Environmental Design and Aggression/Violence in Acute Psychiatry

Literature Review

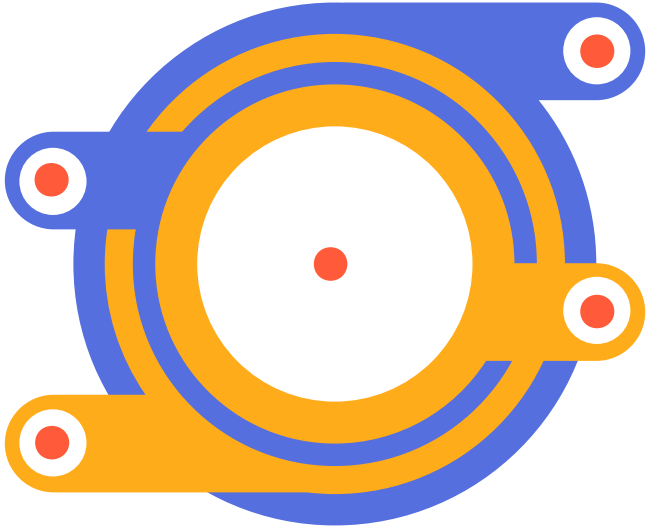
Do improved structural surrounding reduce restrictive practices in psychiatry? By A. Harpoth et al. (2022).	**The relationship between inpatient mental health ward design and aggression.** By M. Rogerson et al. (2021).	**Psychiatric ward design can reduce aggressive behaviour.** By R. S. Ulrich et al. (2018).	**A study of agitation, conflict, and containment in association with change in ward physical environment.** By O. Jenkins et al. (2015).
• Examined if the use of **restrictive practices (RPs) i.e., seclusion, restraint, involuntary acute medication** before and after relocating to a new, purpose-built **psychiatric university hospital (UH)** in Denmark. • Analyzed datasets that included all admissions during study periods.	• Examined the association between ward design characteristics and recorded **verbal, physical aggression and property damage** in 101 **forensic and non-forensic** wards in England. • Created a structured '*Ward Features Checklist*,' consisting of 49 variables • Used out a *Work Safety Scale questionnaire* to measure staff perceptions of safety.	• Created a conceptual model featuring 10 design features identified in *reducing stress and aggression*. • Compared **3 psychiatric hospitals** (Control, Old, and New) in Sweden to each other by analyzing aggressive clinical markers (**compulsory injections and physical restraints**). • New hospital had 9/10 design features while the Old & Control had 2/10 features.	• Examined levels of **seclusion episodes, verbal, physical aggression to others and physical aggression to environment** before and after the move to a new, purpose-built **psychiatric intensive care unit (PICU)** in England. • Utilized a *Nursing Observed Illness Intensity Scale (NOIIS), DATIX system,* and an *Environment Assessment (55-item) Inventory.*

Do improved structural surrounding reduce restrictive practices in psychiatry? **By A. Harpoth et al. (2022).**	**The relationship between inpatient mental health ward design and aggression.** **By M. Rogerson et al. (2021).**	**Psychiatric ward design can reduce aggressive behaviour.** **By R. S. Ulrich et al. (2018).**	**A study of agitation, conflict, and containment in association with change in ward physical environment.** **By O. Jenkins et al. (2015).**
Single rooms	Single rooms	Single rooms	Single rooms
Fewer beds	Staff-to-patient ratios/fewer beds	Light exposure	Visibility throughout ward
Private bathrooms	Private bathrooms	Private bathrooms	Lockable bathrooms
Natural light	Brightness of ward	Large rooms (low social density)	Bedroom ensuites
Wide hallways	Quieter noise levels	Noise-reducing design	Wide hallways
Large rooms	Control over environment	Control over windows	Control over environment
Integrated courtyards	Views from ward	Natural window views	Gender specific areas/facilities
Airlocks	Gender specific facilities	Visibility throughout ward	Quick release doors
Removal of ligature points	Ceiling height	Accessible garden	Observation window in doors
	Type of flooring	Movable seating	Specific visiting areas
	Higher temperatures	Natural art	Designated activities room

Key Takeaways

Strong focus on crowding reduction and privacy

Differences in care practices, staff turnover



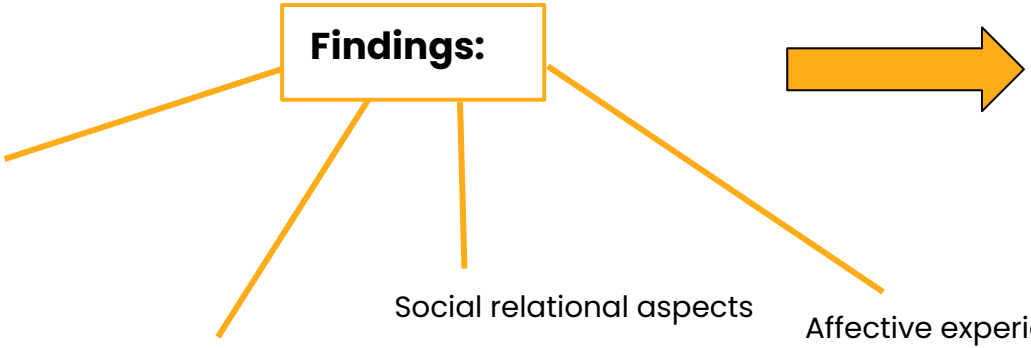
Need for further qualitative measures (staff/patient attitudes, feelings)

Need for further investigation in different psychiatric facilities

The impact of physical environments on outpatient mental health recovery: A design-oriented qualitative study of patient perspectives

Sui et al. (2023)

- Adult Psychiatry Clinic in Northern California
- Incorporate Human-centered design (HCD) into a new building purchased for clinic space
- Semi-structured interviews with patients



Sensory Design Elements
- Soft and neutral Colors
- Natural light
- Sound

Engagement qualities
- Art studios
- Gyms
- outdoors

Social relational aspects
- Privacy and personal space
- Human interactions

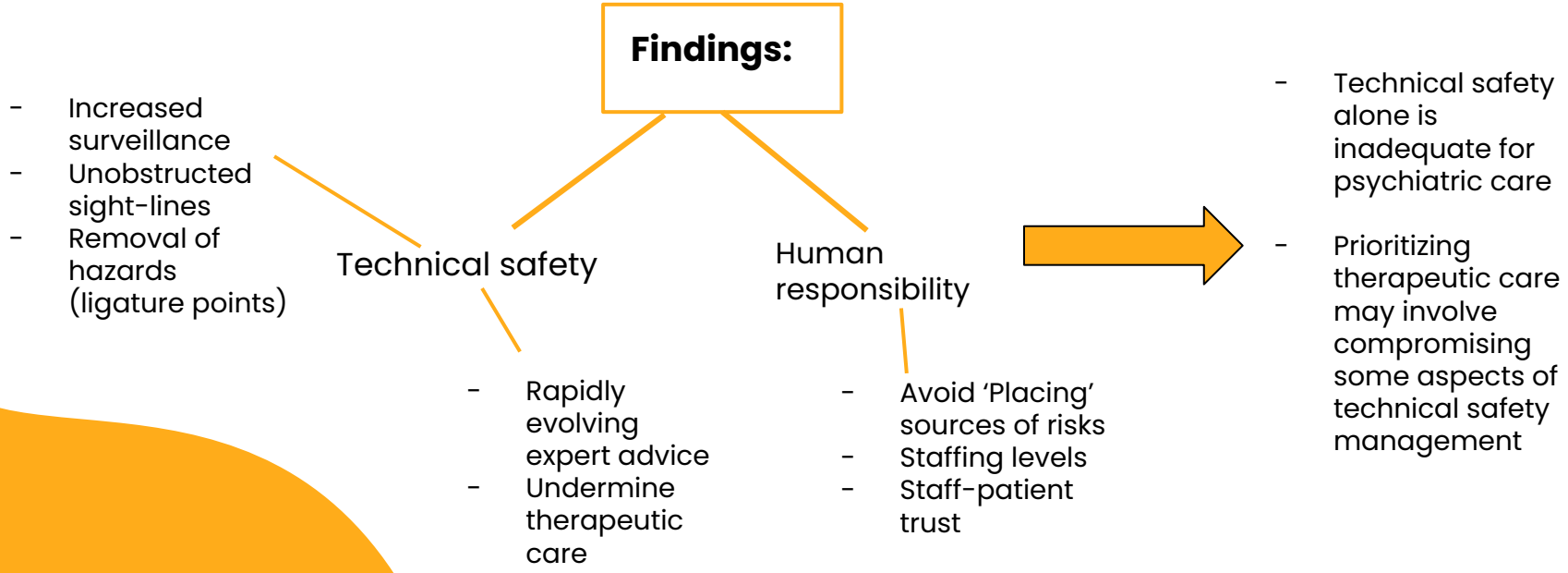
Affective experiences
- Spaces that evoke emotion
- Eg. Natural sounds, neutral colors

- Guide future constructions of healing spaces
- Benefits from physical environment in daily life

Compassionate containment? Balancing technical safety and therapy in the design of psychiatric wards

Curtis et al. (2013)

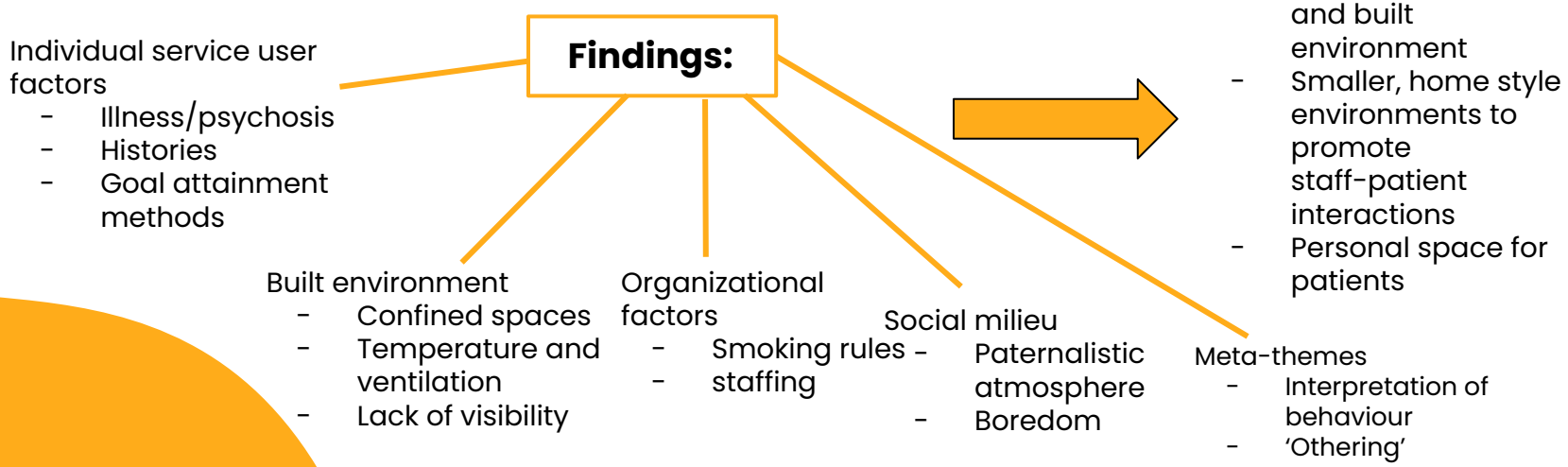
- Newly built **inpatient psychiatric hospital in England**
- Conducted through a combination of group discussions and individual interviews: service-users and staff



Places of safety? Fear and violence in acute mental health facilities: A large qualitative study of staff and service user perspectives

Jenkin et al. (2022)

- Evaluated four **adult acute mental health inpatient units in New Zealand** (three old and one new build with co-design principles)
- Conducted interviews with staff and service users



AGGRESSION

Individual service user factors[3] (small %)[4]

Prompted/ facilitated by environmental cues[2]

Containment
- Surveillance [2,3]
- Spatial organization of response [2]
- Unobstructed sight lines[2,3]

Prevention
- Removal of ligature points[2]
- No movable objects [2]
- Smooth surfaces[2]
- Sensory design elements[1], engagement qualities[1], etc..

Prompted/facilitated by social interactions[2]

Ex/ lack of attention from staff[2], paternalistic approaches[3]

Containment
- Surveillance[2,3]

Prompted by organizational factors[3]

Ex/Rules around visitors[2], smoking[3] etc..

- Flexibility

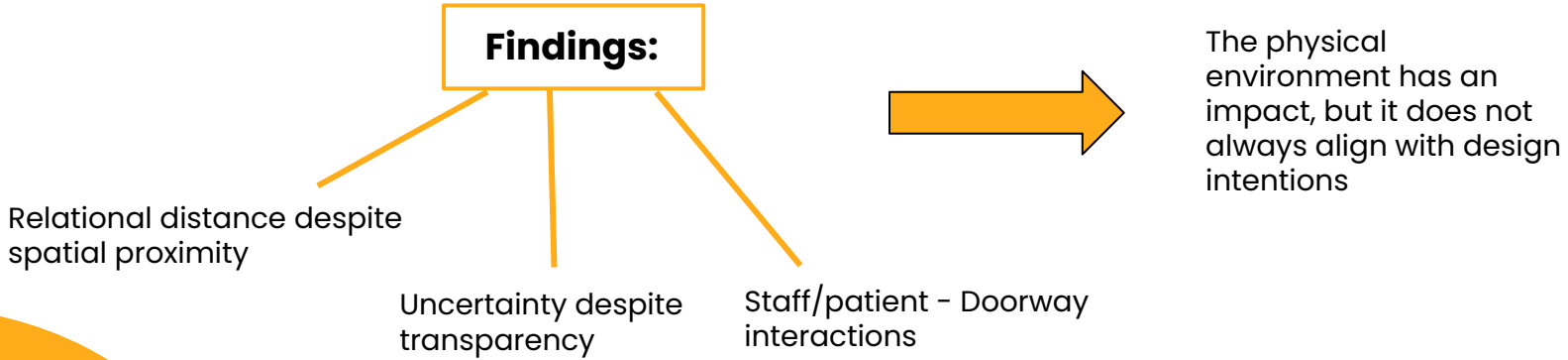
Prevention
- Panopticon theory by Foucault?[2]
- Environments that foster positive staff-patient engagement[2,4]

VISIBILITY AND TRANSPARENCY?

Mutual visibility and interaction: staff reactions to the 'healing architecture' of psychiatric inpatient wards in Denmark

Simonson and Duff (2020)

- Examined two in-patient wards of a **new purpose-built psychiatric hospital in Denmark**
- Fieldwork and semi-structured interviews to obtain how staff experienced working in nursing stations



Next Steps:

Staff-Patient Interactions

- Hierarchies[3]
- Perception of space by service-users is something to think about[1]

"[TLWAV05: One of my favorite spaces is Dr. M's office…Dr. M in general. He's very, very soothing for me. He's very helpful. He's my safe spot or safe place…]" (Sui et al. 2023)

Quant. References

Harpoth, A. et al. (2022). Do improved structural surroundings reduce restrictive practices in psychiatry? *International Journal of Mental Health Systems, 16*(53). https://doi.org/10.1186/s13033-022-00562-7

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Qual. References

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[3]Jenkin, G., Quigg, S., Paap, H., Cooney, E., Peterson, D., & Every-Palmer, S. (2022). Places of safety? Fear and violence in acute mental health facilities: A large qualitative study of staff and service user perspectives. PloS one, 17(5), e0266935. https://doi.org/10.1371/journal.pone.0266935

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[5] Simonsen, T. P., & Duff, C. (2020). Mutual visibility and interaction: Staff reactions to the “healing architecture” of psychiatric inpatient wards in Denmark. BioSocieties, 16, 249-269..https://doi.org/10.1057/s41292-020-00195-4