that those feeling stigmatised would be more likely to re-offend; and thirdly, that those feeling reintegrated by the hearing would be less likely to re-offend. Only the second of these predictions was supported.

Although it is true that question of whether the court hearing was stigmatising cannot be definitively answered by this study, because of the absence of a comparison group, the low mean stigmatisation score observed gives some reason to believe that appearing before the Children’s Court is not an inevitably stigmatising experience. Although slightly higher stigmatisation scores were observed in RISE, both for groups dealt with by court and conference (using the same measures as in this study), the fact the scores for both groups were almost identical is added substantiation for the proposition the juveniles do not, in general, find court a stigmatising experience (Harris, 2001).
The measures of stigmatisation used in this study were intended to assess the immediate reaction to the court hearing. It may be, however, that feelings of stigmatisation take longer to emerge, and only become apparent when the young person has a chance to experience the disapproval of their family and peers in the days and weeks following the court appearance. If this is the case, the current study underestimates levels of stigmatisation in the sample. A further complication is the possibility that the notoriety resulting from a court appearance could be welcome to the offender—that is, the court appearance becomes a ‘badge of pride’.

Although these considerations seem to suggest some caution should be exercised in interpreting the stigmatisation data, it also remains true that most of the young people interviewed did not emerge from court with a burning sense of injustice. This study aimed to assess whether the court appearance itself was stigmatising; that is, whether treatment in the court-room made the young person feel (for example) like a bad person or a criminal. If it is accepted that stigmatisation is specific to the court appearance (and excludes any social ramifications arising afterwards), the conclusion that for most, the court hearing was not stigmatising, remains defensible.

Nevertheless, there were individuals who perceived the hearing to be stigmatising. These individuals were more likely to re-offend. By contrast, no relationship was observed between feelings of reintegration and subsequent offending.

These findings provide some rare support for one of the central tenets of labelling theory: that public labelling in a formal court hearing can have considerable criminogenic properties. This is also an important component of Braithwaite’s theory of reintegrative shaming (Braithwaite, 1989). However, Braithwaite departs from orthodox labelling theory in his belief that labelling need not be inevitably damaging if it is done in a sufficiently respectful,
or reintegrative, manner. No support was obtained for this latter proposition. On this evidence negative emotional reactions to court have a more profound impact than positive reactions.

It is possible these emotional reactions do not play a causal role in future offending, but rather are a result of differential treatment in court determined by the demeanour of the defendant. If this is the case, judicial officers’ treatment of the individuals who appear before them, and these individuals’ subsequent offending, are independently determined by the same factor or set of factors. Individuals appearing with anti-social attitudes would likely be dealt with in a stigmatising manner, and also be more likely to re-offend. Any criminal activity subsequent to the hearing is thus a result of anti-social attitudes, rather than treatment in court, according to this argument.

The fact that the relationship between stigmatisation and recidivism held up while controlling for background variables, including prior convictions, provides some counter-evidence against this proposition. Offenders who had appeared on previous occasions would be a more likely target of censure from magistrates, with resulting higher levels of stigmatisation. This, in fact, was not the case. Equal levels of stigmatisation were observed among individuals both with and without prior convictions\textsuperscript{viii}. Reintegration, which was weakly predictive of recidivism on a bivariate basis, but not in the multivariate model, seems more vulnerable to this criticism. It could well be that individuals presenting with more pro-social attitudes were treated more kindly by the magistrates, without this treatment affecting future offending.

The other noteworthy findings were the failure of the shaming variables and participants’ perceptions of how fairly they had been treated to predict recidivism. Braithwaite’s theory predicts that higher levels of public shaming should lead to lower offending levels. No
evidence was found to support this contention. One possible reason for this is the weakness of the shaming measures used. It is clear that these are, at best, indirect measures of shaming, particularly the questions that asked how many people knew about the offence, and whether parents came to the hearing. The measure ‘what did people think about it?’ is more defensible, but the problem here was the lack of variance in the answers given: the majority of the young people interviewed reported that their family and peers were highly disapproving of what they did. It could well be that this was the case. Alternatively, this finding could be a result of social desirability, in other words, a reluctance to give an accurate answer. It could also be that shame is a response that emerges in the days following the court appearance, when the young person has a chance to experience how their family and peers react.

Procedural fairness advocates have also suggested that laws are obeyed when people believe they have been treated fairly (Tyler, 1990, 2003). No evidence was found in support of this view, although it may be that this proposition would hold up better in a sample from the general population, rather than a sample of convicted offenders.

In conclusion, this study provides some rare support for labelling theory. Perhaps this is because it represents one of the first efforts to test an important implication of this theoretical perspective: that individuals will vary in their reaction to contact with the criminal justice system, and that variations in these reactions will influence subsequent behaviour. A recent, and widely influential addition to the labelling perspective, has been provided by Braithwaite’s theory of reintegrative shaming, which asserts that the act of publicly labelling an individual as an offender can be beneficial if done in a reintegrative manner. Braithwaite’s theory receives little support from the current study, as neither reintegration nor public shaming predicted recidivism levels in the sample.
Other predictors

The final predictor of recidivism identified in the current study was prior convictions. As the positive correlation between past and future offending has been described as the most robust finding in criminology (Nagin & Paternoster, 2000), this is not a surprising finding. More surprising was the failure of any of the other control variables to predict recidivism. Given the large and robust literature on the developmental correlates of delinquency, it might have been expected that at least some of the family factors measured here would be related to subsequent offending in the sample. This applies equally to the measures of school performance, peer influence, and licit and illicit drug consumption.

Two possible explanations for these anomalous findings will be considered. The first is that prior convictions operate as a proxy for these other background factors. It is not possible to test whether this is the case here, because of the confounded temporal relationship between the background variables and prior convictions. It could be that problems within the family were a result of past offending, rather than its cause, as developmental theory would suggest.

If it were the case that an individual’s past offending history acted as a proxy for a poor developmental background, it might be expected that this would be reflected in the data to the extent that significant bivariate relationships between some of the developmental factors and recidivism would attenuate when prior convictions were controlled for. This was not the case, leading to the second explanation, which is that the background factors in the study were not accurately measured. All were based on self-report, and it could well be that the participants were not willing to accurately portray their family life in the course of a brief interview with a stranger. The descriptive statistics reported in Table 4 provide some substantiation for this suspicion, as considerable positive skew can be discerned in a number of the measures employed. Inclusion of data on the participants’ developmental background
and current social context from other sources, such as Juvenile Justice files, would have strengthened this study considerably. At the time, however, this was not possible.

Conclusion

It appears that an appearance before the NSW Children’s Court can have a considerable impact in both preventing and increasing future offending. Some evidence was found in the current study to support the predictions made by deterrence theory. In particular, individuals believing themselves to be at greater risk of apprehension given future offending, and who reported that the sentence they received would stop them engaging in future criminal activity were less likely to re-offend. It seems true, as scholars such as Nagin and Cook have suggested, that the criminal justice system exerts a “substantial deterrent effect” (Nagin, 1998, p. 3). What is not supported by the current findings, is the contention that more severe punishments contribute to this deterrent effect.

However, while a court appearance does appear to have some deterrent effect, it also has the potential to exacerbate subsequent offending by stigmatising individual offenders. People perceiving the hearing to be stigmatising were substantially more likely to re-offend, so it indeed appears possible that emotional reactions to a court appearance can influence subsequent behaviour.

Having made this point, it is important to note that, in general, the participants of this study reacted positively to the court hearing. Mean stigmatisation scores were low, whereas perceptions of reintegration and fairness were, if not high, perhaps higher than might have been expected. It is clear that the Magistrates of the Children’s Court do not set out to stigmatise the young people appearing before them. In many respects, this study shows they are doing an admirable job under difficult circumstances.
Acknowledgements

This research was carried out as part of a PhD conducted at the School of Psychology, University of Sydney. I would like to acknowledge the support of the School and my supervisors, Associate Professor Dave Grayson, and Associate Professor Pauline Howie of the University of Sydney, and Dr Don Weatherburn of the NSW Bureau of Crime Statistics and Research. I would also like to thank three anonymous reviewers for their helpful and constructive comments. I am grateful for the cooperation of the following agencies: the NSW Children’s Court, the Children’s Legal Service, the Aboriginal Children’s Legal Service, and the NSW Bureau of Crime Statistics and Research. Finally, I would like to thank the young people who participated in this study.
References


### Tables

**Table 1 Survival times as of 30 June 2006**

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean*</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>No recidivism</td>
<td>142</td>
<td>313.12 (83.04)</td>
<td>192</td>
<td>574</td>
</tr>
<tr>
<td>Recidivism</td>
<td>51</td>
<td>115.08 (92.02)</td>
<td>1</td>
<td>341</td>
</tr>
<tr>
<td>Total</td>
<td>193</td>
<td>260.79 (122.20)</td>
<td>1</td>
<td>574</td>
</tr>
</tbody>
</table>

*Standard deviations in brackets*
### Table 2 Means, bivariate and multivariate models, hearing and sentencing variables

<table>
<thead>
<tr>
<th>Court (Database)</th>
<th>Means</th>
<th>Bivariate model</th>
<th>Multivariate model</th>
<th>Hazard</th>
<th>p</th>
<th>Hazard</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Violent offence</td>
<td>0.75</td>
<td>0.335</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Property offence</td>
<td>0.96</td>
<td>0.902</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drug offence</td>
<td>1.19</td>
<td>0.733</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Youth Justice Conference</td>
<td>0.98</td>
<td>0.966</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Principal sentence</td>
<td>1.06</td>
<td>0.260</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of concurrent offences</td>
<td>2.01 (1.58)</td>
<td>0.93</td>
<td>0.483</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prior convictions</td>
<td>0.34 (0.47)</td>
<td>2.25</td>
<td>0.004</td>
<td>2.28</td>
<td>0.003</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Court (Interview data)                |       |                |                    |        |     |        |     |
| Perceived certainty of arrest         | 2.84 (0.98) | 0.63 | 0.001          | 0.69   | 0.013 |        |     |
| How soft or hard was the penalty      | 2.71 (1.01) | 1.04 | 0.767          |        |     |        |     |
| How big a problem is the penalty      | 2.30 (1.19) | 0.93 | 0.529          |        |     |        |     |
| Specific problems from penalty        | 1.51 (0.51) | 1.26 | 0.391          |        |     |        |     |
| Intention of re-offending             | 1.47 (0.79) | 1.25 | 0.149          |        |     |        |     |
| Whether penalty will stop future offending | 2.90 (1.16) | 0.67 | 0.001          | 0.71   | 0.005 |        |     |
| Whether you will get locked up next time | 3.04 (1.03) | 1.21 | 0.193          |        |     |        |     |

Model p 0.000

*Standard deviations in brackets*
<table>
<thead>
<tr>
<th>RST</th>
<th>Means*</th>
<th>Bivariate model</th>
<th>Multivariate model</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Means</td>
<td>Hazard p</td>
<td>Means</td>
<td>Hazard p</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level of public shaming</td>
<td>4.06 (1.38)</td>
<td>0.90 0.285</td>
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<tr>
<td>Number of people aware of offence</td>
<td>1.95 (1.18)</td>
<td>0.81 0.105</td>
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<td></td>
</tr>
<tr>
<td>Whether parents attended</td>
<td></td>
<td>0.72 0.144</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level of stigmatisation experienced at court</td>
<td>2.28 (0.71)</td>
<td>1.73 0.009</td>
<td>1.73 0.009</td>
<td></td>
</tr>
<tr>
<td>Level of reintegration experienced at court</td>
<td>1.67 (0.59)</td>
<td>0.65 0.041</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived fairness of court hearing</td>
<td>2.68 (0.73)</td>
<td>0.90 0.566</td>
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Model p 0.009

*Standard deviations in brackets
Table 4 Means, bivariate and multivariate models, background variables

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<tr>
<th>Background Model</th>
<th>Means*</th>
<th>Bivariate model</th>
<th>Multivariate model</th>
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<tbody>
<tr>
<td></td>
<td>Means*</td>
<td>Hazard p</td>
<td>Means*</td>
</tr>
<tr>
<td>Socio-demographic</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Age at interview</td>
<td>16.64 (1.27)</td>
<td>1.00</td>
<td>0.983</td>
</tr>
<tr>
<td>Sex</td>
<td>1.11</td>
<td>0.773</td>
<td></td>
</tr>
<tr>
<td>Indigenous status</td>
<td>0.42</td>
<td>0.145</td>
<td></td>
</tr>
<tr>
<td>Mother’s age</td>
<td>41.08 (5.66)</td>
<td>0.99</td>
<td>0.671</td>
</tr>
<tr>
<td>Father’s age</td>
<td>44.87 (6.68)</td>
<td>0.98</td>
<td>0.809</td>
</tr>
<tr>
<td>Developmental</td>
<td></td>
<td></td>
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<tr>
<td>Parent/child involvement</td>
<td>3.04 (0.77)</td>
<td>0.90</td>
<td>0.553</td>
</tr>
<tr>
<td>Level of supervision</td>
<td>2.83 (1.06)</td>
<td>0.84</td>
<td>0.169</td>
</tr>
<tr>
<td>Parental discipline style</td>
<td>3.17 (0.57)</td>
<td>0.87</td>
<td>0.564</td>
</tr>
<tr>
<td>Child rejection of parent</td>
<td>2.04 (0.92)</td>
<td>1.09</td>
<td>0.568</td>
</tr>
<tr>
<td>Parental rejection of child</td>
<td>1.31 (1.31)</td>
<td>1.19</td>
<td>0.329</td>
</tr>
<tr>
<td>Parental attitudes to deviancy</td>
<td>0.90 (0.23)</td>
<td>0.63</td>
<td>0.395</td>
</tr>
<tr>
<td>Quality of parental relationship</td>
<td>2.98 (0.68)</td>
<td>0.93</td>
<td>0.722</td>
</tr>
<tr>
<td>Household disadvantage</td>
<td>2.05 (0.98)</td>
<td>0.95</td>
<td>0.695</td>
</tr>
<tr>
<td>Household crowding</td>
<td>0.85 (0.33)</td>
<td>0.96</td>
<td>0.913</td>
</tr>
<tr>
<td>Social attachment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was the offence wrong</td>
<td>3.26 (1.06)</td>
<td>1.06</td>
<td>0.282</td>
</tr>
<tr>
<td>Attitude to conventional others</td>
<td>2.32 (0.83)</td>
<td>0.83</td>
<td>0.277</td>
</tr>
<tr>
<td>Current social context</td>
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<td></td>
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</tr>
<tr>
<td>Parent’s marital status</td>
<td>1.29 (0.64)</td>
<td>0.85</td>
<td>0.575</td>
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<tr>
<td>Living arrangements</td>
<td>1.00 (1.00)</td>
<td>1.00</td>
<td>1.000</td>
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<tr>
<td>Behaviour at school</td>
<td>2.61 (0.85)</td>
<td>0.63</td>
<td>0.004</td>
</tr>
<tr>
<td>Progress at school</td>
<td>2.96 (0.91)</td>
<td>0.71</td>
<td>0.023</td>
</tr>
<tr>
<td>Subjective impressions of school</td>
<td>2.65 (0.91)</td>
<td>0.76</td>
<td>0.087</td>
</tr>
<tr>
<td>Deviant peers</td>
<td>2.83 (1.01)</td>
<td>1.22</td>
<td>0.160</td>
</tr>
<tr>
<td>Binge drinking</td>
<td>2.69 (1.68)</td>
<td>1.18</td>
<td>0.044</td>
</tr>
<tr>
<td>Smoking</td>
<td>4.02 (1.90)</td>
<td>1.29</td>
<td>0.005</td>
</tr>
<tr>
<td>Illicit drug consumption</td>
<td>2.40 (1.85)</td>
<td>1.20</td>
<td>0.005</td>
</tr>
<tr>
<td>Model p</td>
<td>0.001</td>
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*Standard deviations in brackets
### Table 5 Final recidivism model

<table>
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<tr>
<th></th>
<th>Final (model 1)</th>
<th>Final (model 2)</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Hazard</td>
<td>p</td>
</tr>
<tr>
<td><strong>Background</strong></td>
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</tr>
<tr>
<td>Behaviour at school</td>
<td>0.80</td>
<td>0.195</td>
</tr>
<tr>
<td>Illicit drug consumption</td>
<td>1.05</td>
<td>0.494</td>
</tr>
<tr>
<td><strong>Court</strong></td>
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<td></td>
</tr>
<tr>
<td>Prior convictions</td>
<td>2.58</td>
<td>0.002</td>
</tr>
<tr>
<td>Perceived certainty of arrest</td>
<td>0.75</td>
<td>0.056</td>
</tr>
<tr>
<td>Whether penalty will stop future offending</td>
<td>0.73</td>
<td>0.014</td>
</tr>
<tr>
<td><strong>RST</strong></td>
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<td></td>
</tr>
<tr>
<td>Level of stigmatisation experienced at court</td>
<td>1.70</td>
<td>0.023</td>
</tr>
<tr>
<td></td>
<td>Model p</td>
<td></td>
</tr>
</tbody>
</table>
Response rate was considerably lower among Indigenous young people (50%).

A range of miscellaneous, non-serious offences such as smoking on a train station or using public transport without a ticket.

These were coded according to Section 33 of the Children’s (Criminal Proceedings) Act 1987, where they are laid out in order of severity

Dichotomised where 0 = none and 1 = one or more, due to the skewed nature of the distribution

Derived from the Australian Bureau of Statistics socio-economic index for areas (Australian Bureau of Statistics, 2001)

Number of people living in the participants’ house divided by number of bedrooms

Survival analysis is a method of statistical analysis used in epidemiological and medical research where the outcome measure of interest is the period of time until a particular event occurs. Often, in medical research, this is the death of a patient, hence the term ‘survival’ analysis. Data of interest in survival analysis are as follows. Start is the date observation commenced, or the date of entry to the study. Here, it is the date the participant was interviewed. Stop is the closing date of observation, indicating either the closure of the study, or, in this case, the date of re-offence. Recidivism status (d) is zero if the participant has not re-offended in the period of observation, and is one if there is an offence in the observation period. Therefore, d is a dichotomous variable indicating re-offence status during the period the participant is under observation. Total observation time (T) equals stop minus start where d = 0, and date of re-offence minus start where d = 1. The participants’ data can be used to construct a survival curve for the entire group. Theoretically, this is a smooth curve where the probability of survival at the start of the study (t = 0) is 1, and at the end of the study (hypothetically where t = ∞) is 0. In practice, it takes the form of a step function.

The impact of a number of covariates on the survival function can be assessed using the Cox proportional hazards model. This allows the researcher to determine the impact of one independent variable on the dependent variable, while holding the other independent variables constant, thus identifying possibly spurious bivariate relationships. The statistic of interest is the hazard ratio, which is a measure of the effect of each variable in the model, adjusted for the other variables. Interpreting a hazard ratio is similar to interpreting a risk ratio in epidemiological research. A hazard ratio of 1 means the independent variable exerts no effect on the dependent variable, whereas a hazard ratio of 5 means that each extra unit of the independent variable the participant obtains makes them five times more likely to fail (i.e. re-offend). Conversely, a hazard ratio of 0.2 means that each unit of the independent variable they score makes them five times less likely to fail.

An ANOVA (not reported here) was conducted to test this and found no differences between the groups

Prior convictions was omitted from the analyses to determine what other factors this variable might be representing (results not presented). When this was done, illicit drug use took its place in the final recidivism model, leading to the conclusion that illicit drug use did play some role in determining future offending patterns in the sample.