Summary

This analysis assessed the impact on re-offending of support provided to female offenders by Women's Centres[1] throughout England. The one year proven re-offending rate[2] for 597[3] offenders who received support provided by Women's Centres throughout England was 30%, compared with 35% for a matched control group of similar offenders from England. Statistical significance testing has shown that this difference in the re-offending rates is statistically significant[4]; meaning that we can be confident that there is a real difference in the re-offending rate for those persons that received support provided by Women's Centres throughout England and the matched control group by between 1 and 9 percentage points.

This analysis is based on information that has been supplied by 39 Women's Centres throughout England[5] to the National Offender Management Service (NOMS). This information does not include any individual identifiers such as name and date of birth that the Justice Data Lab require for matching to the administrative datasets at the Ministry of Justice, meaning that the rate of attrition is notably higher than is usually expected for a Justice Data Lab request. As a result, the final number of individuals included in this analysis[2] is 12% of the number of individuals originally provided to the Justice Data Lab by NOMS. This analysis is therefore not necessarily representative of all the female offenders who received support provided by each Women's Centre throughout England.

It has only been possible to control for a limited amount of information about the individuals who are included within this analysis and it is possible further important contextual information[6] that may help explain the results has not been accounted for. We also know women in the criminal justice system can be particularly vulnerable, which again has not been accounted for in this analysis.

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[1] Also known as women's community services. This group of centres specifically relate to those receiving NOMS/probation trust funding.

[2] 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, start their court sentence, or from receipt of their caution.

[3] 597 individuals were matched from a cohort of 5,115 individuals, whose details were sent to the Justice Data Lab, as described on page 2 of this report.

[4] The p-value for this significance test was 0.01. Statistical significance testing is described on page 8 of this report.

[5] Further information on the Women's Centres that were included in the final analysis is available upon request.

[6] The caveats and limitations section on page 6 of this report detail what information is, and is not, accounted for in this analysis.

It is recommended that the analysis is repeated on a larger sample when additional years of data become available, when further contextual information is available to the Justice Data Lab in order to improve the modelling in the analysis, and, if possible when the standard required individual level variables become available in order to improve the matching process to the administrative data sources at the Ministry of Justice.

As a result of these caveats it is important that the findings of this report are interpreted with particular care.

What you can say: This analysis indicates that individuals who received support provided by Women's Centres throughout England[1] experienced a reduction in re-offending of between 1 and 9 percentage points. This result is indicative and due to the related caveats, it is important that the findings of this report are interpreted with particular care.

Introduction

Women's Centres offer a range of services and opportunities to women in the community, including those that have an offending history across the UK. The Centres' are not centrally managed and so will have different ways of working and main areas of focus, however they will share the common aim of helping to support, encourage and enable women to improve their quality of life and well-being. Individuals seeking support from Women's Centres will have a variety of needs and will sit across a spectrum of risk of both re-offending and of harm.

This analysis includes women offenders who were referred to Women's Centres through various routes including; probation officers, social services, community drugs team, a statutory order as part of their sentence plan, to complete an accredited programme, or self referred to the service, and received support between 2010 and 2012 (see 'Processing the Data' for more details). The engagement of these women with the services provided will have varied. Whilst this analysis looks at offenders and reducing re-offending, which is the Ministry of Justice's main interest, women's centres also work with non-offenders and those at risk so have a preventative and general support role too.

Processing the Data

The information that was provided to the Justice Data Lab did not include any individual identifiers such as name and date of birth that the Justice Data Lab requires for matching to the administrative datasets at the Ministry of Justice. This means that the rate of attrition is notably higher than is usually expected for a Justice Data Lab request. As such, the final number of individuals included in this analysis[3] is a small proportion of the number of individuals originally provided to the Justice Data Lab by NOMS.

5,115

NOMS sent data to the Justice Data Lab for 5,115 offenders who had received support provided by Women's Centres throughout England between 2009 and 2014.

1,451

1,451 of the 5,115 offenders could be matched to administrative datasets[7] at the Ministry of Justice, a match rate of 28%. The majority of these individuals were not matched due to the lack of individual identifiers within the information provided, as is described above. However, we know 470 of the 5,115 individuals were not matched as the support provided by the Women's Centres was received during 2014, a period of which the particular administrative data used for matching is not currently available to the Ministry of Justice.

690

690 offenders received support from Women's Centres within a year of release from custody or receiving a non-custodial sentence, including; a Community Order, a Suspended Sentence Order, a conditional discharge, a caution, or a fine.

Analysis on the remaining 761 offenders who were not included at this stage revealed the following:
- There were 134 individuals who could not be included in the analysis as we were not confident that we had found the correct sentence that was related to the individual's referral to the Women's Centre.
- There were 531 individuals who could not be included in the analysis as they were not referred to a Women's Centre within a year of release from custody or receiving a non-custodial sentence.
- There was 1 individual that could not be included in the analysis as they had one or more previous sex offences.
- There were 23 individuals who could not be included in the analysis for modelling purposes. These individuals could not be included in the analysis as they were the only individuals in a category for particular variables. In order to allow for the statistical modelling to work, and achieve reasonable matching quality it was necessary to remove these 23 individuals at this stage.
- Sentences could not be found on the administrative datasets for the remaining 72 individuals.

The unmatched individuals that we were able to find relevant data for have similar characteristics to the 597 offenders in the matched treatment group (for example they are all female, have similar ethnicities, from the same geographical regions and, on average have a similar number of previous offences). However, there are some differences between the unmatched individuals and those in the matched treatment

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[7] As the data provided did not include the identifiers the Justice Data Lab use in the process of matching to the Police National Computer, a different administrative data source containing probation information was used for matching here.

group; many more individuals are UK nationals in the unmatched group and these individuals were either released from custody or received non-custodial sentences in the wider range of years spanning 2002-2012. The unmatched group also contains individuals who received a more varied range of sentence types. As well as this, the matched treatment group consisted of individuals who received support provided by 32 of the 39 Women's Centres for which data was provided for. As such, the final treatment group may not be representative of all offenders who received support provided by Women's Centres throughout England and so all results should be interpreted with care.

Creating a Matched Control Group

597

597 out of the 690 female offenders who received support from Women's Centres and had available re-offending data could be matched to female offenders with similar characteristics in England, but who did not receive support. In total the matched control group consisted of 193,406 offender records from England.

As this analysis refers to those that received support provided by a Women's Centre after release from custody, or after the start of a non-custodial 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 Women's Centres counterparts. Any matches where the control group had committed a proven re-offence prior to the intervention start date of the Women's Centres counter part were excluded from the analysis. Also, all the members of the matched control group were female, and could only be matched to the Women's Centres 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.

Also, restricting the period to a year between release from custody, the start of a community sentence, or receipt of a non-custodial sentence, and receiving the support provided by any of the Women's Centres, means that any observable difference in the one year proven re-offending rate would be more likely to be attributable to the work of the Women's Centres, rather than any other factors which may have had an effect.

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[2] for 597[3] offenders who received support provided by Women's Centres throughout England was 30%. This compares to 35% for a matched control group of similar offenders (see Figure 1 on the next page).

Figure 1 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 sure 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 1 and 9 percentage points. It is important to show confidence intervals because both the treatment and matched control group 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.

Figure 1: The best estimates for the one year proven re-offending rate for offenders who received support provided by Women's Centres throughout England, and a matched control group.
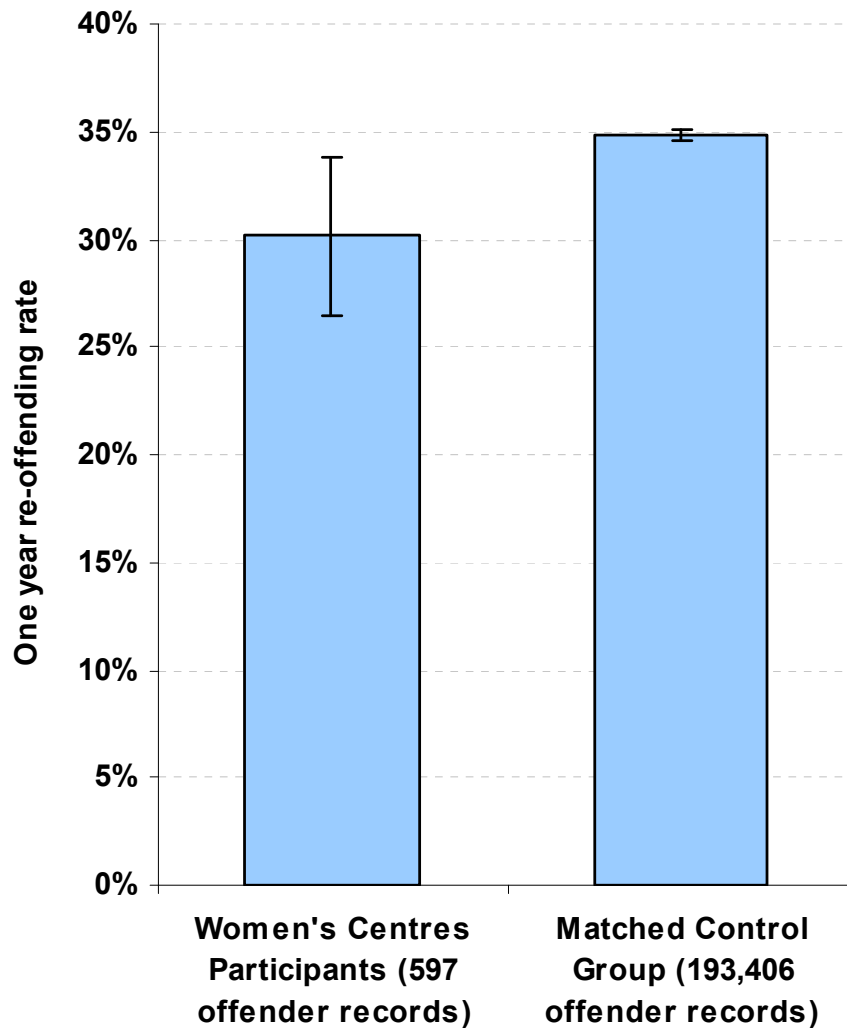
The precision of this estimate could be improved if the size of the Women's Centres group used in the analysis was increased. It is recommended that the analysis is repeated on a larger sample when additional years of data become available, when further contextual information is available to the Justice Data Lab in order to improve the modelling in the analysis, and, if possible when the standard required individual level variables become available in order to improve the matching process to the administrative data sources at the Ministry of Justice.

Additional proven re-offending measures

Frequency of re-offending

The frequency of one year proven re-offending[8] for 597[3] offenders who received support from Women's Centres throughout England was 1.12 offences per individual, compared with 1.29 per individual in the matched control group. Statistical significance testing has shown that this difference in the frequency of re-offending is not statistically significant[9].

Time to re-offending

The average time to the first offence within a year of release for the 180 individuals that were matched, and re-offended, after receiving support provided by Women's Centres throughout England was 140 days. This compares to 136 days for the 97,750 individuals who re-offended from the matched control group. Statistical significance testing has shown that this difference in the time to first re-offence within a year is not statistically significant[10].

These results do suggest positive changes in the re-offending behaviour; however they are not statistically significant. The same caveats and limitations apply to these findings, which are described on the next page.

Caveats and Limitations

The statistical methods used in this analysis are based on data collected for administrative purposes. While these include details of each of the offenders' previous criminal, benefit and employment history alongside more basic offender characteristics such as age, ethnicity and nationality, it is possible that other important contextual information that may help explain the results has not been accounted for. In particular, we have been unable to statistically control for the complex lifestyle or criminogenic needs which will have caused these women to be referred, or to refer themselves, to a Women's Centre. The particular needs that it

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[8] The **frequency of one year proven re-offending** is defined as the number of re-offences committed in a one year follow-up period which were 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, start their court sentence, or from receipt of their caution.

[9] The p-value for this significance test was 0.09. Statistical significance testing is described on page 8 of this report.

[10] The p-value for this significance test was 0.61. Statistical significance testing is described on page 8 of this report.

would be advantageous to control for include; mental health problems, specific substance misuse needs, domestic violence issues, homelessness or any other factors that are associated with referrals to a Women's Centre. We also know that women in the criminal justice system can be particularly vulnerable, which again has not been accounted for in this analysis. The control group against which re-offending rates for those receiving support provided by Women's Centres throughout England have been compared with will therefore include offenders both with and without the specific needs that Women's Centres aim to address. It is also possible that the comparison group will include women who have also attended a different Women's Centre elsewhere in the UK, and received support that is similar to that which is provided by the Women's Centres that are included in this analysis. It is important that the findings in this report should be interpreted with care as a result of these caveats.

It is possible that underlying characteristics about the individuals included in the analysis which were not captured by the data (e.g. homelessness; education history; history of drug and alcohol use etc) may have impacted participants' success in achieving the aims of the support provided by the Women's Centres, and may also have a role in affecting their re-offending behaviour. It is also possible that there are additional underlying characteristics about the individuals included in the analysis which were not captured by the data, for example attendance at other interventions targeted at offenders, that may have impacted re-offending behaviour. Therefore, there remains a possibility that any difference in re-offending behaviour after matching reflects differences in underlying characteristics between the two groups which are not recorded in the data, rather than differences in re-offending behaviour associated with support from Women's Centres throughout England.

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 597 of the 5,115 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 the 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. 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. As such, the final treatment group may not be representative of all offenders who have been on this programme; it is possible that the cohort as a whole experienced a different impact on their re-offending behaviour.

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 who received support provided by Women's Centres throughout England, and who 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 group.

	Treatment Group	Matched Control Group	Standardised Difference
Number in group	**597**	**193,406**	
Ethnicity			
White	89%	89%	0
Black, Asian & Other	11%	11%	0
Nationality			
UK Citizen	23%	25%	-3
Unknown	77%	75%	3
Gender			
Proportion that were female	100%	100%	0
Age			
Mean age at Index Offence	33	33	1
Mean age at first contact with CJS	21	21	3
Index Offence[1]			
Violent offences including Robbery	55%	55%	0
Theft and handling	36%	34%	3
Fraud and forgery	7%	7%	0
Motoring offences, including theft of, and from, vehicles	5%	5%	-2
Drugs related[2]	7%	7%	1
Other[3]	12%	14%	-5
Sentence Type			
Community Order	64%	64%	0
Suspended Sentence Order	27%	27%	0
Custodial Sentence of 6 months or less	2%	2%	-2
Custodial Sentence of 12 months to 4 years	2%	2%	2
Other[4]	4%	4%	0
Criminal History[5]			
Mean Copas Rate[6]	-1.09	-1.09	0
Mean total previous offences	23	23	1
Mean previous criminal convictions	10	10	2
Mean previous custodial sentences	2	2	2
Mean previous court orders	4	4	1
Employment and Benefit History			
In P45 employment (year prior to conviction)	21%	22%	-1
In P45 employment (month prior to conviction)	14%	15%	-2

Claiming Out of Work Benefits (year prior to conviction) [7]	61%	62%	**-2**
Claiming Job Seekers Allowance (year prior to conviction)	26%	27%	**-2**
Claiming Incapacity Benefit and/or Income Support (year prior to conviction)	46%	47%	**-2**
Notes:			

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 Other offences including Burglary and Criminal or Malicious damage. 4 Other Sentences including conditional discharges, cautions, and fines. 5 All excluding Penalty Notices for Disorder. All prior to Index Offence. 6 The Copas rate controls for the rate at which an offender has built up convictions throughout their criminal career. The higher the rate, the more convictions an offender has in a given amount of time. 7 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 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 Difference 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%)	

We assess whether the treatment group and the matched control group are balanced and well matched through a comparison of the standardised differences generated for every variable included in the matching process. Table 1 shows that the two groups were well matched on all variables found to have associations with receiving treatment and/or re-offending. All of the standardised mean differences are highlighted green because they were between -5% and 5%, indicating close matches on these characteristics.

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