

Evidence-informed health care infrastructures: test of SustHealthv2 tool on hospital pilot cases

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Background:

Healthcare facilities are important node of health systems and several scholars from Public Health and health service field highlighted that high quality and sustainable built environment is fundamental in providing high quality health care services. Nevertheless, most hospital buildings are obsolete, not adequate to contemporary organizational models; additionally, none of the existing quality improvement tools systematically evaluate the built environment. Therefore, the study develops an evidence-informed weighted multicriteria tool and tested it on two pilot case study.

Methods:

Starting from previous literature reviews and scenario analysis, different indicators for hospital quality assessment have been grouped in 17 criteria and 3 macro areas, validated through semi-structured interviews and weighted with Multicriteria Simon Roy Figueras (MCDA-SRF) and Deck Card Method (DCM). The weighted tool SustHealthv2 has been tested on two medium sized hospital pilot case studies (H1 and H2) in northern Italy.

Results:

The tool is composed by three macro areas: Social, Environmental and Organizational qualities respectively accounting for 22%, 29% and 49%. The application and test of the tool highlighted transversal criticalities such as Sustainable Accessibility (H1=0.04/0.16; H2=0.11/0.16), Sensitization and Education (H1=0.06/0.18; H2=0.10/0.18). The most recent case study (H1) was able to achieve higher scores in energy (0.15/0.0.19), waste management (0.07/0.07), as well as future proofing characteristics (0.20/0.23) compared to the older one. Overall H1 scored higher in all the macro areas reaching a total fulfillment of 72/100, while H2 scored 52/100.

Conclusions:

The application of SustHealth v2 on operating health care facilities can support hospital management in defining strategic area of improvements and investments for hospital

building renovation providing higher level of services to patients, users and staff.

Key messages:

- Built environment for healthcare needs systematic evaluation frameworks to improve and contribute to health service quality.
- SustHealth v2 is an evidence-informed multicriteria framework for hospital built environment sustainability and quality assessment from social, environmental and organizational perspective.