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BRIEF TECHNICAL EVALUATION REPORT **May 12, 2025**

Evaluation of BRAVE

Kyle Shea, MS, Amy Grau, PhD, & Erik Faust, PhD

Key Findings

- BRAVE participation did not have a statistically significant effect on misconduct or recidivism.
- The lack of statistically significant findings suggests the need for further research looking at outcomes such as changes in criminal thinking and reductions in associated symptoms.

INTRODUCTION

Misconduct impacts the safety and security of inmates, correctional staff, and correctional institutions. The impact of institutional misconduct extends beyond an inmate's period of incarceration into their return to the community through post-release recidivism. This brief provides an analysis of The Bureau Responsibility and Values Enhancement (BRAVE) by examining misconduct and recidivism outcomes for those who participated in BRAVE at FCI Beckley between 2008 and 2014.

THE BRAVE PROGRAM

After a series of disturbances, the BOP identified those inmates with the greatest difficulty in conforming to the rules of correctional institutions and developed a program to help those individuals as well as to reduce misconduct. Initially, BRAVE was only offered at FCI Beckley. Since then, the program has since expanded and is now offered at five sites: FBI Beckley, FCI Victorville, FCI El Reno, FCI Greenville, and FCI Williamsburg.

The program was originally limited to men who were 32 years old or younger, had a sentence of at least 60 months, were first-time BOP commitments, and were within the first 18 months of their sentence. In November 2021, the program criteria were updated to include men who were 40 years old or younger and had at least 36 months left to serve.

The goals of BRAVE are to facilitate institutional adjustment, reduce incidents of misconduct, enhance opportunities for interactions with staff, and identify and treat psychological disorders that may contribute to criminal activity and poor institutional adjustment. Operating as a modified therapeutic community, the program encourages positive interactions and participation in self-improvement activities throughout their incarceration.

PRIOR EVALUATION OF BRAVE

A previous evaluation of BRAVE was conducted by Innes (n.d.) which examined the first two calendar years (1998-1999) of the program. Notably, at the time of the Innes evaluation, BRAVE participation was limited to those designated at medium security institutions, age 30 or younger, serving a sentence of at least 60 months, and were U.S. citizens. The evaluation focused on 289 participants and a matched comparison group of 2,664 non-participants. Innes examined the first 18 months in BOP custody for the two groups and looked at misconduct history, transfer to other facilities, and time spent in Special Housing Unit (SHU). Innes found that BRAVE participants had a 24.2% lower misconduct rate than the comparison group. He further found that those

who graduated from BRAVE had a misconduct rate that was 53.1% lower than that of the comparison group. Those who were expelled or withdrew from BRAVE had a misconduct rate 134.6% higher than that of the comparison group. BRAVE graduates spent 63.1% fewer days in SHU than the comparison group but those who were expelled or withdrew from BRAVE had a 152.9% increase over the comparison group.

CURRENT STUDY

This study looks at BRAVE participants and a matched sample of eligible, non-participants and uses a Cox Proportional Hazard model to estimate the risk of engaging in misconduct and recidivism.

Data for this evaluation was collected from SENTRY[1] and Nlets.[2] Nlets was utilized for the recidivism portion of the analysis only, which was collected through June 20, 2024.

METHODS

Our research methodology was shaped by several issues inherent to the BRAVE program and the outcome measures of misconduct and recidivism.

Although it would have been informative to examine differences between those who completed BRAVE and those who did not, we were unable to do so. When we create a group based on the statistical likelihood someone would have participated in the program, we replicate actual participants as closely as possible. It further complicates the matter when trying to statistically predict who would go on to finish it in this synthetic control group. This approach is referred to as an 'intent to treat' model and is the standard in post-hoc evaluation research due to the inability to predict completers and non-completers within control groups. Further, dosage information was not available.

Subjects were included if they met policy-specific program criteria, and matched selection from past analyses: 32 years old or younger, sentences of at least 60 months, were first-time BOP commitments, and designated to medium security institutions.

Our sample for the misconduct portion consisted of a control group of people who met the criteria for BRAVE but did not participate. The treatment group consisted of those who participated in BRAVE regardless of their completion status.

The sample for the recidivism portion of this analysis was the same as for the misconduct portion but with additional restrictions due to the nature of the recidivism data. For example, we removed people from the sample if they had a detainer, those who were not U.S. citizens, and those who had not been released from BOP for at least a year. These subjects were removed to eliminate the risk of pseudo-recidivism (new sanctions for prior offending) for those with detainers as they would leave BOP custody and likely be taken into custody by the detaining organization. Similarly, subjects had to have been released from BOP custody from June 20, 2023, or earlier so that they had at least one year in the community at-risk for rearrest. The sample excluded non-U.S. citizens to minimize the likelihood of underestimating recidivism events occurring outside of the U.S.

MEASURES & ANALYTICAL APPROACH

To understand the potential effects of BRAVE on the behavior of participants, we examined the following outcomes:

- Misconduct
    - Any misconduct
    - All misconduct codes as identified by a 100, 200, 300, or 400 level discipline code[3]
- Recidivism:
    - Any arrest for a non-violent offense, a supervised release violation, or a violent offense
        - Excluded juvenile offenses, traffic offenses, immigration offenses, and

[1] SENTRY is an internal BOP system with records of incident reports, designation, custody, and sentencing information for inmates.

[2] Nlets, International Justice and Public Safety Network, compiles arrest data from local police, correctional institutions, and other law enforcement agencies for individuals based upon their FBI number.

[3] Misconduct codes range from most (100) to least (400) serious incidents.

offenses that occurred within a correctional facility

We examined misconduct occurring within one-, two-, and three-year intervals from completion of BRAVE for participants. For non-participants, the one-, two-, and three-year intervals began six months after they were designated to a facility. This six-month window was selected to match the length of participation in BRAVE. Recidivism was measured in one-, three-, and five-year intervals based upon their date of release.

SAMPLE MATCHING

While the treatment group consisted of all inmates who participated in BRAVE, we had to create a control group from the population of inmates who were eligible for BRAVE but did not participate. This control group was necessary so that we would be able to estimate the average treatment effect for the treated (ATT), meaning that the results speak to individual treatment effects for those who were treated and not the entire population under study. To create this control group, we used a combination of exact matching and propensity score matching. This approach gave solid matches per recommended balance measures and stands on strong theoretical footing (Ho et al., 2011). We exact matched the treatment and control groups based on their age. Nearest neighbor matching was used for the other variables in the model, meaning they were the closest matched person in the available sample.[4] These variables were criminal history category, violent history, offense severity, and expected months of incarceration.

OUTCOME MODEL

To estimate the treatment effect and standard error, we fit a Cox Proportional Hazard (CPH) model with misconduct as the outcome and the treatment variable and covariates as predictors. The model estimates a hazard ratio that tells us if the risk of misconduct was different when comparing the treatment and control group at any given time within our follow-up period.

Samples

Misconduct

The matched misconduct sample is made up of 714 inmates in the treatment group and 714 in the control group. Table 1 shows the breakdown of the BOP classification system variables for the sample. Some variables were condensed due to low cell counts. We reported frequency of disciplinary reports as a dichotomous (1/0) variable representing if the inmate did or did not have misconduct incidents before the program period. Discipline type was changed to dichotomous variable representing whether the inmate did or did not have a 100/200 level misconduct before the program period. Race was changed to a dichotomous variable of white (1) or non-white (0). Percent time served was changed to a dichotomous variable for over/under 25% of time served. Last, offense severity was changed to a dichotomous variable condensing low and moderate together and high and greatest together. An additional dichotomous variable was added capturing whether the inmate's offense type was categorized as a drug offense or not.

Recidivism

The recidivism sample consisted of 458 inmates in the treatment group and 458 inmates in the control group who were in the community for at least a year post release. Two models were tested. In model 1, the model included BRAVE participation, as well as the covariates: age at admission, race, ethnicity, history of violence, severity of current offense, history of escapes or attempts, family/community ties, frequency of disciplinary reports, number and severity of disciplinary reports, drug involvement, percent time served, education score, program participation, living skills, and expected months of incarceration. Model 1 tested the same model used for the misconduct portion of the analysis. Model 2 included BRAVE participation as well as the covariates: ever engaging in misconduct, any 200-level, and any 300-level misconduct. As BRAVE intends to reduce misconduct, we hypothesized that

[4] After matching, all standardized mean differences for the covariates were below 0.1.

engaging in misconduct would have an impact on the likelihood of recidivism.

RESULTS

Approximately 88% of the control and treatment groups engaged in any act of misconduct at any point during their incarceration. Across the levels of misconduct, the percentage of persons engaging any-300 level misconduct was the highest with 75.97% of the control and 77.51% of the treatment group engaged in any 300-level misconduct. Few people were convicted of any-400 level misconduct at 5.15% of the control and 3.79% of the treatment group. Post-release from BOP custody 145 (31.05%) of the control group and 167 (37.19%) of the treatment group were arrested.

Misconduct

The following results are from the 1-year follow-up. The 2- and 3-year follow-up results paralleled the 1-year follow-up results.

The CPH model used the matched sample: 714 inmates in the treatment group and 714 in the control group. In addition to program participation, other covariates were added to the outcome model from the BOP's classification data: age at admission, race, history of violence, severity of current offense, criminal history category, education score, program participation, and expected months of incarceration. The hazard ratio was .9961 (CI .9961, 1.0039, p=.964). A hazard ratio less than one indicates that the treatment group had a lower risk of misconduct compared to the control group. But the p-value is not close to .05, so we cannot conclude that this difference is related to the BRAVE program. The model did not score high in terms of the concordance statistic (C=.623), indicating how well the model predicts misconduct as the outcome. A C-index value of .5 is no better than a random guess, and the general rule for a solid model fit is a value of .7.

Recidivism

The CPH models used the matched sample: 458 inmates in the treatment group and 458 in the control group. For model 1 the hazard ratio was 1.2340 (CI 0.9857, 1.5448; p = .066). The concordance of the model was not close to a solid model fit value of .7 (C=.621). With model 2 the hazard ratio for BRAVE participation was 1.2318 (CI 0.9793, 1.5494; p = .075) meaning the treatment group had a higher risk of recidivism than the control group but the results were non-significant. Concordance improved in model 2 but remained under the threshold associated with good model fit (C= .634).

SUMMARY & CONCLUSION

We did not find evidence to support that the BRAVE program influences misconduct or recidivism. A comparison of those who do and do not complete BRAVE might be better able to determine if the program influences misconduct or if our results are impacted by those who were expelled or withdrew from the program. This would require the collection of measures that would allow us to predict these groups to create control groups for completers and non-completers. This is a cumbersome task as it would require data collection outside of the program units. Additionally, while recidivism is a common measure for correctionally-involved populations, and a mandated outcome as part of the First Step Act, the amount of time between BRAVE participation (at the outset of incarceration), release to the community, and then to be at-risk for recidivism in the community is several years. There might be numerous known and unknown influences between program participation and recidivism that make it exceedingly difficult to single out any program influence.

The current study, using available measures, was not able to detect a statistically significant impact of the BRAVE program on inmate behavior. We suggest that a more fruitful approach would be to utilize instruments designed to detect changes in thinking styles, antisocial cognitions and other symptoms that are associated with outcomes like institutional misconduct. For example, the collection of criminal thinking and motivation measures such as the Psychological Inventory of Criminal Thinking Styles (PICTS) or the University of Rhode Island Change Assessment Scale (URICA), would allow us to measure cognitive change within the individual as they move through the program. Additionally, a measure of treatment dosage would allow us to examine any impact the program might have on completers and non-completers separately. This would have the additional benefit of allowing for short term evaluations across treatment cohorts without

having to wait for the accrual of time in the general population after program participation. We would utilize repeated measure models where the treatment individuals can serve as their own controls.

References

Ho, D. E., Imai, K., King, G., & Stuart, E. A. (2011). MatchIt: Nonparametric Preprocessing for Parametric Causal Inference.

Innes, C. A. (n.d.). *Technical Report for Results from the Evaluation of the First Two Years of the Beckley Responsibility and Values Enhancement (BRAVE) Program*. Federal Bureau of Prisons.

Table 1. Demographics of Misconduct and Recidivism Samples.

	Misconduct Sample (n=1,428)	Recidivism Sample (n=916)
Outcome		
Misconduct	567 (.40)	
Recidivism		312 (34.1)
Covariates		
Age at admission		
22 and under	404 (28.3)	292 (31.9)
23 to 25	308 (21.6)	214 (23.4)
26 to 29	382 (26.8)	240 (26.2)
30 to 39	334 (23.4)	170 (18.6)
Race		
American Indian	12 (0.8)	5 (0.6)
African American	1021 (71.5)	659 (71.9)
Asian	14 (1.0)	10 (1.1)
White	381 (26.7)	242 (26.4)
Ethnicity		
Hispanic	149 (10.4)	97 (10.6)
Non-Hispanic	1289 (89.6)	819 (89.4)
History of Violence		
None	577 (40.4)	329 (35.9)
Minor 10+ years ago	31 (2.2)	19 (2.1)
Serious 15+ years ago	45 (3.2)	19 (2.1)
Minor 5-10 years ago	142 (9.9)	98 (10.7)
Serious 10-15 years ago	101 (7.1)	50 (5.5)
Minor <5 years	182 (12.7)	133 (14.5)
Serious 5-10 years ago	219 (15.3)	171 (18.7)
Serious <5 years	131 (9.2)	97 (10.6)
Severity of Offense		
Low moderate	81 (5.7)	57 (6.2)
Moderate	927 (64.9)	643 (70.2)
High	21 (1.5)	9 (1.0)
Greatest	399 (27.9)	207 (22.6)
Precommitment Status		
Pretrial Detention	1415 (99.1)	906 (98.9)
Voluntary surrender	13 (0.9)	10 (1.1)
History of Escapes		
None	1258 (88.1)	808 (88.2)
Minor 10+ years ago	35 (2.5)	21 (2.3)
Minor 5-10 years ago	73 (5.1)	39 (4.3)
Minor <5 years	61 (4.3)	46 (5.0)
Serious	1 (0.1)	2 (0.2)
Type of Detainer		
None	1056 (73.9)	678 (74.0)
Lowest/low moderate	133 (9.3)	95 (10.4)
Moderate	189 (13.2)	118 (12.9)
High	6 (0.4)	2 (0.2)
Greatest	44 (3.1)	23 (2.5)
Family/Community Ties		
None or Minimal	126 (8.8)	88 (9.6)
Average or Good	1302 (91.2)	828 (90.4)

Frequency Disciplinary Reports		
0 Incident Reports	1078 (75.5)	677 (73.9)
1 Incident reports	267 (18.7)	176 (19.2)
2-5 Incident report	79 (5.5)	59 (6.4)
6+ Incident report	4 (0.3)	4 (0.4)
Number and severity disciplinary reports		
Any 100 Level in Past 10 years	31 (2.2)	17 (1.9)
Two+ 200 Level in Past 2 Years	19 (1.3)	14 (1.5)
One 200 Level in Past 2 Years	146 (10.2)	95 (10.4)
Two+ 300 Level in Past Year	34 (2.4)	28 (3.1)
One 300 Level in Past Year	141 (9.9)	92 (10.0)
Two+ 400 Level in Past Year	3 (0.2)	5 (0.6)
One 400 Level Past Year	4 (0.3)	1 (0.1)
None	1050 (73.5)	664 (72.5)
Drug involvement		
Never/>5 Years	95 (6.7)	63 (6.9)
<5 Years	1333 (93.3)	853 (93.1)
Percent time served		
0-25%	1025 (71.8)	594 (64.9)
26-75%	399 (27.9)	314 (34.3)
76-90%	4 (0.3)	6 (0.7)
91+%	0(0)	2 (0.2)
Education score		
Verified High School Degree or GED	763 (53.4)	474 (51.8)
Enrolled in GED Program	414 (29.0)	284 (31.0)
No verified GED, not enrolled in GED Program	251 (17.6)	158 (17.3)
Program participation		
Poor	171 (12.0)	113 (12.3)
Average	614 (43.0)	377 (41.2)
Good	643 (45.0)	426 (46.5)
Living skills		
Poor	161 (11.3)	109 (11.9)
Average	644 (45.1)	419 (45.7)
Good	623 (43.6)	388 (42.4)
Expected months of incarceration		
0 to 45.9 months	221 (15.5)	248 (27.1)
46 to 74.9 months	294 (20.6)	265 (28.9)
75 to 113.9 months	459 (32.1)	265 (28.9)
114 to 579 months	454 (31.8)	138 (15.1)
Any misconduct during BOP incarceration		803 (87.8)
Any 100-level misconduct		411 (44.9)
Any 200-level misconduct		533 (58.3)
Any 300-level misconduct		702 (76.7)
Any 400-level misconduct		41 (4.5)