CULTURALLY-SENSITIVE MOTHER-CHILD FACILITY DESIGN

The Physical Environment in Birthing Health Care Spaces

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BAR 613 Research Thesis 2020

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REG: B02/0878/2012
FINAL YEAR THESIS PRESENTATION
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"Life can only be understood backwards ; but it must be lived forwards."
Søren Kierkegaard

Abstract

Culture has undeniable influences on the built forms of the societies in which it is found in. The contemporary maternity design process in Kenya focuses mainly on service delivery, and while this model works for the more culturally diverse urban centers, the marginalized communities struggle to identify with these healthcare spaces. By understanding the culture, one is able to come up with solutions that are appreciated by the community.

This study focuses on a critical analysis into the elements of culturally sensitive hospital design that have been successfully employed in marginalized regions across Sub Sahara Africa and Kenya in particular. This regions face harsh climatic conditions that undermine both the access to healthcare and comfort of patients in hospitals. Therefore, the goal is to study how to harness appropriate solutions from local architecture and transmit it seamlessly into modern hospital design to come up with a fitting solution for these communities.

The study will sample data obtained from three maternities across Africa that have successfully transmitted the local culture into their design. These will cases located within different communities across Turkana, and Karamajong of the Uganda. The maternities chosen all service communities with specific cultural preferences from religion(as is the case with the predominantly Islamic Bukedi region), to the conservative Turkana in Kenya. Through field work and desk reviews of these hospitals, a critical analysis will be drawn that will inform on appropriate conclusions. In addition, a quick study into the local architecture by random sampling will be undertaken to provide the basis on which to draw appropriate strategies from.

The study seeks to establish a pattern of connection between appropriately supporting vernacular traditions to ensure sustainable solutions(Paul Oliver, 2006) and access to health care in these marginalized regions. Also, since culture is a complex whole(Tylor, 1871) that cuts across various aspects of lifestyle, the study will establish a link between the cultural character of a place and transmission of skills and values to contemporary maternity design.

Although the communities in the selected regions reside in hot and dry climate, they have very different approaches to environmental response although ultimately resulting in sustainable solutions that can be borrowed from in the modern maternity design process.

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Abbreviations

AAP American Academy of Pediatrics

dB Decibel

NICU Neonatal Intensive Care Unit

NHDU Neonatal High Dependency Unit

SFR Single Family Room

dBA Decibel A-weighted

KMC Kangaroo Mother Care

CRI Colour Rendering Index

NRC Noise Reduction Co-efficient

KAEDI REGIONAL HOSPITAL, MAURITANIA

The image above shows an aerial view of t he built form of Kaedi Regional Hospital which has been directly derived from the local tradition while making effective use of local resources.

Source: Aga Khan Awards For Architecture, 1995
Retrieved on 15 th July 2019

'Although we live in physical environments, we create cultural environments within them .' (Csikszentmihalyi and Rochberg -Halton, 1981)

1.1 Background

Culturally -sensitive healthcare refers to care that reflects "the ability to be appropriately responsive to the attitudes, feelings, or circumstances of groups of people that share a common and distinctive racial, national, religious, linguistic, or cultural heritage " (Majumdar, Browne, Roberts, & Carpio, 2004).

There is much agreement that the level of cultural sensitivity involved in the hospital design process which is experienced by patients, positively influences their adherence to treatment and, ultimately, their health outcomes . Culturally -sensitive healthcare is the design philosophy in which the needs of all the users, irrespective of their physical abilities are met from the structure, visual environment, way showing and wayfinding. Culturally sensitive health care has also been described as care in which health care providers offer services in a manner that is relevant to patients ' needs and expectations .

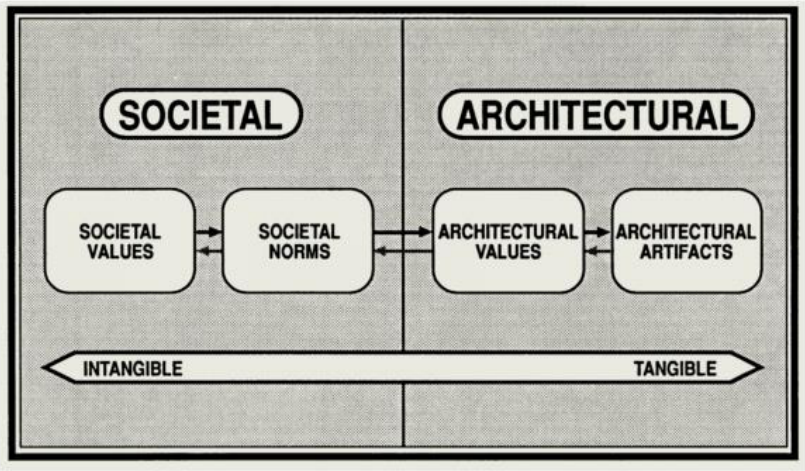
Bogner(2017) suggests phenomenology which involves looking into human experience in built spaces to understand a world wherein people and their environments mutually include and define each other.

Hospitals and healing environments should adapt to the people they are trying to treat and not the other way around. Looking at how people interact and live everyday can inform the design of healthcare systems. From total inclusivity of the community to using building technology specific to that area, this can not only be cost effective in the long term, but also reduce reluctance of the local population in getting medical care.

The aspects of hospital design in the culturally -rich environments to be considered will be patient Safety, Security, Health and Climate. These directly affect patient and staff outcomes which are important parameters of culturally -sensitive design.

Culturally -sensitive healthcare is unique in that it is based on views of culturally homogeneous patients rather than the views of health care professionals.

To create healing spaces , one must be able to understand a user 's need and embody the perception of users. This study is essential to the user since it informs the architect how to identify space characteristics and allocation patterns that make people feel better physiologically and psychologically.



MODEL OF THE RELATIONSHIP BETWEEN SOCIETAL VALUES AND ARCHITECTURE

The image above shows four levels of interrelated values, preferences and choices that affect society 's beliefs regarding suitability and selection of architectural artifacts.

Source: Societal values and architecture, Sanjoy Mazumdar and Shampa Mazumdar
Retrieved on 15 th July 2019

1.2 Problem Statement

In marginalized regions, there is a big ratio of people to medical care. Access to healthcare in these regions remains wanting due to several factors one of which remains to be Culture biases (i.e. unfamiliar hospital environments and traditional practices where more than 60% rely on herbal medicine).

There is an enormous gap between medical care provided in rural versus urban environments, and an even larger gap between the rural agricultural communities and the nomadic pastoralist populations that exists in say, Northern Kenya. Due to reluctance of these populations to access healthcare, there have been high rates of morbidity most of which would have been preventable.

How do cultural -needs of a community affect hospital design? For communities in marginalized areas of Kenya such as West Pokot and Turkana, the communities are more homogenous with strong unique identities compared to the more diverse urban areas. Therefore, a more specific approach would be beneficial in designing healing environments for them.

For instance, the Turkana women refuse to go to conventional maternity clinics and would prefer to give birth at home. This was found out to be due to a specific birthing process non -conventional to the west and therefore the Eurocentric "box -like " hospital design proved unfriendly to the conservative Turkana woman.

MUSLIM WORSHIP HALL, GENERAL HOSPITAL OF NIGER

The image above shows Muslim worship halls scattered in the hospital in the design. In addition, these worship halls can be transformed to temporary camping sites for patients and their families. These responds to the predominant Islamic population of Niamey, Niger.

Source: General Hospital of Niger, CADI ©Liu Chen, 2017
Retrieved on 15 th July 2019

1.3 Research Questions

i. What is culturally -sensitive hospital design and its importance in Architecture?

ii. How do cultural -needs influence the character of space design in hospitals?

iii. What elements of culturally sensitive hospital design can observed from hospitals across Sub -Saharan Africa that have responded to culture and climate?

iv. How can these elements be adopted in the design of culturally -sensitive hospitals to achieve quality healing environments ?

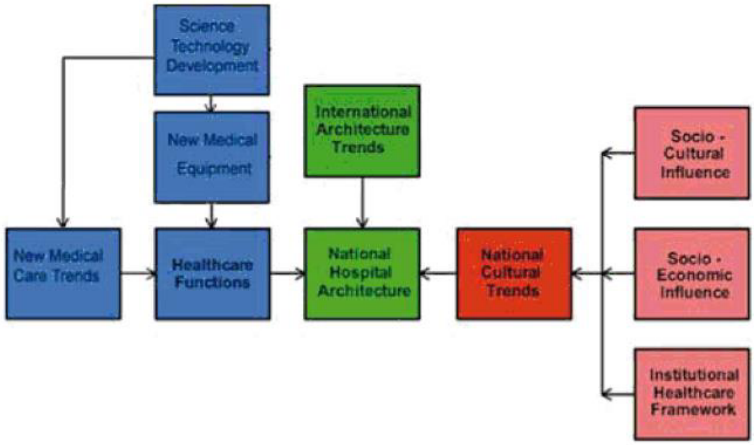
1.4 Research Objectives

i. To understand what culturally -sensitive hospital design is, its origin and importance in Architecture.

ii. To clarify how cultural -needs influence the character of space design in hospitals.

iii. To investigate outstanding examples of hospitals in Sub -Saharan Africa that have maintained the spirit and identity of the people and see which of their elements of hospital design have been restated to respond to climate and culture.

iv. To develop and recommend a set of criteria that will inform culturally -sensitive hospital design to guide stakeholders involved in healthcare in achieving quality healing environments.



Different paradigms of culture that affect hospital architecture

The image above shows how the three aspects of culture affect hospital design parameters.

Source: Culture Aspect in Hospital Design, Zakia Shafie
Retrieved on 15th July 2019

1.5 Justificatio n

The results from this study will serve as foundation for setting realistic expectations for hospitals to meet the cultural and linguistic needs of the populations they serve . By providing a better understanding of the design practices involved in culturally - sensitive hospitals, the gap between current and desired practice will hopefully be bridged.

Why culture? Culture influences many aspects of the built form as culture is the outcome of most aspects in life. It influences behaviour and it is the outcome of behaviour (Zakia Shafie , Culture Aspect in Hospital Design). It influences various areas of healthcare framework both socially and economically. Also, in responding to the culture, one finds that they have simultaneously responded to the climate -needs of the area.

Also, due to the launch of the UHC (Universal Health Care) program in December 2018, counties in the marginalized counties (i.e. Isiolo , Machakos) have reported a rise in the number of patients accessing public hospitals. Improved access to healthcare financing means an increasing demand for an upgrade of existing health care facilities and addition of new state -of-the -art facilities to meet these goals.

Therefore, now is the time to take advantage of goodwill from several stakeholders in healthcare such as the County governments, Ministry of Health and NGOs who are dedicated to improving the quality of healthcare in these regions.

1.6 Scope of Study

This paper would like to address and document culturally -sensitive hospitals in Sub Sahara Africa. The cultural needs will be explained by outlining projects across the Sub -Saharan region.

KONOKONO VACCINATION CENTER IN TURKANA COUNTY

The image above shows corrugated metal supported by structure of scaffolding elements provides shelter against the desert sun, converting the facility into popular meeting place for the Turkana people

Source: Iwaan Baan, 2015
Retrieved on 15th July 2019

Upon prior research into the Turkana County, it was observed that despite the increase in health care facilities (the average distance between hospitals has decreased from 50kms in 2013 to 20 kms by 2016), the numbers accessing these facilities hasn 't improved and mortality rates across the county are still high . This is an underlying issue that the County Government seeks to address. This is what prompted my investigation into how and why the design of hospitals may be potentially influencing access to healthcare within these largely homogenous communities.

Moreover, the county has good case studies for culturally -sensitive hospital design to learn from such as the Konokono Vaccination and Educational Clinic that has employed some contextual sustainable practices .

However, there are some limitations faced during collection of data on this subject such as :

- There is a vast cultural diversity in Sub Sahara and while it would be prudent to study and document how each has responded to their climate and culture, it would be difficult due to the time and budget constraints.
- Also, due to the globalization, most cultures have been watered down with little to no documentation of their built form technologies. Therefore, a desk review of some of the case studies chosen would yield minimal information.