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Who benefits from cognitive skills training?

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The Enhanced Thinking Skills (ETS) programme was a cognitive skills training programme commissioned by NOMS for both prison and community settings with the aim of reducing reoffending. Cognitive skills training programmes teach offenders skills such as problem solving, consequential thinking, decision making, moral reasoning, perspective taking and emotional control. They have been extensively evaluated in the UK and elsewhere and have repeatedly been found to have a positive impact on reconviction rates (e.g. Sadlier, 2010; Travers *et al.*, 2013). One previous study in Canada suggested that cognitive skills programmes may have more impact with some offenders than others. The aim of this research was to explore whether more nuanced targeting of cognitive skills programmes could improve their overall impact and thus make better use of resources.

This is a summary of a full research report published in the journal *Criminal Justice and Behavior*.

Key findings

- Examining recidivism rates for around 21,000 men released from custody between 1997 and 2005 who had attended cognitive skills training while in prison showed that overall the programme was associated with significantly less reconviction than was predicted. The reconviction rate for the whole sample was 47.2%, which was 8.4 percentage points lower than predicted.
- Some types of offender seem to benefit more than others, in terms of reduced recidivism rates, from cognitive skills training. The people who appeared to benefit most were violent offenders (reconviction rate 17 percentage points lower than predicted) and sexual offenders (reconviction rate 13 percentage points lower than predicted).
- Prisoners with index convictions for robbery and burglary who attended cognitive skills training did not have lower reconviction rates than predicted.
- Recidivism rates were lower than predicted for prisoners in all risk bands except the very lowest (where only 10% were predicted to reoffend) and the highest (where over 80% were predicted to reoffend).
- These findings are consistent with a previous study of a different cognitive skills programme in Canada and therefore point to the conclusion that offence type appears to have an important influence on programme impact. It seems likely that for offenders convicted of burglary and robbery, other factors are more important to address than thinking skills. More relevant factors might be, for example, financial motivation, substance misuse, or pro-criminal attitudes.
- To be sure that this is the right conclusion, further work is needed to check whether the risk predictor OGRS works equally well for different types of offenders. A control group design would also be a better way to test for any differential impact of cognitive skills training.

Approach

The study examined the two-year reconviction rates of 21,373 male offenders aged 18 and over who had attended the Enhanced Thinking Skills (ETS) programme in prison and were released from custody between 1997 and 2005. Prisoners were excluded from the sample if they had attended any other offending behaviour programmes in prison, such as anger management or sex offender treatment programmes. Prisoners were assigned to an offence type category according to their main current offence (index offence). Reconviction data were obtained from the Police National Computer for a fixed follow-up period of two years from release. Actual reconviction rates were compared to predicted reconviction rates obtained from the Offender Group Reconviction Scale (OGRS2) – a widely used and well-validated risk assessment tool (Taylor, 1999). OGRS2 scores convey the predicted reconviction rate – so, for example, 80% of those who score 80 on OGRS2 are predicted to be reconvicted within two years. For prisoners who have not attended rehabilitation programmes, OGRS2 predictions have been found to be within 1.6% of the actual reconviction rate (Travers *et al.*, 2013).

The ETS is a 40-hour cognitive behavioural offending behaviour programme which teaches problem solving, perspective taking, empathy, impulse control and critical reasoning. It is targeted at medium- and high-risk offenders who must have the thinking deficits targeted by the programme.

Chi-square analysis was used to test for associations between reconviction and risk, and between reconviction and offence type. Logistic regression was used to test the influence of offence type, age, OGRS2 score, sentence length, programme completion, ethnicity and year of release on reconviction outcome. Staged entry regression was used to test the added value of offence type over risk in predicting reconviction rates for those who had participated in ETS.

Results

Table 1 shows the predicted and actual reconviction rates for the whole sample and by index offence type. This table shows that violent and sexual offenders benefited most from cognitive skills training. Prisoners sentenced to drug-related offences (both possession and supply offences) and to 'other' offences also showed reductions in reconviction rates. However, prisoners sentenced to robbery and acquisitive offences were not reconvicted less than predicted. The association between offence type and reductions in reconviction rate was statistically significant, $\chi^2(5) = 559.98$, $p < 0.001$.

The analysis also examined whether the impact of the programme was consistent across risk groups. It was found that prisoners with an OGRS2 score between 11 and 70 benefited most (see Figure 1), showing at least 8 percentage points less reconviction than predicted. For those with an OGRS2 score between 21 and 50, the difference between predicted and actual reconviction was over 10 percentage points. However, in the robbery and acquisitive categories, there were no significant differences between predicted and actual reconviction rates at any level of risk but for one small group of lower-risk acquisitive offenders.

Regression analysis showed that OGRS2 score, failing to complete cognitive skills training, and the number of each type of previous conviction were all significantly and independently associated with higher reconviction rates among ETS participants. Being older and serving a longer sentence were significantly and independently predictive of lower reconviction rates. When controlling for these other influences, the nature of the current offence still had a significant influence on reconviction: those with robbery, acquisitive and drug import/export offences had significantly higher reconviction rates. Figure 1 shows that the overall reduction in reconviction for those who participated in ETS was 8 percentage points.

Table 1: Predicted vs actual reconviction rates for ETS participants

Offence type	Number in sample	Predicted reconviction rate	Actual reconviction rate	Percentage point difference
Sexual	1,824	26.3	13.6	12.7
Violence	6,358	57.9	40.6	17.3
Robbery	3,007	49.8	52.8	-3.1
Acquisitive	4,969	71.8	71.5	0.3
Drugs	4,072	46.1	36.0	10.1
Other	1,143	68.8	56.9	12.0
All	21,373	55.6	47.2	8.4

If acquisitive offenders, including robbers, are removed from this sample, the reduction in reconviction is substantially greater, at 14 percentage points.

Implications

Responsiveness to cognitive skills training appears to be accounted for in part by a participant's current offence. As there is no matched, untreated control group we cannot attribute the lowered reconviction rates definitively to ETS. However, in conjunction with other recent evaluations of ETS that did involve comparison groups, it is reasonable to assume that cognitive skills training assists many offenders to desist from committing crime.

Violent offenders (apart from those with an OGRS score of 80 or above) and sexual offenders showed the greatest benefits. This finding is consistent with an earlier evaluation of a different cognitive skills programme in Canada (Robinson, 1995). However, a note of caution must be sounded when interpreting this finding for sexual offenders. First, it is unusual for someone convicted of a sexual offence to participate in a cognitive skills programme but not a sex offender treatment programme. Therefore, we cannot assume that the sex offenders in our sample are typical of imprisoned sex offenders. They may, for example, have been serving shorter sentences or may have denied committing the sexual offences for which they were convicted. Second, the outcome variable in this study was 'any reconviction'. We do not know from this

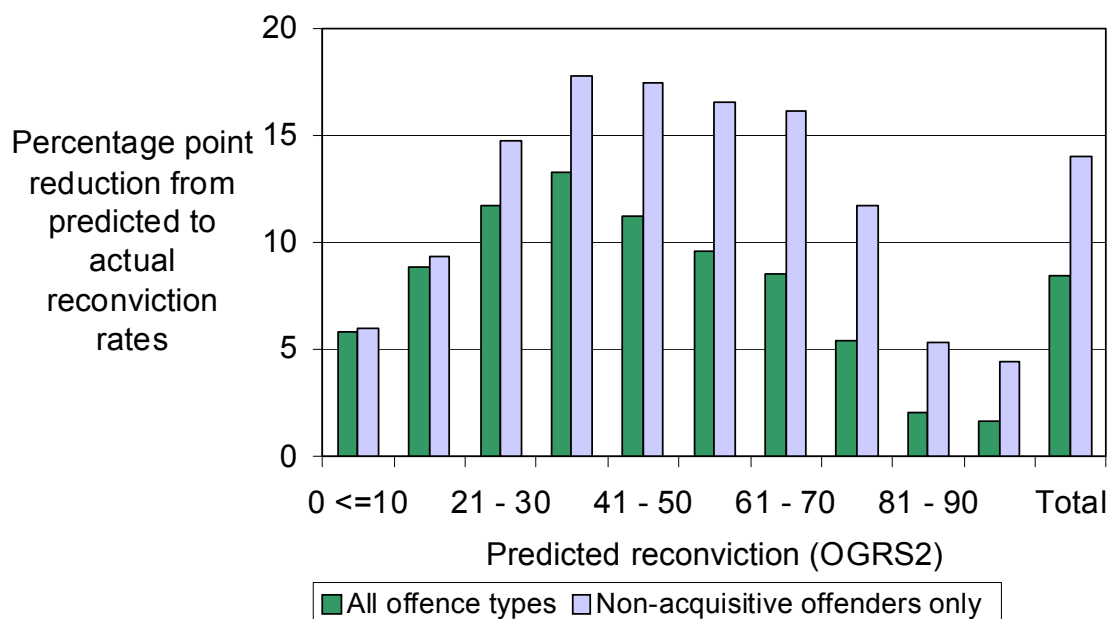
study whether the sexual offenders also had lowered *sexual* reconviction rates. Further analyses need to be conducted to explore these issues.

Acquisitive offenders, especially burglars, robbers, and those convicted of drug import/export, appeared not to benefit from cognitive skills training, despite having the thinking skills deficits that the programme targeted. While this study cannot explain why this is, there are some plausible hypotheses that can be proposed. It may be that acquisitive offences are not impulsive events but are driven by other factors such as drug addiction, a desire for more money, or a criminal identity. Cognitive skills training would not address these factors.

This study focused only on male offenders aged over 18, and it examined outcomes for those in prison only. It cannot be assumed that the same patterns of responsiveness would be found with women, juveniles or offenders serving their sentences in the community. Furthermore, a stronger research design using a control group would enable a more confident conclusion, as would further testing of the risk predictor OGRS to ensure it works equally well with different types of offender.

While the reasons for the differential impact of cognitive skills training have yet to be established, this study indicates that better outcomes for this type of intervention would be achieved by targeting more specific groups of prisoners.

Figure 1: Reductions from predicted reconviction rates by offence type



Note:

The full report of this study can be found at **Travers, R., Mann, R.E. and Hollin, C.R. (2014)**. Who benefits from cognitive skills programmes? Differential impact by risk and offence type. *Criminal Justice and Behavior*, 41, 1103–1129.

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