An explorative study on the impact of Daylight and View among Operating Room Nurses

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Introduction

Hospital environment should support the needs of patients and care professionals.

- Staff shortage
- Job satisfaction
- Work stress


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Introduction

Studies reporting the benefits of daylight and view.

- Erros
- Sleep
- Restoration
- Mood

❖ Chaudhury et al. The Effect of Environmental Design on Reducing Nursing Errors and Increasing Efficiency in Acute Care Settings (2009).
Introduction

Current situation in the Netherlands*

- 35% of all 108 hospitals only had no windows OR’s
- 55.5% of all 978 Operating Rooms had no windows

* April 2018
Aim

Identify the benefits of windows in an operating room related to stress, job satisfaction, vitality, seasonal effect, and well-being of OR-nurses.

- Only limited number of studies performed in hospitals

- Alimoglu & Donmez. Daylight exposure and the other predictors of burnout among nurses in a University Hospital (2005)
- Dianat et al. Objective and subjective assessments of lighting in a hospital setting: implications for health, safety and performance (2013)
Method

Online Survey 4 hospitals, 119 responses,

- Female 82%
- OR (68%) Anaesthetics (32%)
- Age 42.2 (±12.4) Yrs old
- Work week 29 (±6) hrs

Questions

- Experience and Evaluation of Work (Dutch, VBBA)
- SPAQ (Seasonal Pattern Assessment Questionnaire)
- ADAC (Activation-Deactivation Checklist)
View

3 groups identified:

1. Never view
2. Always view
3. Sometimes view
Results

Energy during work
- NoV-SometiV**

Recovery after work
- NoV-SometiV*
- NoV-AlwaysV*

Work pleasure
- NoV-AlwaysV**

Emotional reaction during work
- NoV-AlwaysV*

Stress
- NoV-AlwaysV**

* p<0.05, ** p<0.01
Results

Perception on impact of windows

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Results

Satisfaction with lighting conditions

• Nurses always working in OR’s with windows significantly more satisfied with lighting conditions then nurses with never windows.

• 94% of all nurses would like to work in an OR with external windows, 2% without ext. windows
### Conclusion

Working in an OR without window had a negative impact on

- Perceived stress
- Work pleasure
- Energy during work
- Emotional reaction during work
- Recovery after work
- No impact on SPAQ, nocturnal awakenings, fatigue during work, sleep

But, people might be biased
Follow-up study planned

Field study among OR-nurses.

Cross-over design with and without daylight openings in OR.

- Outcome measures
  - Self-reported Stress and Vitality (Experience Sampling Method)
  - Heart Rate Variability (as measure for stress)
  - Continuous light measurements

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Thank you for your attention!

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