The physical work environment in relation to employee work engagement and performance

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Background of study

Initiatives to enhance office workers effectiveness and efficiency, while reducing costs of office space

• New Ways of working / Blended working
• Activity-based offices
• Flexible work-spaces
Physical work environment

- Use
- Activities performed
- Level of control over environment

Worker well-being and performance

- (Need) satisfaction
- Motivation / engagement
- Performance / productivity

Underlying process linking two domains??

Study among users of hubs in governmental offices
WorkSpace hub

A hub is a center around which other things revolve or from which they radiate; a focus of activity that is aimed at stimulating interdepartmental interaction between office workers

- A hub should support various types of activities:
  - meeting people
  - short-term desk work
  - having a (coffee) break
Research aim

To study the underlying process linking aspects of the physical work environment with office workers’ work engagement and performance

- to provide insight in how hubs are being used in governmental offices
- to provide guidelines for the Dutch government on the design and management of hubs
Conceptual model

Physical work environment, work engagement, and performance

- Basic facilities
- Accessibility
- Attractiveness

Behavioral environment
- Distraction
- Interaction
- Activities
- Stimulation

Work-related need satisfaction
- Need for competence
- Need for relatedness
- Need for autonomy

Work engagement
- Vigor
- Dedication
- Absorption

Work performance
- Productivity
- Efficiency
- Quality
Data collection

• Survey (iPad)
• Hubs of four different governmental offices (Utrecht, Den Haag, Amsterdam)
• Visitors of the hub were invited to fill out a questionnaire
• Four weeks of data collection
Survey: Physical work environment

Statements (7-point Likert scale)

• facilities
• accessibility
• attractiveness
• availability of workspaces
• number of power outlets
• connectedness to the rest of the building
• level of comfort of the furniture
• climate in the hub
Survey: Behavioral environment

Statements (7-point Likert scale)
• visual and noise disturbance
• inclination to have meetings in the hub
• feeling at home in the hub
• feeling stimulated when working in the hub
Survey: Work-related need satisfaction

Statements (5-point Likert scale)

• autonomy: respondent can make his/her own work-related decisions
• competence: respondent feels that (s)he is competent in his/her job
• relatedness: respondent feels connected to his/her coworkers
Survey: Work engagement and Performance

WE: Statements (7-point Likert scale)
- vigor: feeling highly energetic while working
- dedication: experience one’s work as significant and meaningful
- absorption: being fully engrossed in one’s work

PE: Statements (5-point Likert scale)
- Productivity
- Efficiency
- Quality
### Sample (N=236)

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Final path model

Physical environment
- Basic facilities
- Connectedness
- Distance
- Comfort & climate

Behavioral environment
- Pleasantness
- Disturbance
- Meetings
- Home
- Stimulation

Work-related need satisfaction
- Need for autonomy
- Need for competence

Work engagement

Work performance

Goodness-of-fit Statistics
- Degrees of freedom: 66
- Chi-square: 114.65
- Chi-square/df: 1.74
- RMSEA: 0.062
- Goodness of Fit Index: 0.934
Physical environment  ➡  Behavioral environment

• All aspects of physical environment have a significant relationship with one or more aspects of behavioral environment (sometimes sequentially):
  
  • Basic facilities, connectedness, comfort/climate -> pleasantness
  • Distance, comfort/climate (-) -> disturbance
  • Comfort/climate -> @ home
  • High quality drinks -> pleasantness (via meetings, stimulation) and @ home
  • Findability -> pleasantness (via meetings) and @ home
Behavioral environment  \[\rightarrow\]  Need satisfaction

- Pleasantness $\rightarrow$ need for autonomy
- Disturbance (-) $\rightarrow$ need for autonomy, need for competence
- @ Home $\rightarrow$ need for competence
- No significant relationships with need for relatedness
Need satisfaction  \[\rightarrow\]  Work engagement

- Need for autonomy
- Need for competence
- Also direct relationship pleasantness -> work engagement
Work engagement -> performance
Also direct relationship need for competence -> performance
Conclusions

• All aspects of physical environment were related to need satisfaction, work engagement and performance via behavioral environment

• Facilities in the hub (sufficient power sockets, variation of workplaces, comfortable furniture, good indoor climate, high quality of drinks) turn out to be most important (compared to, for example, the location of the hub)

• Workers in governmental buildings should be (better) informed about the existence and possibilities of the hub
Future research

• Research in other (type of) organizations / samples
• Observations/reports by others (colleagues, supervisor) in addition to self-reports (only)
• Longitudinal study
Contact

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