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Author(s):

Adila Zakaria, Norliza Mohd Isa, Taufik Hairudin, Hairul Nizam Ismail

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Department of Islamic Thought and Civilization, School of Social Science and Humanities, University of Management and Technology, Lahore, Pakistan



# **The Satisfaction of the Users with the Islamic Design Quality in Instant Hospitals for Non-Critical Covid-19 Patients in Malaysia**

**Adila Zakaria**

**Dr Norliza Mohd Isa\***

Faculty of Built Environment and Surveying,  
Universiti Teknologi Malaysia, Skudai, Malaysia

**Dr Taufik Hairudin**

Ninewells Hospital, Tayside,  
National Health Service (NHS) Scotland

**Dr Hairul Nizam Ismail**

Faculty of Built Environment and Surveying,  
Universiti Teknologi Malaysia, Skudai, Malaysia

## **Abstract**

Malaysia is currently going through its 3<sup>rd</sup> wave of Covid-19 and the cases have spiked up to nearly 4000/day. This has put an enormous pressure on the Malaysian healthcare system. Therefore, the Ministry of Health has come up with the idea of so-called “instant hospitals” to cope with the excessive number of patients, particularly non-critical Covid-19 patients. As a multi-racial country with Islam as the official religion, the Islamic Principles should be considered in the design of “instant hospitals” to promote Islamic awareness, strengthen the commitment to Islam and ultimately gain Allah’s mercy and forgiveness. The implementation of Islamic Principles in the design of these hospitals will enhance the healing process. The objective of this study is to identify the qualified personages to be selected as respondents and the criteria to implement Islamic design quality in an instant hospital or quarantine centre. This study sifts the satisfaction of the respondents on the basis of the criteria related to the implementation of Islamic design quality. This research has utilised the descriptive and survey-based method rooted in qualitative and quantitative research and supported by Media Content Analysis. From the analysis, new Islamic design criteria for hospitals has been outlined, which is consistent with the qualities in the Islamic Built Environment. The results will influence the Malaysian administrators and designers to develop a better hospital environment with the implementation of Islamic quality for the benefit of all the Malaysians.

**Keywords:** Islamic principles, healthcare design, instant hospital, Covid-19

## **Introduction**

The rapid spread of Covid-19 has become one of the most pressing problems in the world today. Everybody must work together to address this issue at this crucial moment.

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\*Correspondence concerning this article should be addressed Dr Norliza Mohd Isa, Senior Lecturer, Faculty of Built Environment and Surveying, Universiti Teknologi Malaysia, Skudai, Malaysia.at: [norlizaisa@utm.my](mailto:norlizaisa@utm.my)



Tracing the contact among potentially affected individuals and quarantine has been used by healthcare authorities as the main method to slow down the transmission of this infectious disease.<sup>1</sup> The Malaysian Government has taken an initiative to transform a few institutions into instant hospitals or quarantine centres to cater the non-critical Covid-19 patients. All the critical Covid-19 patients are transferred to specific government hospitals for further treatment. The people who are placed in the quarantine centre are divided into three categories, Covid-19 patients (Clinical Stage 1-3), the persons under investigation (PUI) and the persons under surveillance (PUS).<sup>2</sup> The quarantine period previously was fourteen days before the Ministry of Health changed the requirement to ten days only.

The term “instant hospital” here is an emergency speciality field hospital that was built in a very short time in response to Covid-19 pandemic. The Instant Hospital in Malaysia also known as Covid-19 Quarantine and Low-risk Treatment Centre (PKRC) is complete with medical equipment, a pharmacy, an X-ray machine, a pathology laboratory, occupational health and safety services, and a dietician. All the quarantine centres also provide other facilities like television, computer, WiFi and separate working room for healthcare staff.<sup>3</sup> The Government of Malaysia has provided an instant hospital and quarantine centre with at least basic facilities for accommodation and medical equipment depending on the type of places that have been transformed into instant hospitals and quarantine centres and the number of patients that need be catered by each place. The community halls, training institutions, students’ accommodations, prisons, sport complexes, detention centres and hotels are the examples of premises that have been converted into PKRC to cater the non-critical Covid-19 patients, PUI and PUS. However, for some instant hospitals or quarantine centres like in the community halls, the number of patients placed there are higher than in the specific Covid-19 hospitals. So, some issues related to comfort and privacy of the patients have arisen. For example, some quarantine places have limited openings for natural ventilation and lighting. Every type of instant hospital or quarantine centre has different issues that need to be addressed by the designers.

Malaysia is a country where Islam has the status of an official religion. With the fact that the Malaysian community that comprises a Muslim majority of 63.7%,<sup>4</sup> the implementation of Islamic design quality in these hospitals is relevant to promote Islamic awareness and at the same time enhance the healing process. Taking into consideration the broad based nature of Islam as a religion, it is termed universal and is always applied with no boundaries of time and place. On account of this universally and all including scope, Islam takes every creature on the earth its subject. This universality is holistically compatible with the needs of all living creatures on the earth. Therefore it can be said that it is not exclusive for the Muslims alone. On the basis of its dynamic nature, holistic

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<sup>1</sup> WHO, “Considerations for Quarantine of Contacts of Covid-19 Cases.”

<sup>2</sup> Garis Panduan KKM,” Annex 1, updated April 22, 2021. <http://covid-19.moh.gov.my/garispanduan-kkm>

<sup>3</sup> Ministry of Health Malaysia, “Low Risk Covid-19 Quarantine and Treatment Centres.”

<sup>4</sup>Pew Research Center, “The Global Religious Landscape,” 2021.

approach and the capacity to accommodate cultural diversity, the implementation of Islamic design quality is suitable for the Malaysian community.

Being isolated for nearly two weeks is emotionally challenging and has a bad psychological impact for the patients especially if the environment of the quarantine centre is unpleasant. Especially for the Muslim patients, spiritual care is one of the components of their health belief. This study is focussing on the satisfaction of the users on Islamic design quality in Instant hospitals in Malaysia by sifting the public opinions who have been associated with Covid-19 either the healthcare staff (the Front-liners), the Covid-19 patients, PUI or PUS. The questions arise are:

1. Who are the targeted public groups that are associated with Covid-19 that qualified to be selected as respondents?
2. What are the values to measure a certain environment to implement Islamic design quality in an instant hospital or quarantine centre?
3. What is the level of satisfaction on the Islamic design quality in an instant hospital or quarantine centre among Malaysian?

Therefore, the objectives of this paper are first to identify the qualified personages to be selected as respondents and secondly the criteria to implement Islamic design quality in an instant hospital or quarantine centre. Next, this study sifts the satisfactions and opinions of the respondent on the basis of the criteria related to the implementation of Islamic design quality in an instant hospital and quarantine centre in Malaysia. The research issues, the methodology and the findings of this research are elaborated in the next section.

## 2. Instant Hospitals and Quarantine Centres

According to the Ministry of Health, Malaysia (MoHM), the first case of Covid-19 was detected in Malaysia on the 25<sup>th</sup> January 2020 and has spiked up to more than 420 000 cases including more than 31 000 active cases up to May 2021 which is within 15 months only.<sup>4</sup> The World Health Organization (WHO) has declared that Covid-19 as a pandemic in March 2020 after the virus infected almost all the countries around the globe. This virus has taken away thousands of lives around the world and millions more are still fighting for their lives in hospitals. The rapid spread of Covid-19 and no treatment to cure or prevent from the diseases makes the public health authorities opt for a traditional way to slow down the transmission of the virus and protect the community by quarantine and social distancing. Quarantine means the restriction of activities and/or separation of suspected persons who are ill to prevent the spread of infections or contamination.<sup>6</sup> Prophet Muhammad (SAW) preceded both in disease spread prevention 14 centuries ago. The hadiths below really highlight the situation today.<sup>5</sup> Prophet (SAW) said, “If you hear of an

<sup>4</sup> Ministry of Health Malaysia “Situasi Semasa Pandemik COVID-19 Di Malaysia,” <http://covid19.moh.gov.my/> Last modified May 2, 2021. <sup>6</sup>Ibid.

<sup>5</sup> Qur’ān Explorer, “What Islam Says About Contagious Diseases (COVID-19),” 2020.

outbreak of a plague in a land, do not enter it. If the plague breaks out in a place while you are in it, do not leave that place.”<sup>6</sup> Abu Huraira (RA) reported, Prophet Muhammad (SAW) said, “there is no superstitious infection, but do not mix the sick with the healthy.”<sup>7</sup>

Data from epidemiology and virologic studies provide evidence that COVID-19 is primarily transmitted from symptomatic people to others who are in close contact through respiratory droplets, by direct contact with infected persons, or by contact with contaminated objects and surfaces for example, in a household, workplace, or health care centre. WHO has set two scenarios that the implementation of quarantine may apply for other than confirmed cases, (1) for travellers from transmission areas, (2) contacts for known cases. A standard guideline for quarantine centres has also been provided by WHO to ensure that the persons who are physically separated from family and communities are well cared for at the appropriate facilities.

Therefore, The Malaysian government under MoHM has collaborated with the Public Works Department (PWD) to transform a few buildings into a quarantine centre to cater the patients. The first quarantine centre opened in Malaysia is Higher Education Leadership Academy (AKEPT), Nilai in early February 2020 for the first group of Malaysians coming home from the origin place of Covid-19, Wuhan, China.<sup>8</sup> Now Malaysia has provided 334 quarantine places including 72 PKRC with total bed strength 11802 beds to cater all active cases. The largest quarantine centre is Malaysia Agro Exposition Park Serdang (MAEPS) which is the largest expo centre that transforms into an instant hospital or quarantine centre. MAEPS can accommodate up to 1650 patients at one time and has also become an integrated hospital complete with Intensive Care Unit (ICU) to treat critical Covid-19 patients (stage 4 and 5) since late January 2021.<sup>9</sup>

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<sup>6</sup> Muhammad b Ismail Bukhari, *Sahih Bukhari*, The Book of Medicine, Hadith 43, <https://sunnah.com/bukhari/76/43>

<sup>7</sup> Muhammad b Ismail Bukhari, *Sahih Bukhari*, The Book of Medicine, Hadith no. 34, <https://sunnah.com/bukhari:5717>

<sup>8</sup> Bernama, “Covid-19: 66 Arrive at Monitoring Centre for 14-Day Quarantine,” *The Sun Daily*. February 26, 2020.

<sup>9</sup> Khairulrijal, “Covid-19: MAEPS Transformed into Massive Makeshift Hospital,” *New Straits Time*. April 5, 2020.



**Figure 1.** Instant Hospital at MAEPS, Serdang

### 3. Islamic Design Quality

Malaysia has been a pioneer in introducing Islamic concept and *Sharī'ah* compliant products over the last few decades including in healthcare services. Implementation of Islamic design quality in instant hospitals and quarantine centres must consider these two elements, (i) Islamic principles and (ii) Islamic Built Environment (IBE) as main components in the design. However, implementing Islamic design quality in an instant hospital or quarantine centre which are not product-oriented like an Islamic bank, but is rather an organization with the scope of work, procedures and staffing requirements shall comply with *Sharī'ah* or Islamic principles in its totality. Islamic aspects in an instant hospital or quarantine centre are a universal value and approachable by all which goes beyond the physical realm of providing the physical facilities to only the physically sick. The design should accommodate in its functionality, features that could enhance remembrance of God (Allah) without decrementing the required clinical procedures of infection control and good medical practices accepted worldwide.

#### 3.1 Islamic Principles

As a multi-racial country with Islam as the official religion, the Islamic principles should be considered in the design of “instant hospitals” or quarantine centre to promote Islamic awareness, enhance self-esteem, strengthen the commitment to Islam and ultimately gain Allah’s mercy and forgiveness. Man is worth in the eyes of men by the good he does. Man is worth in the eyes of Allah is determined by his obedience to Allah. The concept of quality in Islam should promote mercy for all mankind. Islam is relevant to everyone on the earth. Islam is not exclusive or specific to some creatures or some people only. Islam is able to cater for all human needs based on the principles of justice, peace, freedom and equality.<sup>10</sup> The implementation of Islamic principles will facilitate *ibadah* in all aspects of life

<sup>10</sup> Norliza Mohd Isa, and Ismawi Zen, “Islamic Built Environment Perception in Malaysia,” *The International Journal of Religion and Spirituality in Society* 2, no. 2 (2013): 53-64.

including healthcare and will also govern individual and societal affairs in life to uphold justice, mercy, wisdom and common good among humans and also man's

relationship with nature. Implementation of Islamic criteria in hospitals includes architectural design, services that are open to all regardless of religion or creed, and holistic patient care in respect to physical, mental, emotional, spiritual and social needs.<sup>11</sup>

Basic characteristics of Islam are simplicity, rationality, and practicality. Islamic principles are simple, straightforward, intelligible with no mythology. Basic beliefs of Islam include Allah is One (*Tauhīd*), Prophet Muhammad (SAW) is the Messenger of Allah to guide people, and the concept of life after death. Islam does not have any hierarchy of priests or complicated rituals. In Islam, *Sharī'ah* is a law with fundamental religious concepts. It is a command from Allah for the Muslims to follow. Two main sources for *Sharī'ah* are the Al-Qur'ān and Hadīth. The implementation of *Sharī'ah* Principles is primarily dealing with "*Maqāsid Sharī'ah*" which specifically means the goals and purposes of *Sharī'ah*.

Islamic Scholars have sorted that the purposes of *Maqāsid Sharī'ah* by taking all that is good (*Maslahah*) and rejecting the difficulties (*Mashaqah*), including five areas based on their importance, (i) protection of religion (*hifzh ad-deen*), (ii) protection of life (*hifzh an-nafs*), (iii) protection of mind (*hifzh al-aql*), (iv) protection of progeny (*hifzh an-nasl*) and (v) protection of wealth (*hifzh al-mal*).<sup>12</sup> Implementation of *Maqāsid Sharī'ah* also has consideration of situations that may lead to severe disruption of life (*dharurat*) which also protects *Maqāsid Sharī'ah* during a hard time. Even in an instant hospital or quarantine centre, some of the patients who are in Stage 3 and above are in a *dharurat* situation which will allow them to have exceptions (*rukhsah*) when performing *ibadah*, especially *solat* and *wudhu*.<sup>15</sup> By taking *Maqāsid Sharī'ah* into part of design consideration, the Islamic qualities like tolerance, intelligibility, privacy, safety, and purity have been identified and proved that Islamic design quality is not just superficial like calligraphy.

The doctrine of Islamic principles includes the relationship between man and Creator, man and man, and man and environment.<sup>13</sup> Instant hospitals or quarantine centres with Islamic design quality shall provide the environment and services that bring the staff and the patients closer to Allah SWT in all situations and conditions. Therefore, the implementation of Islamic principles in hospital design will enhance the healing process. The design also creates awareness on seeking the pleasure of Allah, efficient to all users especially the staff and the patients, and respecting the environment. To implement Islamic design quality into an instant hospital or quarantine centre in Malaysia is more complicated

<sup>11</sup> Omar Hasan Kasule, "Islamic Hospital Guidelines: A Place to Share about How to Manage a Hospital Based on Islamic Values," 2011.

<sup>12</sup> *Islamic Hospital Guidelines*, Prof. Dr. Hafeez Ur Rahman Prof. Dr. Aly Mishal Prof. Dr. Najib Ul Haq Dr. Ishak Mas'ud Dr. Muhammad Irfan (Eds.), (Peshawar; Peshawar Medical College: Prime Foundation Pakistan & Pakistan Islamic Medical Association, 2017), 25-26, [http://prime.edu.pk/newsite/docs/Book\\_on\\_IHC\\_Guidelines.pdf](http://prime.edu.pk/newsite/docs/Book_on_IHC_Guidelines.pdf) <sup>15</sup>Ibid., 11, 31-38.

<sup>13</sup> Ibid., 59-61.

due to its multi-racial communities and different from the implementation of other Islamic countries.

### 3.2 Islamic Built Environment (IBE)

During the Islamic medieval era, hospitals known as *bimaristan* were the great achievement and one of the high standards in the Muslim society. The hospital concept and planning worked very well with the environment and the context of the Islamic society. They put environmental elements as the main consideration in the hospital design that could help to enhance healing.<sup>14</sup> There are studies showing that a patient's recovery time can be reduced by good hospital designs. Depression, stress, and anxiety of patients can be reduced by their exposure to nature, daylight, scenic views and greeneries.<sup>15</sup>

IBE is a situation or setting that encompasses the combination of created elements (spaces, places and structures) with the implementation of Islamic ideology to serve human needs and values. The concept considers the suitability of people's lifestyle (both the Muslim and non-Muslim) by symbolizing. Both the spiritual and physical essences of Islam.<sup>16</sup> The requirements of the environment should be addressed as naturally as possible to tangible and workable spaces as the part of architecture elements. The building form supposedly practical as the function, efficient, suitable materials and technology and economic. The form is also designed for human beings, respecting scale and proportion, filled with humane spaces.

As underlined in the IBE frameworks, Islamic design qualities supposedly not only being represented by the external aesthetic values, but more important values are on the aspect of (i) tolerance, (ii) human comfort, (iii) cleanliness, (iv) intelligibility and userfriendliness, (v) natural environment and (vi) safety and well-being. There are subelements in every aspect to ensure the satisfaction value on Islamic design quality are in totality. The existing design of an instant hospital or quarantine centre has been equipped with the facilities for spiritual performance (prayer room), and segregated spaces between gender, but they still lack certain Islamic design quality. It is understandable because instant design during pandemic and the government must cater large numbers of Covid-19 patients despite budget and time constraints.

Therefore, this study will focus to gauge the consumers at instant hospital's satisfaction with these six values. This issue is the basis of this research in the search for answers to

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<sup>14</sup> Norwina, "Islamic Perspective to Healthcare Architecture -an Overview of the Medieval Islamic World with Case Study of Contemporary Healthcare Architecture in Malaysia," (2002), 1727.

<sup>15</sup> Yuhgo, Yamaguchi, "Better Healing from Better Hospital Design," 2015.

<sup>16</sup> Norliza Binti Mohd Isa, "Developing a Definition for Islamic Built Environment in Malaysia by Sieving Through the Interpretation of Public Opinion Shapers," PhD Dissertation (Kuala Lumpur: Kulliyah or Architecture and Development: International Islamic University, Malaysia, 2015).



study on fundamental “Islamic design quality” for instant hospitals and quarantine centres in Malaysia which could be the guidelines for healthcare authorities to manage the patient’s placement during emergency or lockdown by providing better facilities in future with consideration in Islamic design quality. The built environment for instant hospitals or quarantine centres shall consider the Islamic design quality so that the hospital can be considered as IBE. This is to ensure that the instant hospital is safe for the consumers and at the same time have applied Islamic design quality.

#### 4. Research Methodology

This research is descriptive, and survey based rooted in qualitative and quantitative as the primary methods and supported by Media Content Analysis as secondary data. This descriptive research will describe the characteristics of Islamic design quality and the situation in instant hospitals and quarantine centres. The first research method used structured and semi-structured questionnaires for primary data collection. The questionnaire comprises structured as well as semi-structured questions which require respondents who belong to an appropriate group of publics who have been associated with Covid-19 in Malaysia to answer a series of statements and questions through online survey forms. The questions included their experience and satisfaction on Islamic design quality in instant hospitals or quarantine centres for Covid-19 patients in Malaysia and their suggestion for improving the design quality in future. There are three requirements for the identification of respondents; (i) knowledge and experience, (ii) capacity and willingness to participate, and (iii) sufficient time to participate.

This research will also involve secondary data collection using the Media Content Analysis (MCA) to support the outcome from the survey method. MCA is the deconstruction of pieces of media with a tendency towards either quantitative or qualitative research methods. MCA looks directly at communication through texts or transcripts and gets at the central aspects of social communication. MCA is a subset of Content Analysis which focuses on the media. The media consists of books, magazines, online articles, journals, letters to the editor, as well as social media. MCA must be performed accurately without bias to achieve the aims of describing, with optimum objectivity, precision, and generality, what is said in each place at a given time.<sup>17</sup> MCA brings in-depth insights into perceiving the research in the media.

This research will use thematic analysis to administer the responses and analyses using computer application ATLAS.ti for the data analysis process.<sup>18</sup> As a result, from the interpretation surveys and analysis of this research, new Islamic design criteria for hospitals will be outlined that is consistent with the qualities in the Islamic Built Environment. The questionnaires were distributed to the targeted public groups through an

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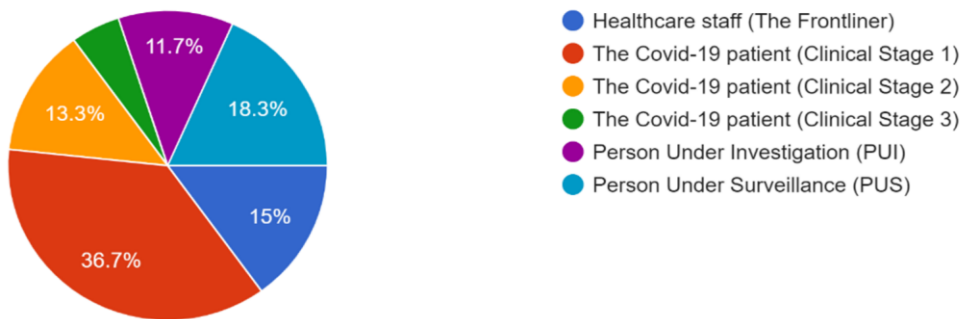
<sup>17</sup> Macnamara, “Media Content Analysis: Its Uses, Benefits and Best Practice Methodology,” *Asia-Pacific Public Relations Journal* 6, No 1 (2005):1-34.

<sup>18</sup> Kalpokas Neringa, and Radivojevic Ivana, “Sentiment Analysis in ATLAS.Ti Cloud.” atlas.ti, 2021.

online survey form and the respondents were required to submit their responses online for the analysis process in the next stage. These research methods were selected for this study according to the purpose to study users' perception on Islamic design quality in instant hospitals.

#### 4.1 Sampling

The target groups for this research were divided into four main categories: (i) The healthcare staff, (ii) Covid-19 patients (Stage1-3), (iii) PUI, (iv) PUS. These groups were selected as per their association with Covid-19 either as patients, close contact to the known cases, travellers from overseas or healthcare workers. They were the main users of instant hospitals and quarantine centres. Their opinions and perceptions on valuing Islamic design quality in instant hospital or quarantine centre were the main points to achieve the objectives of this study. This study evaluated at least 60 respondents based on the rule of thumb of 10 samples per every measurement variable.<sup>19</sup> This research targeted at least 60 respondents for survey from those four categories who were quarantined or working at a quarantine centres around Malaysia.



**Figure 2.** Percentage of Respondents according to the Categories

Six values of Islamic design quality were measured, which are tolerance, human comfort, cleanliness, intelligibility and user friendly, natural environment, and safety and well-being. The evaluation in this study consisted of the “satisfaction and implementation” section for all six categories of Islamic design quality and overall. Table 1 shows the elements included in each value of Islamic design quality.

<sup>19</sup> Joseph F. Hair Jr. et. al., *Multivariate Data Analysis*, 7<sup>th</sup> Edition (Pearson, 2009).

**Table 1. Elements in Islamic Design Quality Values**

Tolerance	Human comfort	Cleanliness	Intelligibility & User-friendly	Natural environment	Safety & Well-being
Socializing area	Room / sleeping area	Toilet and bathroom	Arriving area	Natural element	Access
Eating area	Privacy	Prayer room	Reception area	Natural lighting	Security area
Management	Peaceful	Kitchen	Easy access	Natural ventilation	Surveillance
	Thermal comfort		Space arrangement	Biophilic design	

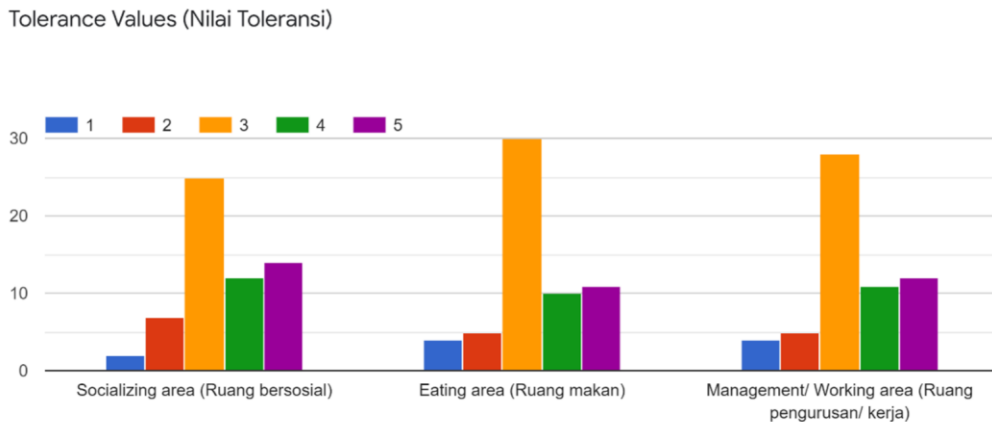
### 5. Anticipated Outcome

These are the initial results from the survey of “satisfaction and implementation” of Islamic design quality in hospitals or quarantine centres in Malaysia.

#### 5.1 Satisfaction

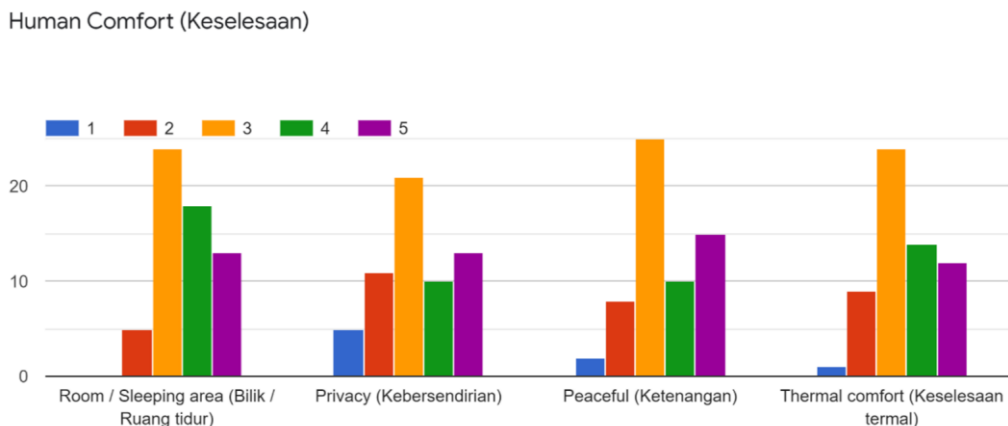
This section shows the result of respondents’ satisfaction on the six values concerning Islamic design quality in instant hospitals or quarantine centres from Figure 3 to Figure 8. The satisfaction levels measured on each element are based on that ranked by the respondents from very dissatisfied (1), to very satisfied (5). Every quarantine centre in Malaysia has pros and cons on its Islamic design quality values. The differences of satisfaction level among respondents on the values depends on the quarantine places that they were placed. The respondents in this survey have been placed in different places based on their categories such as the hospital for Covid-19 patients stage 2 or 3, PKRC like community halls and training centres for Covid-19 patients stage 1 and PUI, and hotels for travellers who are also known as PUS.

Figure 3 shows satisfaction level of respondents about tolerance values at socializing area, eating area and management or working area. Tolerance is the most important value in Islamic quality that needs to be considered in design. In some quarantine centres such as hotels or training centres like AKEPT, respondents were placed individually. That means they do not have a socializing area. Meanwhile respondents who were placed in community halls such as MAEPS, they highlighted that socializing spaces provided have tolerance values which encourage them to have better communication and activities with other people and at the same time help them fight their stress and anxiety. For healthcare workers, working spaces that are provided at an instant hospital or quarantine centre are also very sufficient for them. Some of the respondents did not agree with tolerance values at eating areas and management areas because of limited spaces that cater many people at the same place.



**Figure 3.** Respondents’ Satisfaction with Tolerance Values in Socializing Area, Eating Area, and Management or Working Area

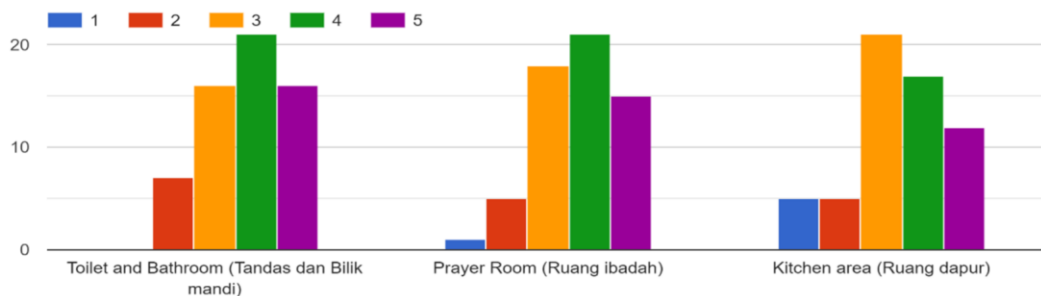
Satisfaction level among respondents on human comfort shown in Figure 4 indicates human comfort including room or sleeping area, privacy for respondent, peaceful, and thermal comfort. Privacy is one of the most important values in Islamic quality to protect *aurat* issues even with the same gender and protect the valuable properties. Covid-19 patients who were placed in hospitals were more satisfied with the quality of privacy and peace than those who were placed in quarantine centres such as MAEPS. Their privacy and comfort satisfaction level were in a way better mainly because they were placed with a smaller number of people in one room or individual room. While respondents in community hall had to share the spaces with more people. The respondents who were placed in a quarantine centre with air-conditioned environment were satisfied with the quality of thermal comfort.



**Figure 4.** Respondents’ Satisfaction with Human Comfort Values in The Sleeping Area, Privacy, Peaceful and Thermal Comfort

Cleanliness and hygiene are part and parcel of faith.<sup>20</sup> This hadith highlighted that cleanliness and hygiene is another important value in Islamic quality that needs to be considered. Satisfaction level about cleanliness value measured at toilet and bathroom, prayer room and kitchen area. Some respondents raised their dissatisfaction on the toilet, bathroom and prayer room area because of the limited number of toilets and prayer rooms for a lot of people. In some quarantine centres, there were no specific prayer rooms provided.

Cleanliness / Hygiene (Kebersihan / Kesucian)

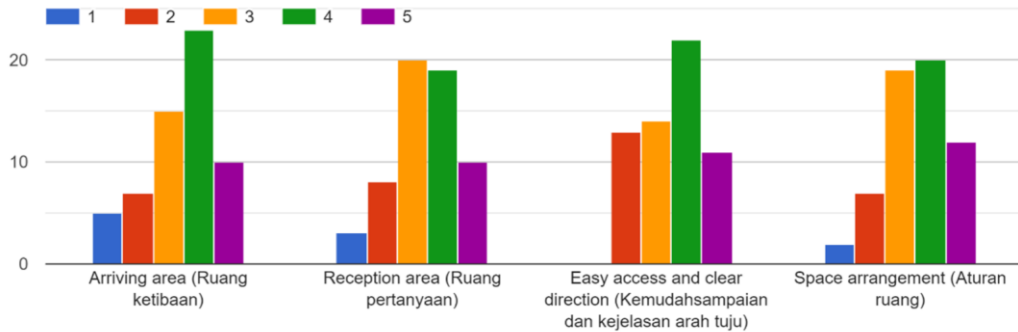


**Figure 5.** Respondents' Satisfaction with Cleanliness and Hygiene Values in Toilet And Bathroom, Prayer Room and Kitchen

Satisfaction about intelligibility and user-friendly value was measured in arriving area, reception area, easy access and clear direction and space arrangement as shown in Figure 6. However, from the survey, the instant hospital or quarantine centre design lacked intelligibility and user-friendly values especially on arriving and direction. Most of the respondent's complaints were that they had to wait upon arrival for more than 2 hours before they were placed in their room or space. Then the direction and accessibility was not clear for certain quarantine centres.

<sup>20</sup> Muslim b Hajjaj, *Sahih Muslim*, The Book of Purification, Hadith no 432, <https://sunnah.com/muslim>: 223.

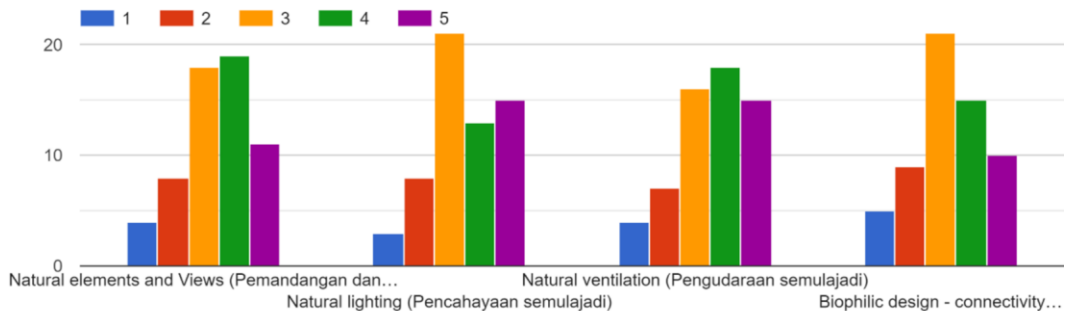
Intelligibility / User-friendly (Kemudah fahaman / Mesra Pengguna)



**Figure 6.** Respondents’ Satisfaction with Intelligibility and User-Friendly Values on Arriving Area, Reception, Easy Access and Direction, and Space Arrangement

From Figure 7, the study found that the design of instant hospitals still lacked natural environmental values especially in large halls which had been converted into instant hospitals like MAEPS as these premises were fully air-conditioned. Once a respondent was registered to be quarantined in an appointed community hall, he/she was allowed to move only within the enclosed hall until their quarantine period ended. Unfortunately, this means that they were unlikely to get to any scenic views, natural ventilation or natural lighting which are important to enhance the healing process. The relationship between man and environment is one of the planning doctrines according to Islam as lot of previous studies highlighted the importance of natural environment in design.

Natural Environment (Persekitaran Semulajadi)

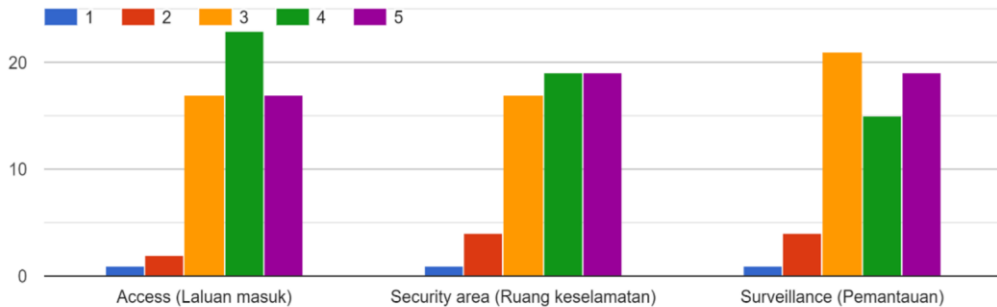


**Figure 7.** Respondents’ Satisfaction with Natural Environment Values Including Natural Elements and Views, Natural Lighting, Natural Ventilation and Biophilic Design

Based on the survey, the highest satisfaction levels were about safety and well-being at the quarantine centres. The access flow to an instant hospital or quarantine centre are well-

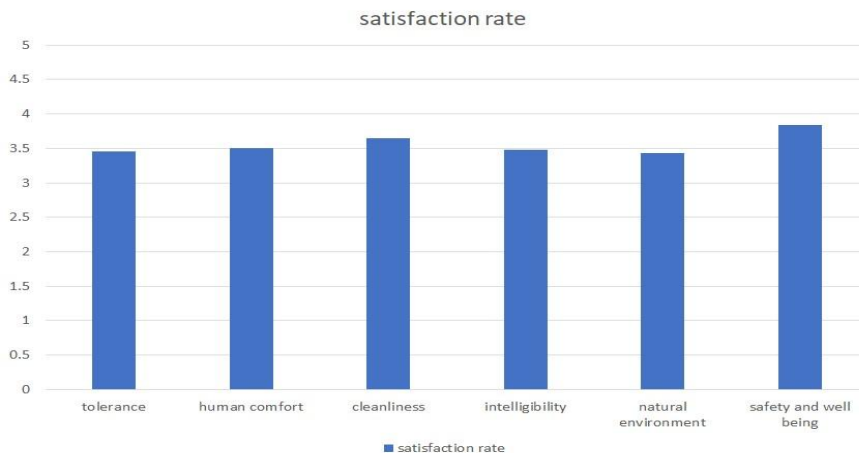
planned to the users. Majority respondents also agreed that the instant hospital or quarantine centre is safe and secure in all aspects. It shows that the Malaysian government had addressed safety issues in these centres very well.

Safety and Well-being (Keselamatan dan Keselesaan)



**Figure 8.** Respondents’ Satisfaction with Safety and Well-Being Values Including Access, Security Area and Surveillance

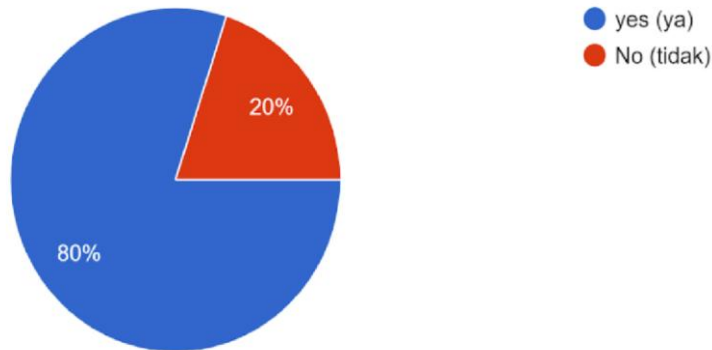
Figure 9 shows that overall respondents were generally satisfied with the Islamic design quality in the quarantine facilities that they were placed in. However, from this survey, the satisfaction level from the respondents were influenced by the type and condition of the quarantine centres, the status of the respondents (healthcare staff, Covid19 patients, PUI or PUS) and other external factors such as their acceptance and expectations.



**Figure 9.** Respondents’ Satisfaction with Each Value of Islamic Design Quality in Instant Hospital or Quarantine Centre in Malaysia

## 5.2 Implementation

This section presents the initial results of measuring respondents' opinion on the overall implementation of Islamic design quality values in hospitals or quarantine centres that they were placed at.



**Figure 10.** Overall Implementation of Islamic Design Quality in Instant Hospital or Quarantine Centre in Malaysia

The majority of the respondents agreed that Islamic design qualities have been implemented appropriately in instant hospitals or quarantine centres they had been placed in. Three main issues that raised the concern of respondents were natural environment, privacy and arriving. Natural environment is one of the main values to consider in Islamic design quality. One of Islamic planning doctrine is the relationship between man and environment, that means natural environment must be considered in design to ensure that the instant hospitals or quarantine centres appropriately implement Islamic design quality.

Next is the privacy issue which was raised by most of the respondents at community halls and MAEPS. They were placed in the large halls and separated by partitions and some of them were placed at double decker beds without any partitions. This situation made the respondents feel they had no privacy at all during the quarantine. The designer should consider privacy issues in future especially privacy is related to *aurat* even though among the same gender. The third higher issue to consider is intelligibility of the arriving area. Most of the respondents faced difficulties during arrival. Arriving areas need to be welcoming and have proper directions as these affect respondents' experience and help in reducing stress or anxiety.

Other than these three issues, some of the respondents suggested the design should emphasize on the comfort and practicality of praying space for the Muslim staffs and patients. Some instant hospitals or quarantine centres had very limited spaces for praying areas. The design also should be tolerating and friendly towards non-Muslim.



## 6. Conclusion

This study is beneficial for Malaysian administrators and professionals in building environment industries to gain a better understanding and more comprehensive information on Islamic design quality. According to the survey, majority respondents agree that Islamic design qualities have been implemented appropriately. However, the natural environment scored the lowest satisfaction value in the existing instant hospitals or quarantine centres. Therefore, this study suggests that the natural environment should be considered in order to achieve an appropriate Islamic design quality. The results hopefully will help designers to design and develop a better ‘instant hospital’ as the quarantine centre environment particularly with Islamic design qualities taken into consideration which will be able to enhance the healing process by creating a more convenient and pleasant environment for Covid-19 patients.

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