Healing Architecture: Evidence, Intuition, Dialogue

Stefan Lundin

Symposium in Honour of Roger Ulrich
Chalmers University of Technology 10 December 2015
Between 2005 and 2007, the number of compulsory injections fell by almost one-third per quarter. Restraint cases declined during the same period by almost half. Sickness absence among staff dropped by a third.

Sahlgrenska University Hospital, Östra
In-patient psychiatric care (2006)
2007
The Healthcare Building Award

2009
WAN
2009
Architecture as Medicine –
The importance of architecture for treatment outcomes in psychiatry
2010
Go west, Stefan! Go west ... HCD10
2012
Towards a design theory for Reducing Aggression in Psychiatric Facilities

FIGURE 1: A Design Theory for Reducing Aggression in Psychiatric Facilities

Patient characteristics
Psychopathology

Stress from involuntary admission

Environment Designed to Reduce Stress
- Single patient rooms with private bathrooms
- Ward layout for smaller patient group size
- Movable seating in spacious dayrooms, lounges
- Low noise, good acoustics
- Nature window views
- Garden accessible to patients
- Nature art; no abstract art
- Daylight exposure
- Staff stations close to activity areas, providing good visibility
- Other (homelike qualities, easy wayfinding)

Reduced Patient STRESS

Reduced AGGRESSION

Improved Staff Outcomes
Designing for Calm

BY ROGER S. ULRICH
Published: January 11, 2013

It should come as no surprise that violence in mental health facilities causes psychological and often physical harm to health care workers and patients. What’s shocking is how prevalent it is.

Globally, a third of all patients admitted for psychiatric care are involved in violent incidents, according to a 2011 analysis by researchers at King’s College in London. In Sweden, where I teach, it’s estimated that more than half of psychiatric care staff members are exposed to physical violence each year, an experience mirrored in many other countries.
2014
CAMH - Toronto
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Continued expenditure for structures whose layout, ambience, and appurtenances are informed by guess, fad, or the personal preferences of designers, administrators, healthcare professionals, or even patients themselves—absent solid efforts for aesthetic leanings and unsupported theories with outcomes data to the extent scientifically possible—is frivolity we can no longer afford.

Immoral?
Self-centered?
Evidence – the buzzword ... and the fragrance
Stefan Lundin, the architect of Östra /.../ claimed that he had no prior knowledge of Roger’s 10 concepts. His designer’s intuition, knowledge of the client, and empathy for the patients had led him to a design solution that had, apparently entirely by coincidence, matched the research-informed guidelines produced by a recognized scholar. An intuitive decision need not be a poor decision.

2009
Rågården – Forensic
From Believing to Knowing
What’s evidence?

Is that obvious?
What’s grade?
(Grading of Recommendations Assessment, Development and Evaluation).

• High
• Moderate
• Low
• Very low
2008

A review of the research literature on evidence-based design
Cause and effect!
Environmental Interventiones / Healthcare Outcomes
### TABLE 1: SUMMARY OF THE RELATIONSHIPS BETWEEN DESIGN FACTORS AND HEALTHCARE OUTCOMES

<table>
<thead>
<tr>
<th>Healthcare Outcomes</th>
<th>Single-bed rooms</th>
<th>Access to daylight</th>
<th>Appropriate lighting</th>
<th>Views of nature</th>
<th>Family zone in patient rooms</th>
<th>Carpeting</th>
<th>Noise-reducing finishes</th>
<th>Ceiling lifts</th>
<th>Nursing floor layout</th>
<th>Decentralized supplies</th>
<th>Acuity-adaptable rooms</th>
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<tbody>
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<td>Reduced hospital-acquired infections</td>
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<td>Reduced pain</td>
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<td>Improved patient privacy and confidentiality</td>
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<td>Improved communication with patients &amp; family members</td>
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<td>Improved social support</td>
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<td>Decreased staff injuries</td>
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</table>

* Indicates that a relationship between the specific design factor and healthcare outcome was indicated, directly or indirectly, by empirical studies reviewed in this report.

** Indicates that there is especially strong evidence (converging findings from multiple rigorous studies) indicating that a design intervention improves a healthcare outcome.

2012
Sensory environment on health-related outcomes of hospital patients
Sensory environment on health-related outcomes of hospital patients (Review)

For other aspects [except music, author’s remark] of hospital environments, there are not very many well designed studies to help with making evidence-based design decisions. The studies that have been included in this review show that physical changes made to ‘improve’ the hospital environment **on the whole do no harm**.

(Drahota, et al., 2012, p.2)
In a June 2012 workshop Kirk Hamilton reported that a highly respected physician claimed only 15% of current medicine is based on evidence, so Hamilton speculated that only 5% of potentially useful evidence might be available for architecture.
ok- Stefan ...
- you son of a b....h
what´s your contribution?
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Members of the healthcare staff shall perform their work in accordance with science and best practices.

Law 1994:953 on the responsibilities of healthcare workers, 2 §.
Evidence > Best practice > Intuition
Intuition is a tacit knowledge that have not yet reach consciousness and the level of evidence
“It’s not just ‘intuition,’ not just ‘talent.’ It’s not an unexplainable ‘skill.’ It’s the direct result of contact with basic reality”

(Pirsig, 1974, pp. 277-278)
“Nothing is in the imagination that was not first in the senses.”

René Descartes
”They [designers] must learn to make a decision on the basis of incomplete knowledge...”

(Hamilton and Watkins, 2009, p.215)
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Knowledge grows i dialogue
Designtheory:
Solving a problem by a proposal for it’s solution

- What’s the problem?
- ”Liberate” the clients’ and the staffs’ needs and expectations!
Hand-in-hand:

Facility + Organisation = Truth.
Fears:
- Away from arbitrary!
- Away from personal and subjective decisions!
- Away from aesthetics!
Dialogue
- Form a multidisciplinary group!
- Ask for scrutiny and discussions!
- Form reliable proposals!
- Improve programmes!
- Improve organization!
Healing Architecture: Evidence, Intuition, Dialogue

- summary, conclusions

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Stefan Lundin
Summary / conclusions

• EBD – A Rationalistic Movement with a reductionist and simplistic view of knowledge!
• The search for evidence is important!
• Intuition is a necessary tool for innovation and progress that precedes science and evidence!
• Dialogue make decisions reliable and keeps arbitrary away!
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