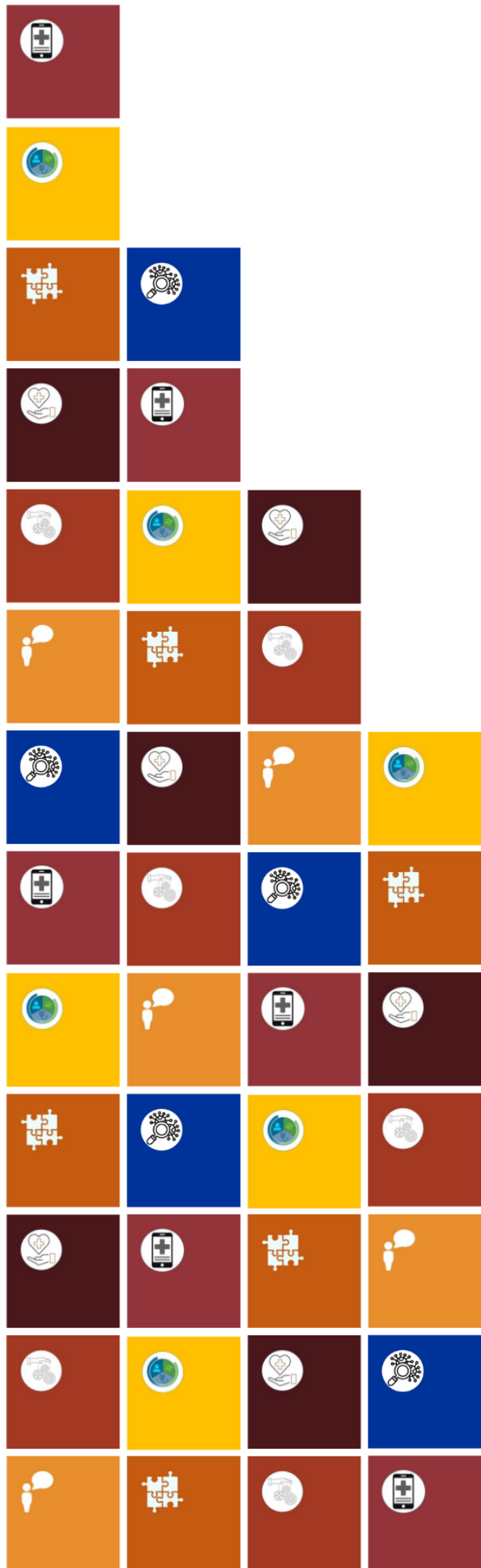


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HEALTH MANAGEMENT:
REALIGNING SYSTEMS,
CONTEXTS AND PLAYERS

ABSTRACT BOOK



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Sustainable and healthy hospitals. How to measure physical qualities?

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Context

Healthcare facilities are complex building types due to the different users, the continuous needs of transformation the relevant integrated technologies and systems, and the building's role as Public Health promoter. They are energy demanding systems active 24 h per day seven days per week. These kind of facilities have the objective of decreasing building energy use, providing a comfortable and healthy environment, and increasing productivity for occupants. Evidence Based Design (EBD) researches clearly show that specific physical features are able to improve patient satisfaction, enhance staff productivity and reduce patient length of stay resulting in considerable economic advantages for the hospital organization.

Research gap

Within the wider framework of Sustainable Development Goals, there is the growing demand for improving overall quality, efficiency and sustainability of hospitals and several methodologies have been developed in order to evaluate, assess, and measure it. Among international recognized quality assessment tools (i.e. Joint Commission International), great importance is given to organizational performances or clinical outcomes but very few actions are available to hospital managers for understanding and improving the physical assets also in terms of sustainability.

Objective

The aim is to critically review the existing assessment tools that evaluate hospital facilities and critically identify in which terms they are able to measure health or sustainability outcomes.

Methods

A literature search has been conducted within relevant scientific databases. Forty-four tools or rating systems have been extracted from full-text assessment and citation snowballing from the collected documents. Exclusion criteria and time variables allowed to include 13 assessment tools for the evaluation of hospital built environment and organization during its operation phase. The percentage and the content of health or sustainability-related criteria have been compared and further discussed.

Results

Tools developed in the 90s such as LEED or BREAM embed up to 70% of the indicators related to environmental sustainability. On the contrary more recent tools such as WELL Building Standard or SustHealth tools include up to 50% of the indicators related to health outcomes. The analysis of those instruments and the discussion of the most relevant ones lead to highlight a gradual, growth of the prevalence of health-related indicators within rating tools for hospital built environment quality assessment. Indeed, while in the nineties and early 2000s, the most recurrent topics were mainly related to environmental sustainability, today, the evaluation of hospital environments tend to include more health-related topics. Specifically, health related criteria in the most recent tools are used three times more than in the tools developed in the nineties. Although sustainability remains a relevant issue to achieve, today it cannot be tackled without considering the impact of built environment on occupant's health.

Discussion

These results are a first step for the dissemination of the value of sustainable and healthy built environmental qualities within hospital organization. Hospital strategic management should base decisions about physical settings on the best available evidence through the support of assessment tools for social, environmental and organizational qualities. Healthcare facilities and especially hospitals environment is important not only for patient's and visitors comfort, as well as essential for health professional's working efficiency, their motivation and final results in healthcare deliveries.