

MANAGING FUNCTIONAL COMFORT: designing better workspace

JACQUELINE C. VISCHER, Ph.D.
EMERITUS PROFESSOR
UNIVERSITÉ DE MONTRÉAL



Functional Comfort: what does it mean?

- Years of research on human use of space at work shows how people are affected by physical features
- What we know about how people use workspace in office buildings
- What happens when workspace is not comfortable or safe
- Applying our knowledge to the design of hospitals and health care settings



Assessing functional comfort:

- Workspace as a **tool for work**
- Provides **support** to users' tasks
- Improves ease and efficiency of task performance = **productivity**
- Lack of **functional comfort** means **stress**



Every workspace lies on the continuum . . .

. . . depending on building characteristics, interior lay-outs, and occupants' tasks . . .

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Workspace means:

- Desks and offices for individual work
- Meeting-rooms and conference space
- Informal space for collaborative work
- Nursing stations and Pharmacies
- Patient rooms and corridors
- Surgical suites
- Specialised testing equipment (e.g. MRI)
- Emergency facilities
- Training rooms and lectures/teaching

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Dimensions of functional comfort

- Workstation comfort
 - Spatial comfort
 - Air quality
 - Thermal comfort
 - Lighting quality
 - Daylighting
 - Office noise
 - Building noise
- Appearance / aesthetics
 - Safety and security

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Some result from base building design decisions ...

- *Air quality*
- *Building noise*
- *Thermal comfort*
- *Daylighting*

Some result from interior design decisions ...

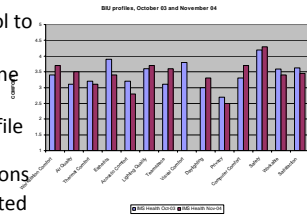
- *Room layouts – access to patients, equipment*
- *Spatial comfort – access to shared space & amenities*
- *Privacy for concentration*
- *Lighting quality*
- *Noise control*

and ‘Building convenience’

- Stairs and elevators
- Bathrooms and coat closets
- Parking
- Main entry, inside and outside
- Security controls

Measuring functional comfort

- Relies on user feedback
- Standardized survey tool to collect reliable data
- Comparison with baseline scores
- Provides diagnostic profile of 'comfortable' and 'uncomfortable' conditions
- Problems can be corrected and improved



Workspace stress:

- Wrong lighting for task ⇒ Sore eyes and fatigue
- Limited access to windows for light and views ⇒ Depression, sleep problems, low morale
- Unergonomic furniture ⇒ Neck and back pain
- Too much noise ⇒ Fatigue
- Distracting sounds ⇒ Inability to concentrate
- Unpredictable temperatures ⇒ Colds, coughs, respiratory problems
- Insufficient places to meet, or to be alone, to get work done ⇒ Frustration, demotivation, low energy
- Inadequate ventilation ⇒ Headaches

Effects on morale and productivity

- Morale
 - Spatial comfort
 - Privacy
 - Lighting Quality
- Productivity
 - Spatial comfort
 - Office Noise Control
 - Air Quality
- Health & Well-being
 - Air Quality
 - Thermal Comfort
 - Lighting Quality

Designing workspace for healthcare personnel

1. Analyse/understand workers' task requirements
2. Gather systematic feedback from users on workspace conditions
3. Identify priorities for correction/improvement
4. Develop design guidelines for new design OR action plan for changes to existing design
5. Implement and measure impact on users' functional comfort / effectiveness



Health care environments provide workspace

Functionally comfortable workspace:

- Ensures worker comfort and safety
- Makes work easier and faster
- Facilitates communication
- Helps users feel in control of their environment
- Is more cost-effective

Functionally uncomfortable workspace:

- May increase risk of errors
- Increases staff stress at work
- Increases staff fatigue
- Slows down task performance
- Limits social contact and collaboration
- Ends up being more costly



Thank-you – merci!

Jacqueline C. Vischer Ph.D.

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