



## Examining the Efficacy of the Building Skills for Recovery (BSR) Programme for Substance-Misusing Offenders in Custody in England and Wales

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Building Skills for Recovery (BSR) is a substance misuse intervention that has been designed to reduce offending behaviour and dependent substance misuse with an eventual goal of recovery. As little research has been carried out to explore the efficacy of BSR, this study aimed to measure change in the treatment targets of impulsivity, locus of control and problem solving in 1,702 BSR participants in custody, particularly clinically significant change. The impact of readiness to engage in treatment on programme completion was also explored.

### Key findings

- When pre and post treatment scores for impulsivity, locus of control and problem solving abilities were examined at the group level, significant differences were observed for each target, with scores moving in the desired direction.
- While for the majority of BSR participants there was no clinically significant change in the treatment targets of impulsivity, locus of control and problem solving (44% to 62%), between 5% and 25% of participants demonstrated improvement at a clinically significant level after they had completed the programme.
- Participants who completed BSR did not significantly differ from non-completers in terms of age, gender and levels of dependence but did in terms of risk of recidivism with non-completers having significantly higher risk scores.
- Non-completers of BSR had significantly lower perceived ability to participate in treatment programmes than completers.

The views expressed in this Analytical Summary are those of the author, not necessarily those of the Ministry of Justice (nor do they reflect government policy).

## Introduction

Understanding the efficacy of offending behaviour programmes is important to ensure that participants are engaging in the most beneficial interventions and that limited resources are placed where they will have the greatest impact (Wakeling and Travers, 2010). Delivering effective programmes that address substance related offending is a priority for the criminal justice system given the high number of offenders with addiction problems (McMurrin, 2007). It is estimated that between one-third and one-half of new receptions to prison are problem drug users (McSweeney, Turnbull and Hough, 2008).

A range of interventions aimed at reducing offending among drug users have been developed, including medical treatment, Therapeutic Communities (TC) and Cognitive Behavioural (CBT) programmes (McMurrin, 2006). Research has found that most drug treatment approaches have some impact on crime reduction although some are more effective than others (Holloway, Bennett and Farrington, 2005; 2008). Research into drug treatment in prisons has consistently demonstrated that TCs are able to reduce drug relapse and recidivism (e.g. Pearson and Lipton, 1999; Mitchell, Wilson and MacKenzie, 2006, Perry and others, 2009), but tend to be expensive to run because of their duration and intensity (McSweeney and others, 2008). The evidence for a CBT approach to substance misuse is promising (Pearson, Lipton, Cleland, and Yee, 2002; Porporino and others, 2002), although little research has been carried out on CBT interventions that address substance misuse problems in custody, especially in a UK context.

This study examines a substance misuse intervention based upon a cognitive behavioural model of treatment being delivered to offenders in custody in England and Wales. The Building Skills for Recovery (BSR) programme is based upon a 'cognitive behavioural model of treatment with the aim of reducing offending behaviour and dependent substance misuse with an eventual goal of recovery' (Theory manual, BSR V1.0 2015, page 8).

## The programme – Building Skills for Recovery (BSR)

BSR is a psychosocial programme and was developed in 2011 as part of a process to streamline substance misuse interventions in custody and community (NOMS, 2011b). The programme built on the most recent knowledge of effective treatment with substance misusing offenders (NOMS, 2011b).

BSR aims to address emotional management and self-control, problem solving and decision making, substance use management, relapse prevention, impulsivity, motivation and engagement, self-support systems and harm minimisation. It is delivered in 16 sessions through group work and over a 4-week period, with some additional individual sessions, specially targeted sessions and supplementary work. Both male and female participants with a history of substance misuse related offending are eligible to attend BSR.

BSR was piloted in 2011 (NOMS, 2011b) to test programme design and materials and identify areas for improvement. In a study of the pilot, the majority of BSR participants described their experiences as positive. Measurement of the treatment targets of impulsivity, locus of control and problem solving found significant improvement by the end of the intervention in a sample of 282 participants. The study also concluded that BSR appeared to be suitable for the range of offenders it targeted.

This study aimed to build on the early findings from the pilot and examined the effectiveness of the BSR programme for offenders in custody in England and Wales in addressing key treatment needs targeted by the programme. Change in measures of impulsivity, locus of control and problem solving were used pre and post programme to assess the extent of reliable and clinically significant change. The study also aimed to assess the impact of treatment readiness on programme completion. Furthermore, given the programme is designed for a broad range of offenders, participants who completed the BSR programme were compared to those offenders who

did not complete the programme to assess if there are any other factors that may impact on attrition.

## Method

### **Participants**

The sample consisted of 1,702 offenders who had started BSR in custody in England and Wales between 2010 and 2012. Participants were located across 20 different prisons which were either closed male (whose security rating was either B or C), female, or young offender sites. Overall, 83% (1,406) of the sample were male and 17% (296) were female. Seventy-six per cent (1,295) of the sample were classified as adult offenders (22+ years) and 24% (407) were young offenders (18 to 21 years). In total, 81% (1,371) completed the programme and 19% (331) did not.

### **Self-report pre and post measures**

Participants were asked by programme staff to complete the following pre and post measures before starting BSR and again in the final session of the programme.

**Eysenck Impulsivity Scale (EIS)** (Eysenck and Eysenck, 1978) was used to measure impulsivity. It contains 22 items which are responded to by either 'yes' or 'no'. High scores indicate an individual who acts impulsively in many situations.

**Locus of Control of Behaviour (LOC)** (Craig, Franklin and Andrews, 1984) was used to measure Locus of Control. It is an 18-item scale where respondents are asked to rate each item on a 5-point scale from 'strongly disagree' to 'strongly agree'. Higher scores indicate that an individual believes that they have control over their lives and can influence what happens to them.

**Social Problem Solving Inventory – Revised (SPSI-R) Short Form** (D’Zurilla and others, 2000) was used to measure problem solving styles and is a 10-item measure that uses a 5-point scale from 'not at all true of me' to 'extremely true of me'. The full SPSI has 5 scales; Positive Problem Orientation (PPO), Negative Problem Orientation (NPO), Rational Problem Solving (RPS), Impulsivity / Carelessness Style (ICS) and Avoidance Style (AS). The SPSI-R Short Form, which BSR uses, is a 10-item version that measures PPO and RPS. High scores indicate constructive problem solving styles.

### **Treatment Readiness Questionnaire (TRQ)**

Treatment readiness was also measured before the start of the programme using the Treatment Readiness Questionnaire (Casey, Day, Howells and Ward, 2007); a 20-item measure rated on a 5-point scale from 'strongly disagree' to 'strongly agree'. Overall, higher scores indicate higher levels of treatment readiness. It was administered pre-treatment to measure individual's readiness to begin treatment prior to starting on BSR. The TRQ consists of 4 subscales: attitudes and motivation (attitudes and beliefs about programmes and the desire to change), emotional reactions (emotional responses to the individual's offending behaviour), offending beliefs (beliefs about personal responsibility for offending behaviour) and efficacy (perceived ability to participate in treatment programmes) (NOMS, 2011b).

The extent of their dependence on drugs was measured using the Severity of Dependence Scale (SDS)<sup>1</sup> (Gossop and others, 1995) and their risk of recidivism using the Offender Group Reconviction Scale 3 (OGRS3)<sup>2</sup> (Howard and others, 2009). The SDS and OGRS3 are used as selection criteria for BSR. Additional information about gender, age, severity of dependence and risk of recidivism, which is used by staff when recruiting for the programme and monitoring it, was also used in the study.

<sup>1</sup> SDS (Substance Dependency Scale) is a measure of dependence and is completed for the offender's main drug of choice. It is a 5-item measure, with each item being rated on a 4-point scale, from 0-3 (Gossop and others). A score of 4 or above is suitable for BSR.

<sup>2</sup> OGRS3 (Offender Group Reconviction Scale) is based on static risk factors and estimates the probability that offenders with a given history

of offending will reoffend within one and two years of release. The Offender Group Reconviction Scale (OGRS3) is based on static risk factors and estimates the probability that offenders with a given history of offending will reoffend within one and two years of release (Howard, Francis, Soothill and Humphreys, 2009). Sentenced offenders must score 50+ at 24 months to be considered for BSR.

## Analysis

Chi-Square analysis and independent sample t-tests were used to compare differences between completers and non-completers. Paired sample t-tests were used to compare pre and post scores for treatment completers in order to measure any statistical change.

Additionally, clinical significant change analysis was used to investigate individual treatment responses. Using Jacobson and Truax's (1991) approach<sup>3</sup>, the clinical significant change analysis was completed in 2 stages. Firstly, reliable change was calculated. This indicates how much change has been demonstrated through treatment and if it is statistically reliable (Jacobson and Truax, 1991). Following this, clinical significance of the change was calculated. This assesses whether an individual has moved from a dysfunctional pre-treatment score to functional post-treatment scores (Wise, 2004). Participants could be placed in one of 5 categories (see Wise, 2004 for further information):

- *deteriorated* – demonstrates reliable change but in the undesired direction
- *unchanged* – demonstrates no reliable change
- *improved* – shows reliable change but is still in the dysfunctional range
- *recovered* – shows reliable change and is within the norms of the functional range.
- *already okay* – individuals who score in the desirable range both pre and post treatment.

## Results

### Differences between completers and non-completers

Demographics of those who completed BSR were compared with those who failed to complete. The results showed that participants who completed BSR did not significantly differ from non-completers in terms of age (young offender and adult offenders were compared  $\chi^2 = 0.28$ ,  $p = 0.60$ ), gender ( $\chi^2=0.67$ ,  $p = 0.41$ ) and levels of dependence (measured by the SDS score) ( $t=0.30$ ,  $p =$

0.76). The only difference in terms of individual characteristics was that non-completers had significantly higher risk of recidivism (measured by the OGRS3 score) ( $t = -2.78$ ,  $p < 0.01$ ).

### Pre and post differences in treatment targets

When compared at the group level, significant differences were observed in pre and post scores for all of the measures, with effect sizes ranging from 0.19 to 0.34. The largest difference was observed for impulsivity with a pre mean of 13.21 compared with a score of 9.40 after the intervention (See Table 1 for further details).

Table 1: Pre and Post mean scores

Measure	Pre mean	Post mean	Effect Size
Eysenck Impulsivity Scale (EIS)	13.21	9.40	0.34*
Locus of Control (LOC)	43.73	48.53	0.25*
Positive Problem Orientation (PPO)	11.22	13.41	0.19*
Rational Problem Solving (RPS)	9.40	12.37	0.23*

\* $p < 0.05$  after Bonferroni correction

### Clinically significant change

When the treatment targets of impulsivity, locus of control and problems solving were examined using the clinical significant change analysis, the majority of offenders were 'unchanged' for each measure (between 44% and 62% of offenders) (see Table 2 for further details). Clinically significant change was observed for some offenders, for example 25% of offenders were classed as 'recovered' on the Eysenck Impulsivity Scale and 16% of offenders were 'recovered' on the Rational Problem Solving measure (See Table 2).

Table 2: Clinical Change

Measure	Deteriorated	Unchanged	Improve	Recovered	Already okay
EIS	4%	44%	15%	26%	12%
LOC	4%	62%	26%	5%	3%
PPO	5%	55%	12%	12%	13%
RPS	7.0	44%	16%	18%	15%

<sup>3</sup> Jacobson and Truax's (1991) method for calculating the reliable change index (RCI) was used. They state that when the RCI is equal to or larger than 1.96, it is likely the post treatment score is reflecting reliable change (with a 95% confidence level).

### **Treatment readiness**

No significant differences were found on the Treatment Readiness Questionnaire between completers and non-completers (a mean of 76.81 compared to 74.90) apart from on the sub-scale measuring the perceived ability to participate in treatment, where the non-completers had significantly lower scores (a mean of 12.52 compared to 11.65, ( $t=4.06$ ,  $p < 0.05$ )).

## **Conclusions**

The findings suggest that BSR had a positive impact on the treatment needs of impulsivity, problem solving and external locus of control for between 5% and 25% of programme participants. Apart from the perceived ability to participate in treatment, the Treatment Readiness Questionnaire appears to have limited value at highlighting which offenders may not complete BSR. Nevertheless, an awareness of the links between perceived ability to participate and non-completion is still useful for clinicians. If programme providers are aware that an offender's perceived ability to participate in BSR is low at the treatment planning stage, consideration could be given to exercises that could be completed with these offenders, in order to increase their self-efficacy and may result in lower attrition. Furthermore, being aware that offenders with a higher risk of recidivism might be more likely to not complete BSR could be used during treatment planning to help to identify those offenders more susceptible to non-completion so that more consideration could be given to how to work with them effectively.

In addition, between 15% and 26% of BSR participants were found to be in the 'improved' category. Therefore BSR has shown to have some positive impact at an individual level for each of the treatment targets measures by the measures. Furthermore, this result was comparable to 'recovered' outcomes in other clinical significant change studies with forensic population. For example, Bowen, Gilchrist and Beech (2008) found that on average 17.3% of offenders were considered to have recovered and, in the Wakeling and others (2011) study,

the percentage of offenders in this category ranged from 1.8% to 23.2%. While the most common category for offenders to be included in for each measure was 'unchanged' this could be because BSR is not addressing the treatment targets as effectively as the programme developers initially thought. It could also be because BSR is relatively short and therefore it may not be realistic to expect all offenders to be within the 'recovered' range after completing it. Instead, for some offenders, BSR could represent the start of the process of change and as such, require further support and interventions before they will be in the functional range. In addition, this result may also be because some offenders have a limited insight into their difficulties and so their responses on the pre and post measures may not be an accurate reflection of their progress. It may also be that the actual measure itself is not a very good measure to address change. It is also recognised that the functional norms used in the clinical significant change analysis were taken from a student sample which are not representative of the non-offending population which may have impacted on the accuracy of the analysis (Jacobson and Truax, 1991).

The study, while demonstrating the positive impact of BSR in the short term, does not measure whether this change is maintained over time or whether this translates into lower rates of recidivism. Therefore, it would be useful to use reconviction data to assess if those offenders who show short-term change are less likely to reoffend than those offenders who do not. Assessing if there is observable behavioural evidence that participants are employing the skills learned on BSR could be another useful way in which the programme's efficacy could be evaluated. Furthermore, to increase generalisability it would be useful for this study to be replicated on BSR participants in the community.

### **Limitations**

There are limitations to this study, which include the lack of a control group. Therefore, it cannot definitely be concluded that the observed changes are the result of completing BSR. Instead, changes could be due to any

number of reasons, such as completion of previous interventions (NOMS, 2011d) or the environment in which treatment takes place (Beech and Fordham, 1997). However, identifying a suitable untreated control group for large volume programmes that aim to recruit all suitable offenders is difficult (Kerr and others, 2011). A further consideration is the use of self-report measures, as the accuracy of such measures may be affected by the honesty of participant's responses (Wakeling and Travers, 2010). However, although there are limitations it does add to the limited literature on the impact of drug treatment programmes delivered in UK prisons (McSweeney and others, 2008) and the BSR programme specifically.

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First published 2018

ISBN 978-1-84099-818-4

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