



Behavior Change through Design: Evaluation at the Virginia Center for Behavioral Rehabilitation

Report Submitted to EDRA CORE April 2018



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RESEARCH TEAM

The multi-disciplinary evaluation team includes individuals with clinical, research, and architectural design expertise.

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ABSTRACT

Recently, there has been considerable attention devoted to the conditions of confinement for those civilly committed under the Sexually Violent Predator (SVP) statutes. One important aspect of those conditions is the actual structure of the secure facility. It is often noted that those civilly committed under SVP statutes must be afforded more considerate treatment and conditions of confinement than those incarcerated in prisons (Chamberlain, 2007). Class action lawsuits alleging unconstitutional treatment have included a focus on the physical environment. For example, in Minnesota, it has been noted that the construction of the facility suggested “the facility’s intentional punitive design” (Frezzo, 2015, p. 673). It was also pointed out that the architects who designed the new wing published a statement on their website about how they had developed a “maximum security environment for these extremely dangerous individuals” (Frezzo, 2015, p. 673), which was viewed as supporting a ‘punitive’ intent. In addition, the layout of the facility was arguably analogous to that of Minnesota prisons.

The SVP program in the Commonwealth of Virginia is in the process of renovating its current facility and expanding the structure in a manner that would enhance the existing treatment environment. The planned design responds to treatment and human needs for both residents and staff. The ongoing research study is focused on the central hypothesis that the architectural design of the VCBR facility expansion will be associated with improvement of specific resident outcomes both while committed and after release. In addition, the project aims to create a supportive environment for staff.

This report presents preliminary baseline data from the facility that has been analyzed and fed back into the design process. The preliminary data included resident demographics, aggression incidents, severity of incidents, and disability status. Differences based on resident and incident characteristics were assessed using Chi-square analysis. Data was also obtained on those conditionally released and conditional release failures in that program. This data was analyzed descriptively.

We found significant differences in involvement in incidents by disability status ($p < 0.01$). This reinforced the potential efficacy of spatial strategies to separate more and less vulnerable groups. In addition, for the conditional release data, the vast majority of revocations were not for a subsequent sexual offense, and many were related to issues of life skills (e.g., adequate self-care, maintenance of employment and housing).

Based on key findings from the baseline data, we concluded that architectural strategies to strategically locate and separate resident sub-groups and enhance security, as well as to provide environmental support for life skills and social support in a dedicated transitional facility, would likely be efficacious in terms of outcomes. Once the new facility has been in use for some time, we will statistically test our hypotheses by comparing follow-up to baseline data.

PROJECT BACKGROUND

Civil commitment of sexually violent persons (SVPs) has been a contentious issue since its inception, and states in the U.S. have developed and used a range of programs and facilities to house and/or treat SVPs who, upon release from the correctional system, have been deemed too dangerous to live freely in the community. The population of formerly civilly-committed SVPs living in communities is fairly small. Therefore, the body of knowledge as to the efficacy of civil commitment treatment programs remains somewhat limited. As SVP civil commitment is costly to states, there is need to rehabilitate eligible SVPs effectively so that they may return to communities without undue societal risk. To date, there is no formal knowledge as to the direct, mediating, or modifying roles that the architectural designs of civil commitment facilities play in resident outcomes either while committed or after release. Because of this lack of knowledge, it was critical to first examine baseline data to inform the facility design as well as the feasibility and direction of an overall outcomes based research study.



PROJECT BACKGROUND

The Virginia Department of Behavioral Health and Developmental Services (DBHDS) operates the Virginia Center for Behavioral Rehabilitation (VCBR), a treatment facility for SVPs. VCBR opened in February 2003, and resident volumes have exceeded originally planned capacity. The facility as currently designed and built is based upon a standard direct supervision detention model. It includes a connected 'treatment mall'-type module consisting of program and activity spaces, narrow and over-crowded corridors, and inadequate support for staff to monitor resident movement and activities. In 2013, DBHDS selected HDR to design the needed expansion of the facility. The expansion project's guiding principles include improvement in VCBR's capabilities to treat resident SVPs via provision of a multi-tiered environment that allows for increasing responsibility and self-management as residents progress through the program.

The central hypothesis of this study is that the architectural design of the VCBR Expansion may be associated with improvement of specific resident behaviors and outcomes both while committed and after release. In addition, the project aims to create a supportive environment for staff, potentially increasing job satisfaction while decreasing burnout, absenteeism, turnover, and injuries due to resident aggression.



RESEARCH DESIGN

Study of the new facility's associations with VCBR staff and resident safety, resident treatment outcomes, and staff wellbeing, is anticipated to inform future practice with regard to SVP (and related) facility design and interior environment, and rehabilitating civilly committed SVPs in Virginia, and elsewhere. Specific aims follow:

Aim 1. Evaluate associations of the VCBR architectural space planning, interior environment, and security design solutions on frequency and severity of reported incidents of interpersonal physical aggression.

Aim 2. Evaluate associations of the new VCBR transitional living facility on residents' success in transition to the community, as measured by length of time in the community post-release, and whether or not conditional release failure occurs.

Aim 3. Evaluate associations of the VCBR architectural space planning, interior environment, and security design solutions on staff well-being.

Aim 4. Evaluate specific design elements to assess effectiveness of the new VCBR facility in changing staff and resident perception.

VCBR's IRB approved the research protocol.



RESEARCH DESIGN

The research design includes cross-sectional and longitudinal components. Data will be matched pre and post. Resident and staff data will be examined over the period of time from data availability to just prior to occupancy of the renovated and expanded facility, and compared to independent samples after occupancy of the renovated and new areas. Staff surveys will be conducted prior to construction and six months after facility completion. For those in residence during both time periods, pre/post within-subject incident frequencies per time and incident severity will be compared longitudinally. Currently, baseline data has been assessed and preliminary results are presented. Differences between resident groups were assessed using Chi-squared analysis or Fisher's exact test, as appropriate. Further analyses will be conducted when additional data is available from the staff survey and after the construction is complete and follow-up data is available.

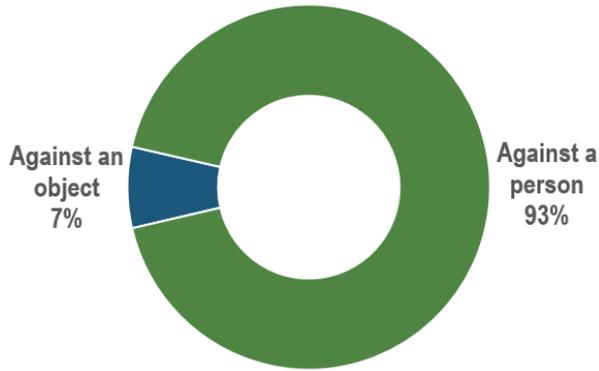
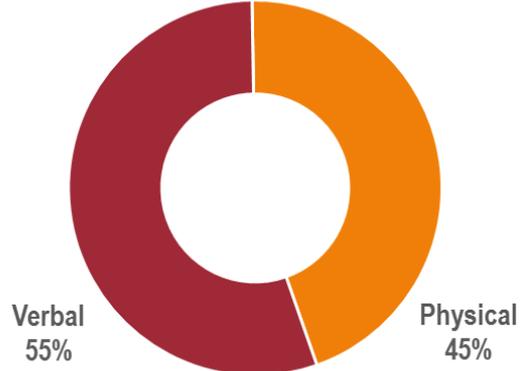
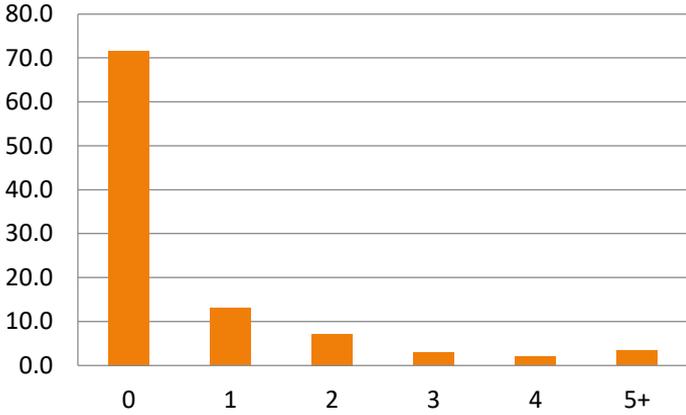
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BASELINE FINDINGS

We examined aggressive incidents for an 18 month period. There were a total of 541 incidents during this period and we assumed a constant census of 350 residents. Just over half of the incidents were verbal and most were against another resident. While most of the residents had no incidents, some residents had more than five.

Incidents per Resident

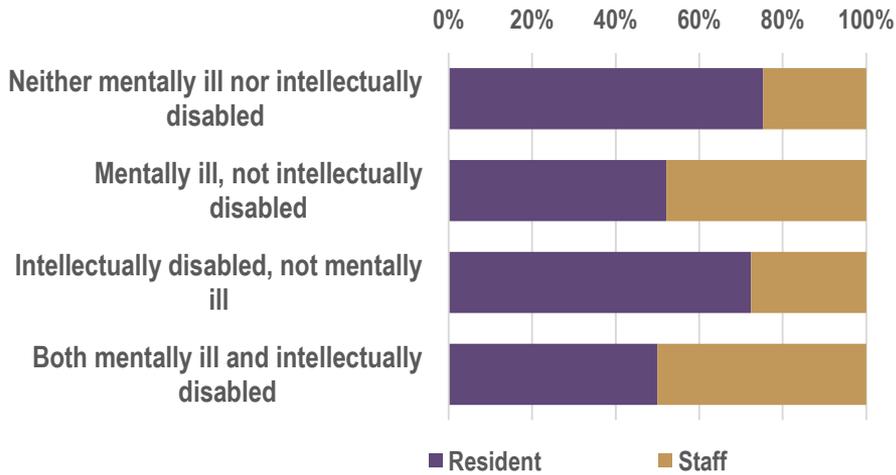


Type of Incident

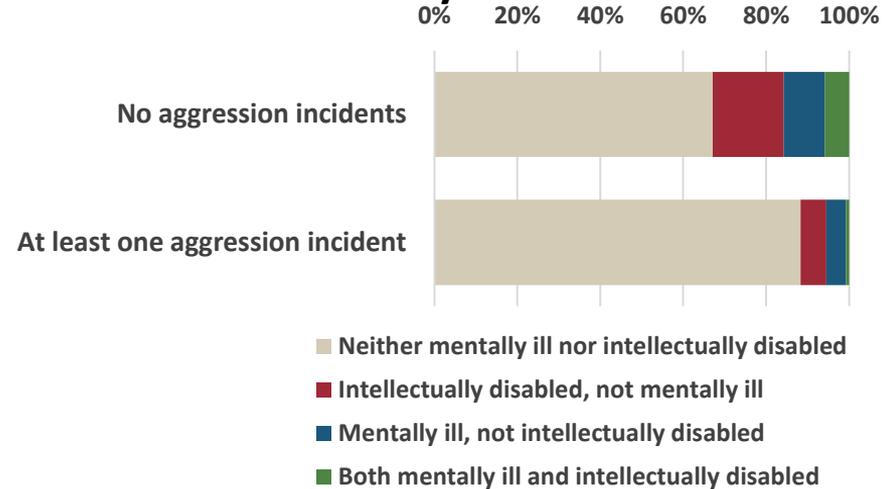
BASELINE FINDINGS

When examining our findings by disability status we found significant differences in involvement in an incident as well as by the target (resident or staff). Both were statistically significant ($p < 0.01$). Those without a disability were more likely to have at least one aggression incident and were more likely to target another resident. Residents with mental illness were more likely to target a staff member.

Incidents by Target and Disability Status



Aggression Involvement by Disability Status



SUMMARY

DESIGN IMPACT

Based on key findings from the baseline data, we concluded that architectural strategies to strategically locate and separate resident sub-groups and enhance security, and to provide environmental support for developing life skills and enhancing social support in a dedicated transitional facility, would likely be efficacious in terms of outcomes. In addition, we found that it would be feasible to test our hypotheses regarding facility design in a larger study based on the preliminary data. Although we found that conditional release data may contain a limited number of failures, we should be able to assess this descriptively in the short term. Once the new facility has been in use for some time (we anticipate 1+ year), we will statistically test our hypotheses by comparing follow-up to baseline data.

The baseline findings had a direct impact on the facility design as well as components of the larger evaluative study planned. Working in an interdisciplinary group allowed all participants to learn and to create a stronger design and research proposal. Since little research has previously been conducted in this type of setting, having client experts engaged in the entire process was critical to provide the context needed both for design of the facility and for the research to be conducted. Working with research experts, the client learned more about collecting and documenting the data needed for an objective analysis of the facility and outcomes.

STUDY REACH

This study can serve as a model of best practices in evidence based design. Having an interdisciplinary, engaged team helped give rise to early results that were then able to be translated into design decisions and research project development.