

Wood material as a restorative material

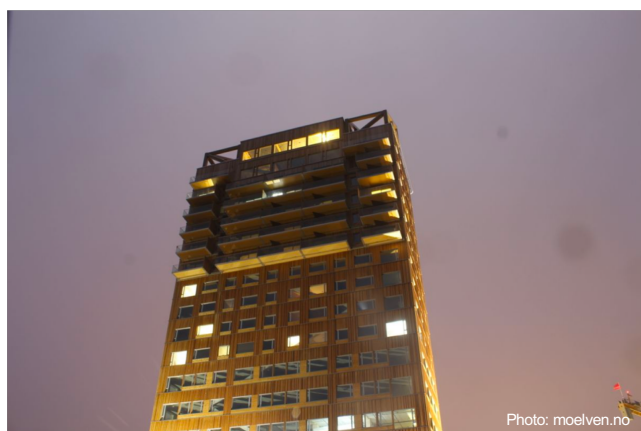
Evidence from Norwegian research

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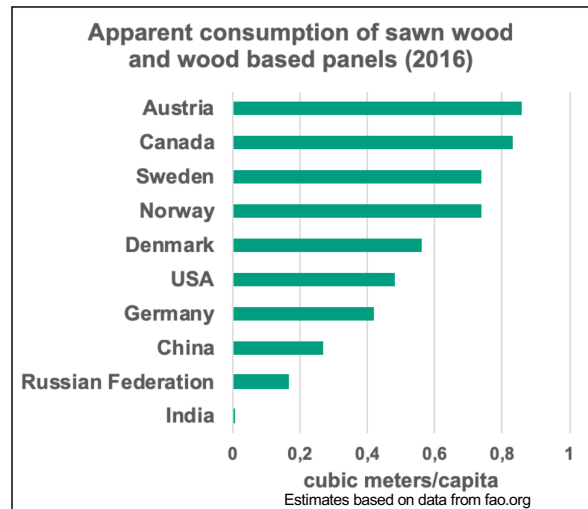
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Use of wood – timber construction

- A natural building material
- Renewable
- Used in most cultures
- Can influence indoor environment
 - Physical properties
 - Experience of environment



How does nature and nature elements affect us?



Nature

- Wilderness, natural landscapes, parks, gardens
- Elements of nature in built settings, window views to nature

Beneficial effects

- Stress-reduction
- More positive feelings
- Faster mental recovery
- Decline in subjective feelings of pain

Environmental psychology

- Interrelationship

Nature ⇔ Health

Natural elements ⇔ Positive psychological effects



Ulrich, R. 1984. View through a window may influence recovery from surgery. *Science* 224:420-421

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Expectations – why do people like wood?

Female, Austria:

I can cite a professor of mine from earlier days: wood is warm, concrete is cold. I still have this in mind. Wood creates warm feelings and is used where these feelings have to be created.

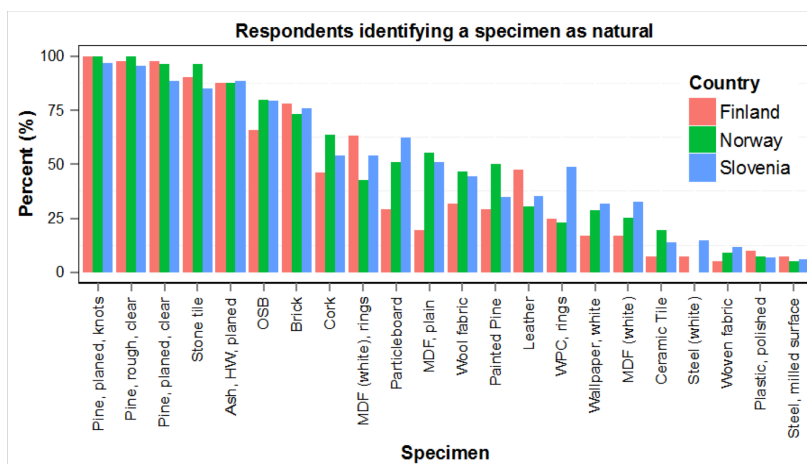


Strobel, K, Nyrud, AQ, Bysheim, K. 2017. Interior wood use: linking user perceptions to physical properties. *Scandinavian Journal of Forest Research* 32:798-806

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Is wood a natural material?

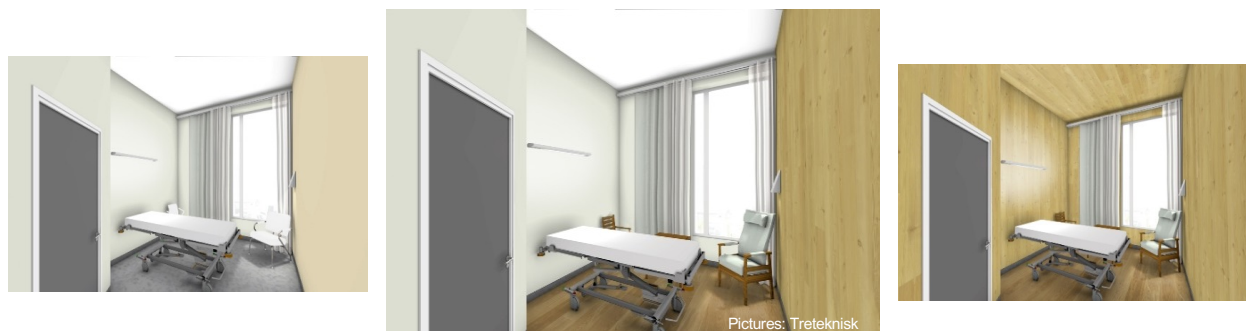


Burnard, M, Nyrud, AQ, Bysheim, K, Kutnar, A, Vahtikari, K, Hughes, M. 2016. Building material naturalness: Perceptions from Finland, Norway and Slovenia. *Indoor and Built Environment* 26: 92-107

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Preferences and emotions



Nyrud, AQ, Brigslimark, T, Bysheim, K. 2013. Benefits from a wood interior in a hospital room: a preference study. *Architectural Science Review* 57: 125-131

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Restorative effect

- Four interiors
 - Wood surfaces
 - White surfaces
 - Wood surfaces and green plants
 - White surfaces and green plants
- Results
 - Wood environments can have a restorative effect



Fell, D. 2010. *Wood in the human environment: Restorative properties of wood in the built environment*. PhD Thesis. University of British Columbia.

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Ulrich 1984 v.s. Nyrud, Bysheim & Bringslimark 2017



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Wood in patient rooms

- Similar study to Ulrich
- Experimental setting in hospital
- Patient rooms, four types
- 210 participants
- Emotions
- Pain and stress
- Other health outcomes

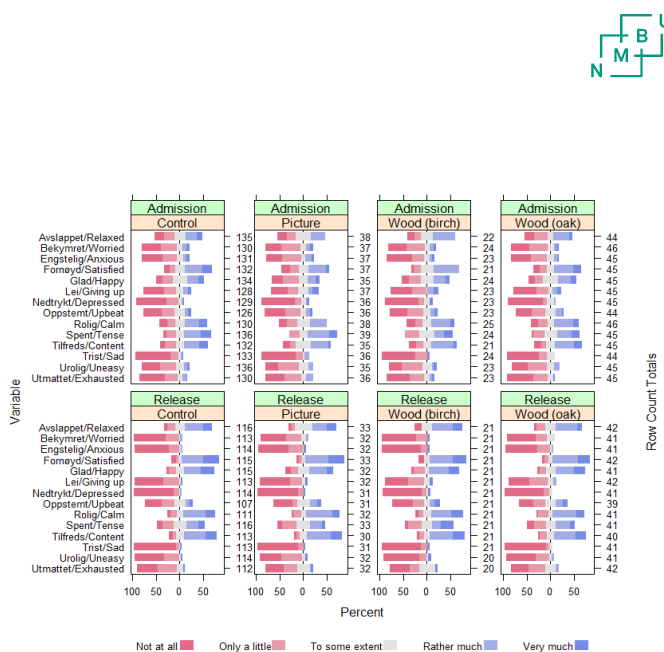


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Outcomes

- Experimental setting in hospital
- Patient rooms, four types
- 210 participants
- Emotions
 - When arriving (*Admission*)
 - When leaving (*Release*)
 - Similar results for all room types

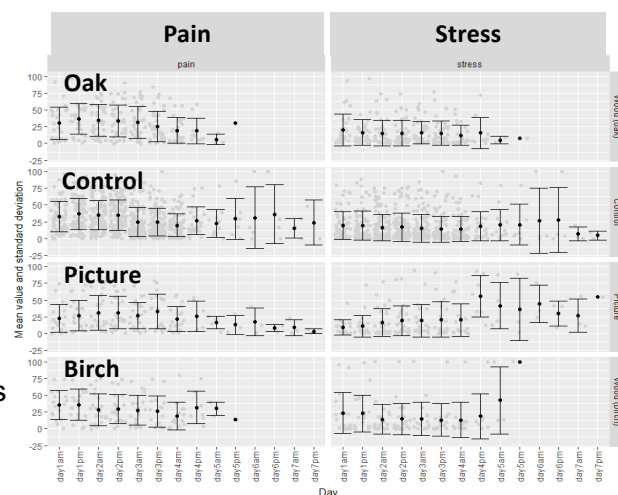


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Outcomes

- Experimental setting in hospital
- Patient rooms, four types
- 210 participants
- Emotions: similar for all room types
- Pain and stress
 - Experienced pain declines over time
 - Experienced stress differs between rooms

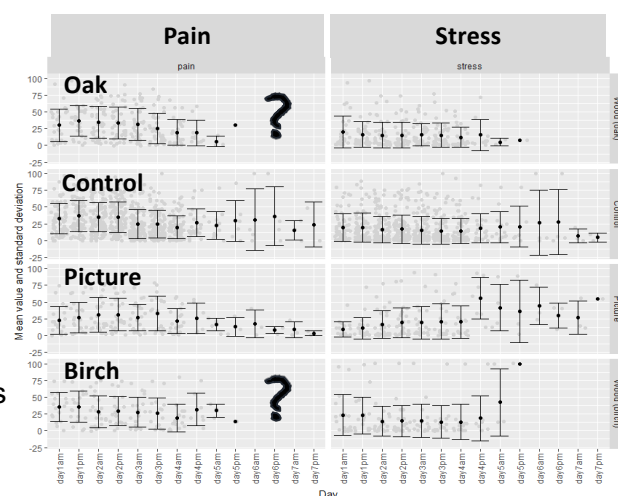


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Outcomes

- Experimental setting in hospital
- Patient rooms, four types
- 210 participants
- Emotions: similar for all room types
- Pain and stress
 - Experienced pain declines over time
 - Experienced stress differs between rooms
 - Duration of stay



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Evidence from current research

- We have some evidence that wood has positive effects
- These effects can be utilized when designing interior environments
- We do not know much about why wood has these effects
- We need:
 - Studies in experimental settings
 - Studies in real-life settings



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