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## Can Prison Design Affect Inmates' Mental Health Outcomes?

*Art, natural light, other elements can improve results, researchers say*

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October 31, 2018

AUSTIN, Texas -- The right prison design can make a difference in inmates' mental health, researchers said here.

Using a checklist to include certain features in the design of mental health facilities in prisons could help facilitate improved patient outcomes, Mary Colavita, MD, an attending psychiatrist at the Bedford Hills (N.Y.) Correctional Facility and the Sing-Sing Correctional Facility in Ossining, New York, and colleagues said in a poster at the [American Academy of Psychiatry and the Law](#) annual meeting.

Although there are only an estimated 35,000 state hospital beds for mentally ill patients, there are about 10 times that many mentally ill inmates in prisons, the authors noted. "In effect, these facilities are rapidly becoming primary sources of mental health treatment for this population," they said.

"We don't have much literature looking at the psychological impact of architectural design on correctional settings; it's an up-and-coming topic," Colavita told *MedPage Today*. She said she developed the idea for the checklist after learning about [Halden Prison](#) in Norway, "where they're making it incredibly humanistic -- they have a kitchen, a recording studio, all the things we don't have here. That motivated me initially to look at this."

The researchers listed two theories of prison design:

- **Deprivation Theory:** This is the idea that when an inmate is subjected to a restrictive environment, certain basic needs may go unsatisfied and an inmate may adapt to the situation by satisfying needs via maladaptive behaviors.
- **Situational Theory:** This is the idea that architectural and social determinants can impact one's perception of his/her experience (safety, available resources, relationships) and the likelihood of engaging in violence.

Facilities are also designed with security goals in mind, on the theory that safety, privacy, and operational efficiency will lead to decreased violence and decreased recidivism, they said.

The investigators reviewed the health, medical, and correctional literature to come up with a checklist of architectural features that fostered "positive mental health outcomes," defined as increased willingness to participate in treatment and decreased symptom intensity. They then visited a prison

and looked for the items on the list within several different categories of the prison's mental health units, including the acute care mental health unit, the mental health step-down unit, specialized mental health disciplinary housing, and long-term segregated mental health housing.

Examples of design elements and their effects as reported in the literature included:

- Residential density with a lower percentage of double cells: This gives inmates an increased sense of privacy and control over their environment; communication with the staff improved as inmates' sense of privacy increased.
- Corridor length: Echoes and repetitive sounds exacerbate psychosis.
- Windows and natural light: These reduce depression, decrease length of stay, improve sleep, lessen agitation, and reduce pain.
- Nature imagery/Plants: These reduce pulse rate and blood pressure, and improve cognitive functioning.
- Art: Inmates have fewer PRNs [as-needed medications] for anxiety and agitation when exposed to landscape art as compared with abstract art, the authors said. Inmates prefer nature images, positive facial expressions, and depictions of caring relationships.
- Division of Space: Although closed nursing spaces via Plexiglass partitions make the staff appear inaccessible, discrete private spaces for staff to relax and tend to administrative tasks have been associated with an increase in positive nurse-patient interactions.
- Residential features (i.e., laundry, gallery kitchen, private bathrooms/showers): Conflict sometimes arises between what is best for patients and how the community views the design. Multi-stall bathrooms and showers can be dangerous for staff and patients.

In the prison they inspected, the researchers found that the long-term segregated housing unit had a higher number of checklist elements than other types of units; "it is conceivable that risk and safety concerns dictate the limited flexibility of design in the acute care settings," they said.

With the checklist, Colavita said, "We want to be able to create some change in the prison system to make them more therapeutic like they are in Norway, [although] maybe a lighter version; it's a different population we're working with."