



Summary

This analysis assessed the impact on re-offending of a recruitment service run by Working Chance targeted at female offenders in prison or in the community. The one year proven re-offending rate¹ for 52 offenders who received the recruitment service provided by Working Chance² was 6%, compared with 13% for a matched control group of similar offenders. Working Chance aims to give women training and support around seeking paid or voluntary employment; this analysis includes women who do go on to achieve paid employment and those that do not. Statistical significance testing has shown that this difference in the re-offending rates is statistically significant³; meaning that we can be confident that there is a real difference in the re-offending rate for those women who received the recruitment service provided by Working Chance by between 0.2 and 13 percentage points.

What you can say: This analysis indicates that individuals who received the recruitment service run by Working Chance, experienced a reduction in re-offending between 0.2 and 13 percentage points, compared to a matched control group.

Introduction

Working Chance is a charity which supports female offenders into paid and voluntary work with mainstream employers.

Working Chance advises candidates on CV writing and provides opportunities to practise for interviews, including how best to present information regarding their offending history and how to prepare for the practicalities of attending interviews and starting work.

The work conducted with individuals depends on their needs and engagement. All registrations include a one hour “One2One” session, which is an individual mentoring session with the aim of learning more about the candidate and identifying the support they need. After this session, individuals are given the option to attend training events. The most engaged and active individuals receive further

¹ The **one year proven re-offending rate** is defined as the proportion of offenders in a cohort who commit an offence in a one year follow-up period which was proven through receipt of a court conviction, caution, reprimand or warning during the one year follow-up or in a further six month waiting period. The one year follow-up period begins when offenders leave custody or start their probation sentence.

² 52 individuals were matched from a cohort of 254 women’s details who were sent to the Justice Data Lab, as described on page 2 of this report.

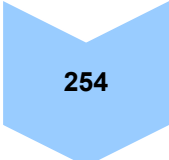
³ The p-value for this significance test was 0.04. Statistical significance testing is described on page 8 of this report.

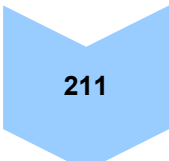
“One2One” support over a 6-9 month period. If candidates are placed into voluntary or paid work, Working Chance continues to check in with them at 1/3/6 month intervals.

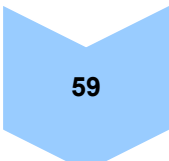
Working Chance supports women offenders in prison and in the community. Individuals are referred to the recruitment service by prisons (HMPs Holloway, Send, East Sutton Park, Downview (until it closed) and Bronzefield), London Probation Trust and partner charities, or can refer themselves or someone they know. Working Chance is currently open to registration for any woman who has been involved in the Criminal Justice System in the past three years.

This analysis relates to female offenders who received the recruitment service run by Working Chance in prison or in the community (Community Orders or Suspended Sentence Orders) between 2009 and 2011, which includes individuals that were successfully placed into paid or voluntary employment and those that were not. Due to the small sample, this analysis was not able to separately assess re-offending rates for women who were successfully placed into paid employment, which is the primary goal for Working Chance. Additionally, this analysis includes women who received just the one hour “One2One” session and those who continued to receive more “One2One” support sessions. It was not possible to identify from the cohort which individuals had one or more “One2One” sessions, therefore this analysis was not able to separately assess re-offending rates for the women that were more engaged in the service.

Processing the Data

 Working Chance sent data to the Justice Data Lab for 254 offenders who received the recruitment service in prison or the community between 2009 and 2011.

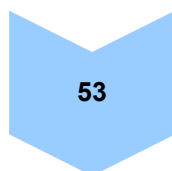
 211 of the 254 offenders were matched to the Police National Computer, a match rate of 83%. Forename and surname were not provided for one of the unmatched offenders; this individual could not be matched as forename and surname are requirements for matching. There were 12 women who did not appear to have ever received a conviction at court, or their cases were currently pending. There were 30 remaining women who could not be matched; a possible reason that these women could not be identified is that a different surname may have been recorded either with Working Chance, or on the Police National Computer – for example due to marriage, or use of their maiden (or an alternative) surname.

 59 offenders received the recruitment service run by Working Chance within a few months before their release date from custody (8 individuals) or within a year after release from custody (23 individuals) or within a year of an identifiable community sentence (a

Community Order or Suspended Sentence Order) (28 individuals). Having a year period between release from custody or the start of a community sentence and receiving the recruitment service provided by Working Chance means that any observable difference in the one year proven re-offending rate would be more likely to be attributable to the work of Working Chance, rather than any other factors which may have had an effect.

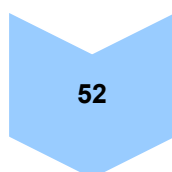
Analysis of the unmatched data revealed the following:

- Some were individuals who did not have a custodial sentence or community sentence as the most recent proven offence before receiving the recruitment service run by Working Chance; this could include persons who appear to have received fines, conditional discharges, cautions or youth sentences (52 individuals across all different sentence types, 8 of these individuals received the recruitment service from Working Chance within a year of receiving a sentence).
- There were 46 individuals who had a custodial sentence or community sentence as the most recent proven offence before receiving the service run by Working Chance, but who were not included in the analysis. All of these individuals did not commence receiving the recruitment service provided by Working Chance until at least a year after release from custody or a year after the start of a community sentence.
- There was 1 individual that could not be included in the analysis as their index offence appeared to be of a sexual nature.
- There were 2 individuals who were not included in the analysis as they received indeterminate custodial sentences.
- There was 1 individual who could not be included in the analysis for modelling purposes.
- Sentences could not be found on the administrative datasets for the 50 remaining individuals. Some of these individuals may have been released from custody after 2011, a period for which re-offending data is not currently available, or may not have received a conviction during 2002-2011, the period for which re-offending data is currently available.



6 persons were removed because they had committed a re-offence before the recruitment service provided by Working Chance commenced.

Creating a Matched Control Group



52 of the 53 offender records for which re-offending data was available could be matched to offenders with similar characteristics, but who did not receive the recruitment service run by Working Chance. In total the matched control group consisted of 26,276

offender records.

As this analysis refers to those that received the recruitment service provided by Working Chance after release from custody (as well as whilst in custody) or after the start of a community sentence, additional checks were imposed on the control group to ensure that the matched individuals had similar characteristics. All members of the matched control group could not have committed a proven re-offence before the intervention start date for the matched Working Chance counterparts. Any matches where the control group had committed a proven re-offence prior to the intervention start date of the Working Chance counterpart were excluded from the analysis. Also, all the members of the matched control group could only be matched to the Working Chance counterparts if they received the same sentence type. These checks ensured that we have greater confidence that the matched control group presents a more accurate counterfactual for comparison.

The Annex provides information on the similarity between the treatment and control groups. Further data on the matching process is available upon request.

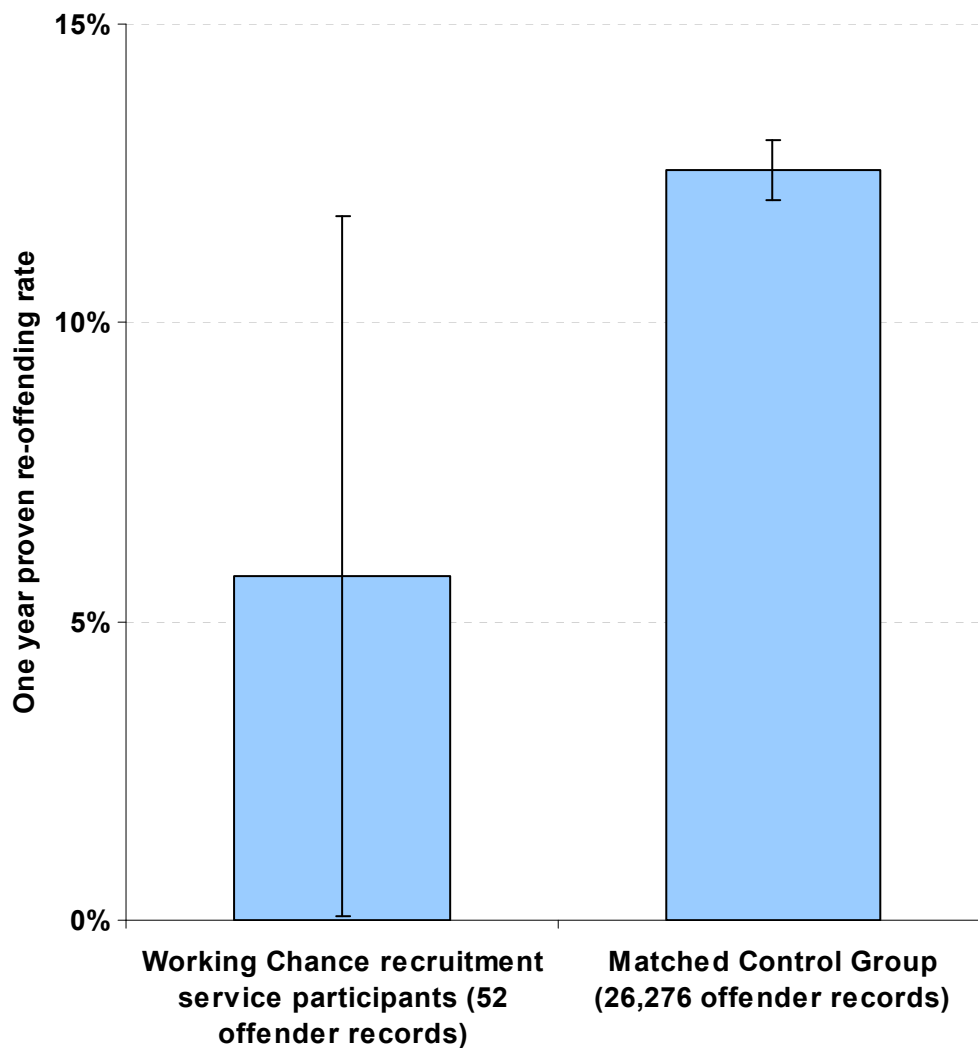
Results

The one year proven re-offending rate for 52 offenders who received the recruitment service provided by Working Chance⁴ was 6%. This compares to 13% for a matched control group of similar offenders. This information is displayed in Figure 1 on the next page.

Figure 1 on the next page presents the 95 per cent confidence intervals for the re-offending rates of both groups, i.e. the range in which we can be 95 per cent confident that the true re-offending rate for the groups lie. For this analysis we can be confident that the true difference in re-offending between the two groups is between a 0.2 and 13 percentage point reduction. It is important to show confidence intervals because both the treatment and matched control groups are samples of larger populations; the re-offending rate is therefore an estimate for each population based on a sample, rather than the actual rate.

⁴ 52 individuals were matched from a cohort of 254 women's details who were sent to the Justice Data Lab, as described on page 2 of this report.

Figure 1: The best estimates for the one year proven re-offending rate for offenders who received the recruitment service run by Working Chance in prison and the community, and a matched control group



The precision of this estimate could be improved if the size of the Working Chance group used in the analysis was increased. It is recommended that the analysis is repeated on a larger sample, including previous years of information, and when additional years of data become available. It may be possible when future years of data become available to look additionally at the re-offending behaviour of women who received the recruitment service provided by Working Chance and are successfully placed into paid employment, and to control for other characteristics not currently available through the Justice Data Lab.

Additional proven re-offending measures

Frequency of re-offending

The frequency of one year proven re-offending for 52 offenders who received the recruitment service run by Working Chance was 0.08 offences per individual, compared with 0.53 per individual in the matched control group. Statistical

significance testing has shown that this difference in the re-offending rates is statistically significant⁵.

This result is in line with the findings around the indicator of one year proven re-offending; the subject of this report. The same caveats and limitations apply to these findings, which are described below.

Caveats and Limitations

The statistical methods used in this analysis are based on data collected for administrative purposes. While these include details of each offender's previous criminal, benefit and employment history alongside more basic offender characteristics such as age, gender and ethnicity, it is possible that other important contextual information that may help explain the results has not been accounted for. It is possible that underlying characteristics about the individuals included in the analysis which were not captured by the data (e.g. full previous employment history; education history; attendance on other interventions), that may have impacted participants' success in achieving the aims of the recruitment service run by Working Chance, and re-offending behaviour.

In this instance, it would have been particularly beneficial to be able to take account of various factors such as employment outcomes, educational attainment, and motivation for both the group that Working Chance worked with, and the matched control group. This information however, is currently not available routinely to the Justice Data Lab. This analysis presents a comparison between offenders with similar characteristics, where one group (the treatment group) was known to receive support through the recruitment service provided by Working Chance, and the comparison group did not. Whilst the success of the matching described in the Annex suggests that the individuals were well matched to the control group on key characteristics such as demographic and criminal history, individuals with employment and education problems are known to have particular difficulties in breaking the cycle of re-offending. As this key information is missing from the underlying data used, the results of this analysis should be interpreted with particular care. Another limitation is that the data used for matching is restricted to that which is available in existing systems, and there remains a possibility that the difference after matching reflects differences in underlying characteristics which are not recorded in the data, rather than differences in re-offending behaviour.

The one year proven re-offending rate is measured from when an offender leaves custody or starts their community sentence. It is possible that there may be many other unobserved variables, which to varying extents, play a role in whether an offender re-offends. We cannot account for any of these variables such as whether the offender was actively looking for work between the release from custody or start of a community sentence, and the start of receiving the recruitment service provided

⁵ The p-value for this significance test was <0.001. Statistical significance testing is described on page 8 of this report.

by Working Chance. Therefore, the results of this analysis should be interpreted with particular care.

Many organisations that work with offenders will look to target specific needs of individuals; for example improving housing, or employability. However, how the organisations select those individuals to work with could lead to selection bias, which can impact on the direction of the results. For example; individuals may self select into a service, because they are highly motivated to address one or more of their needs. This would result in a positive selection bias, meaning that for these persons we would generally expect a better re-offending outcome as they are more motivated. Alternatively, some organisations might specifically target persons who are known to have more complex needs and whose attitudes to addressing their needs are more challenging. This would result in a negative selection bias, meaning that for these persons we would generally expect a poorer re-offending outcome as they are not motivated. However, factors which would lead to selection bias in either direction are not represented in our underlying data, and cannot be reflected in our modelling. This means that all results should be interpreted with care, as selection bias cannot be accounted for in analyses.

Furthermore, only 52 of the 254 offenders originally shared with the MoJ were in the final treatment group. The section “Processing the Data” outlines key steps taken to obtain the final group used in the analysis. In many analyses, the creation of a matched control group will mean that some individuals, who will usually have particular characteristics – for example a particular ethnicity, or have committed a certain type of offence, will need to be removed to ensure that the modelling will work. Steps will always be taken at this stage to preserve as many individuals as possible, but due to the intricacies of statistical modelling some attrition at this stage will often result. As such, the final treatment group may not be representative of all offenders who received the recruitment service run by Working Chance. In all analyses from the Justice Data Lab, persons who have ever been convicted of sex offences will be removed, as these individuals are known to have very different patterns of re-offending.

The re-offending rates included in this analysis **should not** be compared to the national average, nor any other reports or publications which include re-offending rates – including those assessing the impact of other interventions. The re-offending rates included in this report are specific to the characteristics of those persons who received the recruitment service provided by Working Chance, and could be matched. Any other comparison would not be comparing like for like.

For a full description of the methodology, including the matching process, see www.justice.gov.uk/downloads/justice-data-lab/justice-data-lab-methodology.pdf.

Assessing Statistical Significance

This analysis uses statistical testing to assess whether any differences in the observed re-offending rates are due to chance, or if the intervention is likely to have led to a real change in behaviour. The outcome of the statistical testing is a value between 0 and 1, called a 'p-value', indicating the certainty that a real difference in re-offending between the two groups has been observed. A value closer to 0 indicates that the difference in the observed re-offending rates is not merely due to chance. For example, a p-value of 0.01 suggests there is only a 1 per cent likelihood that any observed difference in re-offending has been caused by chance.

For the purposes of the analysis presented in this report, we have taken a p-value of up to 0.05 as indicative of a real difference in re-offending rates between the treatment and control groups.

The confidence intervals in the figure are helpful in judging whether something is significant at the 0.05 level. If the confidence intervals for the two groups do not overlap, this indicates that there is a real difference between the re-offending rates.

Annex

Table 1: Characteristics of offenders in the treatment and control groups

	Treatment Group	Matched Control Group	Standardised Difference
Number in group	52	26,276	
Ethnicity			
White	42%	39%	6
Black, Asian and Other	58%	61%	-6
Nationality			
UK Citizen	81%	78%	7
Foreign National and Unknown Nationality	19%	22%	-7
Gender			
Proportion that were female	100%	100%	0
Age			
Mean age at Index Offence	34	33	3
Mean age at first contact with CJS	24	25	-3
Index Offence¹			
Violent offences including robbery	31%	29%	4
Theft and handling	23%	24%	-2
Motoring offences, including theft of and from Vehicles	8%	7%	5
Fraud and Forgery	19%	20%	-3
Drugs related ²	13%	14%	0
Other ³	6%	7%	-4
Type of Sentence			
Individuals on community sentences	44%	44%	0
Individuals on custodial sentences of less than 12 months	8%	7%	4
Individuals on custodial sentences of 12 months to 10 years	48%	49%	-2
Criminal History⁴			
Mean Copas Rate	-1.78	-1.77	-1
Mean total previous offences	7	7	2
Mean previous criminal convictions	3	3	5
Mean previous custodial sentences	1	1	2
Mean previous court orders	1	1	-2
Employment and Benefit History			
In P45 employment (year prior to conviction)	44%	45%	-2
In P45 employment (month prior to conviction)	33%	34%	-3
Claiming Out of Work Benefits (year prior to conviction) ⁵	65%	65%	0
Claiming Job Seekers Allowance (year prior to conviction)	31%	30%	3
Claiming Incapacity Benefit and/or Income Support (year prior to conviction)	44%	44%	0
Notes:			
<p>1 Index Offence is based on OGRS categories. Further details on make-up of categories available upon request. 2 Drug related offences including importation, exportation, possession, and supply of drugs. 3 This category includes Burglary and Other. 4 All excluding Penalty Notices for Disorder. All prior to Index Offence. 5 Out of Work Benefits include people on Jobseeker's Allowance (JSA), Employment and Support Allowance (ESA), Incapacity Benefits (IB) and Income Support (IS) but it does not count people whose primary benefit is Carer's</p>			

Allowance (CA).
All figures (except mean copas rate) are rounded to the nearest whole number, this may mean that percentages do not sum to 100%.
Standardised Difference⁶ Key
Green - the two groups were well matched on this variable (-5% to 5%)
Amber - the two groups were reasonably matched on this variable (6% to 10% or -6% to -10%)
Red - the two groups were poorly matched on this variable (greater than 10% or less than -10%)

Table 1 shows that the two groups were reasonably matched on all variables found to have associations with receiving treatment and/or re-offending. The standardised differences are highlighted as amber (i.e. between 6% to 10% or -6% to -10%) in a few cases, suggesting that the control group could have been slightly better matched in these cases, but were still indicative of a control group who exhibit similar characteristics. The higher standardised differences in the “Ethnicity” and “Nationality” section may have occurred because Working Chance work with a diverse group of individuals that have a mixture of ethnicities and different nationalities.

⁶ We assess whether the treatment group and the matched control group are balanced and well matched through comparing the standardised differences for each characteristic across the two groups.

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