

Health: The Design, Planning and Politics of How and Where We Live

- **Paper / Proposal Title:**

Anatomic consideration of a safe hospital's architecture in the case of external emergency

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- **Abstract (300 words):**

Emergencies can happen in any country, at any time. During emergencies or disasters, hospitals and other health facilities must remain safe, accessible and functioning at maximum capacity in order to help save lives.

Efficient disaster management plan is considered an essential way for hospitals to supply continuous health services during disasters.

Unfortunately, there is often a big gap between what was planned and what actually happens in a major emergency.

Functional collapse, not structural damage, is the usual reason for hospitals being put out of service during emergencies.

Providing appropriate spaces for delivery of medical services for disaster sufferers is one of the actions which should be taken and done even before taking them to hospitals.

Inefficiency of physical spaces in hospitals is one of the most critical limiting factors during external emergencies.

Regardless of disasters and emergencies, hospitals are unique in being a building type with a long overall useful life but a very short lifetime for specific rooms.

Finding proper solutions for inefficiency of hospital spaces in the case of external emergencies in order to make hospitals safe and resilience is a serious issue in the field of hospitals` architecture which requires comprehensive considerations.

In this research, first of all disasters and emergencies were classified according to several guidelines and researches. Following that, disaster and emergency guidelines and related researches have been studied to determine the quality and quantity of required physical spaces in hospitals during emergencies. Also in order to check previous disaster experiences in hospitals, several large-scale disasters` reports including the most recent earthquake happened in Iran on 12 November 2017 have been reviewed.

Variety of functions in hospital spaces, shortness of time during an emergency and dynamics of emergency phases makes providing indispensable adequate hospital spaces more acute and critical.

In the process of preparing emergency response plans for hospitals, there should be involvement of various sectors such as architects in determining the vulnerability of hospitals and addressing these concerns.

Considering the nature and characteristics of probable disasters and emergencies in the location of hospitals is the first step of architectural design of safe hospitals.

As the second step, the functionality of hospital during an external emergency should be checked out in several stages of architectural design with specialists of related sectors like emergency managers, hospital managers, emergency doctors and nurses.

Furthermore , in designing physical spaces , flexibility and future extension plans of hospital spaces which are essential during emergencies should be adopted with the flexibility concepts of these spaces which has been considered for emergency situations .

Also innovative and simple solutions for creating temporary and smart spaces will make the flexibility of hospital spaces more efficient.

• **Author(s) Biography (200 words each):**

Araz TAHERI

I am PhD candidate of architecture in Yildiz Technical University (TURKEY-Istanbul) . Since graduating with Msc of architecture in Iran on 2006, I was interested working in the field of design and construction of healthcare facilities and hospitals beside my architectural design activity in the field of residential buildings . During that period of time I have had several experiences in designing , renewing and developing of healthcare facilities . After starting my PhD in Yildiz Technical University, I focused on researching in the same field . Combining years of technical and constructional experiences with academic research and studies on healthcare design, opened a new and unique prospect for me . This prospect has a essential effect on my business which has been supported by academic researches . The dynamic of hospital architecture motivates me to work on its several aspects .

Prof. Dr. Ş. Tülin Görgülü

She started her academic carrier in Yildiz Technical University (TURKEY-Istanbul) on 1987 . Currently she is the head of building sience branch in university`s architectural faculty . She has several researches in the field of creativity in architectural design and planning . Her recent book published in 2016 with the topic of "revolution of multi-story residential apartments in Turkey".