



The Resolve Trauma Treatment Program: A Retrospective Evaluation of the Effects of Program Participation on Behavioral Outcomes. 2014—2019.

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Key Findings

- In this Retrospective analysis, FBOP evaluates a trauma-informed intervention, the Resolve Treatment Program (RTP). A prospective analysis will be forthcoming which will afford more in-depth and rigorous analysis of the program.
- The intent of this program is to reduce trauma-related psychology disorders. The goal is to improve functioning so that there are better outcomes both during and following FBOP custody.
- Overall, the results from the fixed effects analysis showed support for the impact of the RTP on readily quantifiable post-program behaviors of those who participated in treatment.

INTRODUCTION

The prevalence of trauma experiences in the general population is a known and growing issue. The experience of trauma among the custodial population is even greater. Exposure to trauma is often associated with several mental health disorders and substance abuse issues. Further, individuals in custody often lack the necessary coping mechanisms to deal with these events in a healthy manner.

The Federal Bureau of Prisons (FBOP) has approached the delivery of trauma informed treatment through the development of the Resolve Treatment Program (RTP). This research brief provides an overview of our initial attempt at determining the degree to which this intervention impacts the functioning of individuals incarcerated in the FBOP who have completed this intervention.

THE RESOLVE PROGRAM

The RTP was designed to treat persons suffering from trauma-related disorders. Broadly, the RTP is a group-

based treatment protocol that includes one psychoeducational and three treatment groups. The three treatment groups are Seeking Safety, Dialectical Behavior Therapy (DBT), and Cognitive Processing Therapy (CPT). All phases are designed to treat symptoms of posttraumatic stress disorder (PTSD), other trauma-related disorders, and substance abuse. Those wishing to continue treatment may enter a maintenance phase (phase 3) after the completion of the main treatment groups.

The main goal of the RTP is to decrease the incidence of trauma-related psychological disorders and improve the functioning of persons who are affected by such disorders. Accordingly, by increasing their functioning, it is anticipated that there will be a subsequent increase in the efficacy of other programming, such as the Residential Drug Abuse Program. Further, we also anticipated that the treatment of any trauma-related disorders will reduce institutional misconduct and placements in segregated housing, lower the number of crisis-related contacts, and reduce recidivism upon release.

DATA

Data for the RTP study was collected from the Bureau Electronic Medical Records – Psychology Data System (BEMR-PDS) and SENTRY inmate management system. In addition to housing all clinical psychology data, BEMR-PDS also tracks RTP program participation. All participation data was collected for the 13 female Resolve program sites from April 2014 through December 2019. This dataset resulted in a sample of 897 female adults in custody who completed the program during the reference period.

METHODS

We were confronted with several challenges when attempting to evaluate the RTP. First, although the program is primarily designed to treat those suffering from trauma, we did not have access to a formalized measure of PTSD or any other symptoms associated with trauma exposure, such as anxiety or depression. As such, we were unable to create a comparison group of those with trauma issues who did not participate in the program. Second, the multi-phase aspect of the RTP created a situation wherein some incarcerated individuals would complete the program after the Seeking Safety phase, while others would go on to complete RTP after taking Cognitive Processing Therapy (CPT) or Dialectical Behavior Therapy (DBT). We had no mechanism to predict who would go on to these latter phases of treatment (e.g., DBT, CPT or both) after completing Seeking Safety and it was therefore impossible to create a comparison group of individuals appropriate for further treatment, but who did not move forward with the process.

Given the above difficulties and the absence of the ability to conduct a randomized controlled trial due to ethical limitations inherent in restricting program participation to any individual in custody, we sought to design a study that would allow us to draw some conclusions about the program's efficacy, even in the absence of the ability to infer causation. As such, we utilized a fixed effects regression approach. This approach allowed us to minimize bias in the selection process as each study participant served as their own comparison.

MEASURES & ANALYTICAL APPROACH

To understand the possible effects of the RTP on the behavior of the participants, the following markers were examined:

- Incident reports (Misconduct)
- Duration of time (days) in Special Housing Unit (SHU) for any reason
- Major Psychology Services Events (MPSE) defined as the following:
 - Crisis Interventions
 - Disruptive Behavior Interventions
 - Psychology Alerts
 - Behavioral Management Plans
 - Suicide Risk assessments

We chose 365 days to observe behavior of the RTP samples both before entry into the RTP and post program completion. To be included in the analyses, each Resolve participant had to meet the 365 days of observation both before and after completing the program. For example, if participants either had too few days in custody prior to entering the RTP, or left custody within 365 of RTP completion, they were excluded from the sample.

The first set of models utilized conditional logistic regression to determine if there was a change in the probability of any of the outcome markers during the post-treatment risk period. In this approach, we excluded those who had no change in observed behavior across the observation periods.

The second round of modeling used conditional Poisson models to determine the extent to which change occurred in the number of events in the outcome measures from pre- to post- program completion. Participants in this model were excluded if they had zero observations in both pre-and post-periods.

RESULTS

Overall, the results from the fixed effects analysis showed support for the impact of the RTP on post-program behaviors of those who completed treatment.

Table 1 shows the total number of cases in the sample, broken down by valid and invalid cases for both the logistic regression probability (PROB) and Poisson

regression count (CNT) models. As shown in the table, both modeling approaches resulted in many participants being excluded from the analysis due to a failure to meet inclusion criteria.

Table 1: Valid Study Cases per Model Type

| | Misconduct | | SHU | | MPSE | |
|----------------|------------|------|------|------|------|------|
| | CNT | PROB | CNT | PROB | CNT | PROB |
| Total | 897 | 897 | 897 | 897 | 897 | 897 |
| Valid | 409 | 268 | 296 | 209 | 88 | 67 |
| % Used | 45.6 | 29.9 | 33.0 | 23.3 | 9.8 | 7.5 |
| Invalid | 488 | 629 | 601 | 688 | 809 | 830 |

The results from both the count and probability models are presented in Table 2. The count model is presented first followed by the conditional probability models for the three markers (misconduct, special housing unit duration, and major psychological services events).

Misconduct

The estimated coefficient for the count model (-0.11) represents the change in the average number of misconduct events comparing pre- to post-program. Expressing this in terms of percent change, we found a 10.4% decrease on average from pre- to post-program misconduct events. However, this was not statistically significant, and thus we cannot conclude there was a difference between risk periods.

The same held true for the probability model: Although the direction of the estimated coefficient (-0.13) was in the expected direction (decrease), it was not statistically significant ($p > .05$).

Special Housing Unit (SHU)

The estimated coefficient from the count model was not statistically significant (1.29, $p > .05$). However, the estimated coefficient of the conditional logistic model was significant (-0.34, $p < .05$), indicating that the odds of being placed in SHU decreased 28.7% from the pre-program period to the post-program period.

Major Psychology Service Events (MPSE)

The estimated coefficient for the number of MPSE (-0.35) was in the expected direction (decrease) but was

not statistically significantⁱ. As with the conditional logistic model for SHU, the same analysis for MPSE showed a statistically significant decrease in the odds of an MPSE event from the pre-program to the post-program period (-0.78, $p < .05$). Specially, there was a 54.3% reduction in the odds of an MPSE event in the post-program period compared to the pre-program period.

Table 2: Fixed Effects Regression for Outcomes

| | Misconduct | | SHU | | MPSE | |
|------------------|------------|-------|-------|-------|-------|-------|
| | CNT | PROB | CNT | PROB | CNT | PROB |
| Intercept | | | | | | |
| Estimate | -0.11 | -0.13 | 1.29 | -0.34 | -0.35 | -0.78 |
| S.E. | 0.08 | 0.12 | 1.93 | 0.14 | 0.17 | 0.26 |
| P | 0.17 | 0.27 | 0.05 | 0.01* | 0.05 | 0.01* |
| Time | | | | | | |
| Estimate | | | -0.69 | | | |
| S.E. | | | 0.30 | | | |
| P | | | 0.02* | | | |

SUMMARY & CONCLUSION

The results of this analysis are promising with regard to understanding the impact of the RTP on the behavior of individuals who have completed trauma-informed programming; two of the three outcome markers - Duration of time in SHU and MPSE events - showed statistically significant decreases from the pre-program observation period to the post-program observation period, depending on the modeling approach we utilized. A few limitations, however, should be mentioned.

The most basic limitation was our methodological approach. While necessitated by the data available, a fixed effects regression approach does not have the methodological rigor associated with a higher quality program evaluation. As such, the absence of a comparison group limits the ability to draw conclusions about the impact of the RTP on those who participate versus those who don't.

The second, and perhaps more important limitation is simply the outcome measures we had available with which to evaluate the effectiveness of the RTP. While some significant effects in the models were found, it is

not entirely clear that these measures are the most appropriate with which to understand the effectiveness of a trauma treatment program. Further, a large proportion of cases had to be excluded in both modeling approaches due to a lack of change from the pre- to post-observation period. Therefore, any type of change could not be estimated from a treatment effect because there was simply no change to measure.

To conclude, while this analysis suggests a positive impact on the behavioral outcomes measured, it is not enough to show a causal impact of this trauma-informed intervention and neither does it show the effect of this programming compared to a group of similarly situated individuals who did not participate in the RTP.

Finally, the design of the current study also necessitated that we look only at those who completed at least the

ⁱ While the p value of the MPSE count model is over the expected .05 significance level, it should be noted that this is a rather conservative estimate of statistical significance and one that applies a two tailed test to what should theoretically be a single tailed test, as we are assessing whether a program

first stage of the RTP. By only measuring such persons and not including those who also may have benefitted from exposure to treatment, we are unable to say anything about the effect of any time spent in treatment on subsequent behavior.

In consideration of these limitations, we hope to learn more about the impact of the RTP on measurable outcomes with a prospective evaluation in process. We are currently collecting data on several symptom measures associated with trauma. These assessments will provide a baseline understanding of symptomology and allow us to observe any possible changes with a group of treatment participants compared with a group who are not.

worked or did not. Notwithstanding, there is much debate about this methodological approach in the scientific literature which is beyond the scope of the current project. We are therefore staying with convention, referring to this outcome as not statistically significant.