

# Abstract

In the last fifteen years, the term supportive healthcare environment became widespread within the healthcare services, the market stimulated providers to find ways to attract the patients. At the same time, academic research followed with the newly presented focal goal of the relationship between stress and healing as well as enhancing the influence that the medical environments have on patients, staff, and medical work processes.

The concept of supportive environments refers to environmental characteristics that reduce stress and evoke positive responses from their users on physical, social, and emotional levels. The supportive design goes one major step further by emphasizing the importance of creating environments which facilitate the associated work processes. However, the healthcare managers and designers focus the attention to the design of hospitals which are becoming a small constituent of the whole health care delivery system. Yet, nowadays, ambulatory care has become the major player.

It is a fact, that there is a need to focus on the design of medical environments where the ambulatory care is provided. In this thesis it was approached that accurate methods have to be developed which should be used by the designers to define and to recognize the issues of those environments and their influence on the work process and users. In general the relationships between people and the designed environment is the major concern of the ergonomics-oriented environmental design research.

The thesis embraces a broad literature review. That provided an understanding of the knowledge base of designing medical environments. The knowledge base is classified into two main sections; healthcare design and human factors.

In addition to that, case studies that were performed in Egypt and Germany applied a quantitative and qualitative mixed methodology approach, using a combination of methods and

tools. The case studies involved purposive sampling from various medical disciplines and healthcare facility types, such as medical offices, medical centers, and outpatient departments in hospitals. The fact that the case studies were performed in Egypt and Germany has allowed cross-cultural differences to be identified. It has been assumed that the natural surrounding (being where the problem occurs) is the best place to study the problem, and also the best way to evaluate the methods used in the investigation.

The approach proposed in this thesis is the design strategy where, first the designer is bridging between several disciplines to built interdisciplinary vision and design considerations, and second mixing the use of methods and instruments to determine what staff and patients do know and what they need in the medical environment.

Environmental design research affects designed spaces, which in turn affect how people use, inhabit, or are exposed to them. On this conceptual background, designing a medical environment is a significant issue for designers. The work presented and the structure of this thesis will support the efforts of designers to create effective and affective medical environments. This concept includes two challenges for designers, creating medical environments to be both functionally effective (“it is going well”) as well as to be emotionally affective (“it is affecting well”).