

***A Spiritual Aesthetic within Islamic Patterns in the Interior Design of
Hotel Rooms: A Case Study of Hotels around AL-Haram in the Holy
Cities of Saudi Arabia***

A thesis submitted in partial fulfilment of the requirements of Bournemouth
University for the degree of Doctor of Philosophy by

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Date: March 2021

Bournemouth University
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Abstract

According to the Saudi government's 2030 vision, numerous modern hotels are planned to accommodate more pilgrims in the holy cities of Saudi Arabia (Makkah and Medina). Normally pilgrims come to these cities to connect with their spirituality and to worship, and so they prefer to stay near the Grand Mosque in Makkah or the Prophet's Mosque in Medina. Typically, designers plan hotel chains based on a predetermined design that lacks an awareness of the traditional designs of a local area, and therefore does not reflect an Islamic identity or the preferences of pilgrims.

Consequently, this research aims to realise pilgrims' preferences for Islamic patterns in hotel rooms by identifying the interior design elements of Islamic patterns in hotel rooms and understanding the perception of Islamic patterns in relation to spiritual aesthetics.

This study is based on a qualitative inductive approach. The data was collected using a case study strategy in three phases via semi-structured interviews, and was then analysed according to a thematic analysis technique.

The main findings of this research are related to Islamic patterns; key design elements were identified, which include colour, lighting, style, and material. Secondary design elements were also important according to the participants such as: pattern size, pattern form, pattern format and the multi-layers of the pattern. Supplementary design elements are also important, and will increase a user's satisfaction with their surroundings, which include the room view, room layout and space, and its relationship with nature. The findings of this study also reveal that satisfaction is linked to spirituality in the environment. Pilgrims perceived Islamic patterns in hotel room design holistically. The study also ascertained that Islamic patterns in interior design are critical for informing a pilgrim's perception of spiritual aesthetics, which is created by combining cognitive, physiological and emotional responses.

This research makes both an academic contribution and a design contribution. The academic contribution involves the spiritual aesthetics within the framework of Islamic patterns (the spiritualscape via Islamic patterns). The data has revealed several interesting and valuable elements that effect the perceptions of hotel guests. The design contribution lies in proposing guidelines to help designers enhance the spiritual aesthetics in a hotel room using Islamic patterns in interior design. The research also

has commercial importance in raising the awareness of hotel directors regarding the practical and creative value of interior design, and helping to identify the importance of Islamic patterns as an interior design element that affects spirituality. This could enable various stakeholders to improve their hotels, which in turn will affect hotel income.

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Acknowledgments

First and foremost, thanks to Almighty God, the most Gracious and most Merciful. I am grateful for my team of supervisors: I consider myself the luckiest PhD student to have worked with Dr Bob, Dr Moamer, and Dr Tim. Your support and your positive comments were the reason I could achieve my dream. Hard work, the spirit of sharing, and laughter prevailed in the atmosphere of our group, which is what led us to these results. I won't forget the first words in my first meeting with Dr Bob ("This is a stress-free zone; if you are comfortable, you will produce better."). I have gone through many difficulties and obstacles but have had a great many moments of happiness as well, which could not have been experienced without the people who shared their love with me.

I would like to thank my sons for their support and for their patience during my time working on my PhD in the UK. I apologise for being busy, I will make it up to you and we will spend happy times together. I will be the biggest support to you, and see you in the best positions.

I would like to thank my dear Mum and Dad - thank you for your support, your sincere prayers, and for encouraging me. In every moment of weakness and surrender, you are the reason, after God, that I am able to continue.

I would like to thank my lovely husband Muhammad - thank you for your patience during my stressful days. Thanks for your valued advice, which changed me. I will stand by you until the end of my life, and we will soon celebrate your graduation from the PhD program.

I would like to thank my brothers and sisters, Shahad, Raghad, Abdullah, Muhammad, and Alaa—despite the distance, your support played a great role in helping me become what I am.

I would like to thank my overseas friends and sisters, Hessah, Noor, Mona, and their husbands—you were and are still my second family; thank you for your sincere support.

Thank you Dr Noha and Dr Reem, for your support in completing my higher education; thank you from the bottom of my heart.

I also thank my country and my employer (Jeddah University), which supported and funded my studies, and I thank all those who supported me. I apologise for not mentioning the rest by name.

Author's Declaration

I declare that the thesis has been written by myself. This work has not been submitted for any other degree or professional qualification or any other university. I confirm that the work submitted is my own, excluding the work involved in jointly authored publications. My contribution and those of the other authors to this work have been explicitly indicated below.

Signature:

Doaa Fatihaddin

Definitions

- **Al-Haram or the Holy/Grand Mosque** is the largest mosque in the religion of Islam, and is located in the heart of the city of Makkah in the west of Saudi Arabia. Within the centre of the Holy Mosque lies the Kaaba (a black cube-shaped structure). According to the Islamic faith this is the greatest and holiest place on earth. Muslim's face in the direction of the Kaaba, also called "Qiblah," when saying their prayers, and they visit it during pilgrimage.
- **Azan (Adan)** is the Islamic call to prayer, recited at the prescribed times, five times a day to call people to the mosque to perform prayers.
- **Al-wudu' (Ablution)** is the washing or cleaning of oneself, for personal hygiene, or as ritual washing or cleaning associated with religious observance. In Islam, ablution is performed before prayers.
- **Ramadan** is the ninth and the most venerated month in the Islamic Hijri calendar. During this time, Muslims must fast from pre-dawn until sunset and should give charity to the poor and needy.
- **Dhū al-Ḥijjah** is the twelfth and final month of the Islamic Hijri calendar. During this month, Muslim pilgrims from all around the world congregate at Makkah in order to partake in the annual Hajj pilgrimage.
- **Hajj (Pilgrimage)** is an annual Islamic pilgrimage to Makkah and a mandatory religious duty for Muslims, which must be carried out at least once in their lifetime by all adult Muslims who are physically and financially capable of undertaking the journey. The Hajj is the largest annual gathering of people in the world at a specific time, and takes place from the eighth until the twelfth day of the month of Dhū al-Ḥijjah.
- **Umrah** is a smaller pilgrimage and can be performed by Muslims at any time of the year, in contrast to the Hajj which takes place once during the twelfth month of the Islamic Hijri calendar. The Umrah is not compulsory but is highly recommended.
- **Pilgrims** in this thesis are people who travel to Makkah to perform Hajj or Umrah.

Chapter 1 **Research Introduction and Background**

1.1 ***Introduction***

This chapter introduces the research topic by presenting the Saudi 2030 vision, and identifies the research background and rationale. It outlines the research aim, objectives, and research questions. It briefly outlines the theoretical framework, research methodology and research contributions, and then finally presents the thesis structure and contents.

1.2 ***Saudi Government 2030 Design Vision.***

The ground-breaking agenda of Vision 2030 is built on three pillars: a vibrant society, a thriving economy and an ambitious nation which draws on the country's intrinsic strengths to help its citizens realise their aspirations. To achieve the 96 strategic objectives of Saudi Arabia's national Vision 2030, the Council of Economic and Development Affairs established 13 vision realisation programs. These include: the Fiscal Balance Vision Realisation Program, the National Companies Promotion Vision Realisation Program and the Hajj and Umrah Vision Realisation Program (Vision2030.gov.sa 2019).

This research was inspired by the Hajj and Umrah Vision Realisation Program, which aims to allow the maximum number of Muslims possible to perform the Hajj and Umrah pilgrimages. This program hopes to enrich and deepen pilgrim experiences by preparing the two holy mosques; actualising the message of Islam; developing the world's tourism and cultural sites; providing the best services before, during and after a pilgrim's visit to Mecca and Medina; and by reflecting a bright and civilised image of the Kingdom in the service of the Two Holy Mosques (Vision2030.gov.sa 2019).

1.3 ***Researcher's Perspective Informing this Research***

There is a disconnection between designers and spirituality in most previous design studies. High-level research on either side requires both psychological science and

design knowledge. This study attempts to bridge this disconnect, and to make invaluable and practical contributions to this area of research.

The researcher is a lecturer at Jeddah University in the Interior Design Department, with over eight years of experience teaching students in the field of art and interior design. Her personal research interest in this topic is driven by two factors: firstly, her experience visiting different hotels in Makkah and Madinah, and secondly due to living in the port city of Jeddah, which is situated between Makkah and Madinah, and is the first port of call for most pilgrims.

A further interest can be traced back to the experience of her father in real-estate hotel development and a long conversation with him, and with his colleagues, about hotel design development. She understood from this that the physical elements of hotel rooms did not meet the needs and expectations of pilgrims, and that there was demand for a high-quality environment that uplifts spirituality.

The literature review clearly indicated that no research had been conducted regarding spirituality in hotel rooms. Similarly, there was no research regarding the use of Islamic identity and culture in hotel rooms in holy cities in Saudi Arabia, despite the dire need of such research in order to fulfil the government's 2030 vision for the development of hotels in the holy cities. This study distinguishes itself from previous research by focusing on preferences for Islamic patterns in hotel rooms to enhance spiritual aesthetics.

1.4 *Research Background*

Numerous modern hotels have been built in the holy cities of Saudi Arabia (Makkah and Medina), and according to the 2030 Vision by the Saudi government, more hotels will be built to accommodate more pilgrims. Since pilgrims normally come to connect with their spirituality and to worship, they prefer to stay near the Grand Mosque in Makkah (Al-Haram Al-Maki) and the Prophet's Mosque in Medina. This study

therefore focuses on the meaning of spiritual aesthetics in hotel rooms in the holy cities.

Two of the holy cities in Islam are located in Saudi Arabia: Makkah and Al Madinah Al Munawara. Makkah was selected as the basis of this study because it is the centre of the Islamic faith. The Grand Mosque (Al-Haram Al-Maki) and the Kaaba are both located in Makkah (see Figure 1-1). Adherents to the Islamic faith believe the Grand Mosque to be the first house of Allah (God) on Earth; the Kaaba was built by the prophet Ibrahim and his son Ismail (Osweis 2002; Ghoomi et al. 2015). It was constructed in Makkah before the birth of Islam, has been rebuilt many times, and is used as the direction to face for Muslim prayer. The Kaaba symbolises spirituality and worship for all Muslims (Salman 2012).



Figure 1-1: The Kaaba in Al-Haram (Abouther 2020)

To find the gap, related literature has been reviewed and a field study conducted (Figure 1-2). The field study involved a case study in this research which revealed the existing interior design of hotel rooms and the hotel design procedure followed by designers; it consisted of visiting hotels rooms in the immediate vicinity of Al-Haram and conducting interviews with designers and real-estate developers.

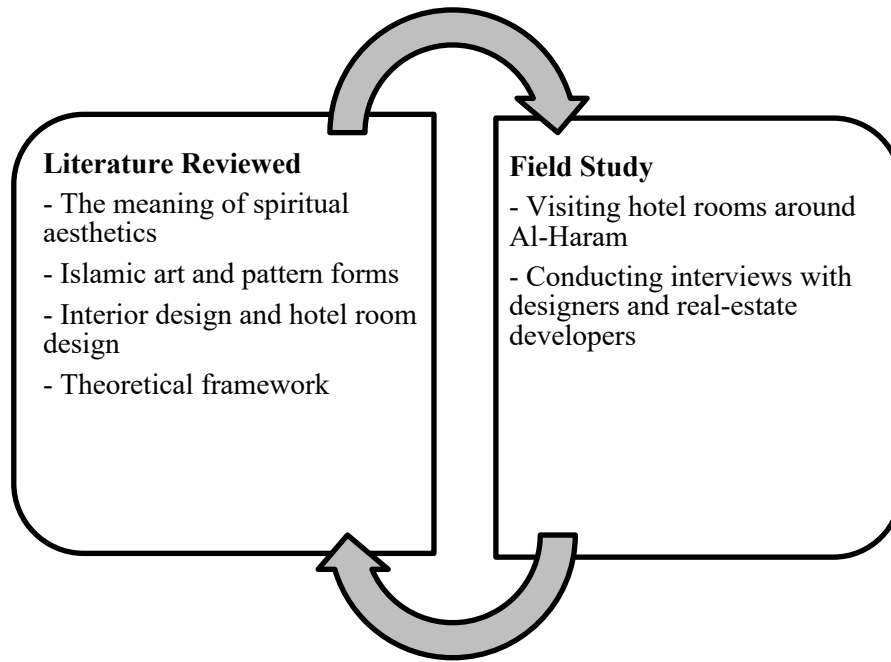


Figure 1-2: Finding Gap Process (Researcher)

The process outlined above made it clear that designers plan hotel chains based on a predetermined design that lacks an awareness of the traditional designs of a local area, and does not express an Islamic identity. These hotel chains also do not meet the preferences of pilgrims, who seek a spiritual atmosphere, due to difficulties of communication and time limitations in the design process.

Observing modern hotel rooms, particularly in hotel chains, therefore makes it increasingly apparent that they lack spirit and character, and are merely rooms in which to spend the night, or for fun and luxury. Compared to traditional living spaces, modern hotel rooms seem bland and lack an adequate sense of space (Ghoomi et al. 2015). Spaces and places are not only for people's everyday lives; they are embedded with deeper personal and cultural meanings and symbolise personal histories and relationships, as well as people's values and sense of belonging (Butterworth 2000). It is essential for interior designers to understand the effect of space as it relates to aesthetics and feelings (Nasar 1994). The physical interior-design elements such as colours, patterns, material, and furniture all combine to confer sense and meaning. This study focuses on the capacity of Islamic patterns, taken from Islamic art, to

enhance the spiritual aesthetics and meaning of hotel rooms in the holy cities. The study shows how a pilgrim's need to connect with spiritual meaning can be taken into consideration, in order to help meet the Saudi government's 2030 vision of developing appropriate hotels in holy cities.

The justification for discussing the meaning of spiritual aesthetics within Islamic patterns as interior-design elements and as symbols is that many artists consider symbols to be a form of expression that brings us closer to spirituality and peace. This idea is compatible with the meaning of "Islam" in Arabic: peace. Islamic philosophy is about bringing peace to the spirit. Islamic art embodies Islamic philosophy, and thus symbolises spirituality. Islamic art works as a platform to deliver the messages of Islam culture, which includes Islamic identity and values. One of the main features of Islamic art is the depth of meaning behind it, which may contribute to a person's perception of spiritual aesthetics (Erzen 2007).

A strong example of the use of Islamic art to enhance spirituality is found in the Islamic calligraphic and geometric patterns that decorate the Kaaba. The Caliph al-Mahdi Abbasi was the first to cover it with black silk, and when the Abbasid state became weak, the rulers of Egypt and Yemen continued the act of covering the Kaaba until 1381 H (1962). This role was taken over in the 19th century by King Abdul Aziz of Saudi Arabia, who became the first to cover the Kaaba with black silk decorated with embroidered gold thread. A factory dedicated to producing the cloth to cover the Kaaba was established (Figure 1-3). Each year when the month of Hajj commences, the Kaaba cover is lifted up and replaced with a newly prepared cloth.



Figure 1-3: The Kaaba Cover with Black Silk and Embroidered with Gold Thread (Samar 2017)

1.5 *Research Rationale*

1.5.1 **Commercial Rationale**

For the past seven years, from 2013 to 2020, the Royal Makkah Clock Tower in central Makkah has overlooked the Kaaba in the Grand Mosque (Figure 1-4) and has become a landmark in Makkah. This tower and its immediate vicinity include several luxury hotels, most of which are managed by famous international hotel chains such as Hotel Fairmont Makkah Clock Royal Tower, Swissôtel Makkah, and the Hilton Hotel.



Figure 1-4: The Royal Makkah Clock Tower Overlooking the Kaaba (Fairmont n.d.)

The Arab Gulf's oil profits, historic sites, and the numerical density of pilgrims have all combined to trigger the exponential growth of hotel development and real estate markets in the region, especially in Makkah (Tyrrell and Mu'azu 2008). According to the General Organisation for Statistics (GSO), which is responsible for the implementation of the pilgrim census program in the city of Makkah, the average number of pilgrims per year for the last decade was 2,393,635. This statistic includes both local and international pilgrims (GASTAT 2021).

In March 2016, Hassan Abdul Rahman announced in *Entrepreneur al-Arabiya* business magazine that the city of Makkah was leading the development of hotels in Saudi Arabia, with 24,133 hotel rooms and with more rooms still being built as of 2020, such as those in the Jabal Omar project (Figure 1-5). This study derived its relevance from the 2030 Vision of the Kingdom of Saudi Arabia, which emphasises the importance of developing religious tourism and increasing the number of Hajj and Umrah pilgrims from 8 million to 30 million within the next 14 years (Vision2030.gov.sa 2019). The current number of hotels in both holy cities combined stands at 900 and is expected to increase to 5,000, with an estimated annual revenue of S.A.R. 450 billion (Alameri 2016). This research was thus developed in order to take into consideration the role of spiritual aesthetics in designing hotels in the holy cities, and to help the Saudi government meet its 2030 vision.



Figure 1-5: Jabal Omar Project Under Construction (Hill n.d.)

A concern has arisen that modern international styles are becoming more common in response to the booming tourism industry (Tyrrell and Mu'azu 2008). The pilgrims who come to Makkah from all over the world do so to enhance their spirituality and

to uplift Islamic values and culture, rather than for recreational tourism. Strannegård and Strannegård (2012) have argued that the standardised design of international hotel chains could actually make destinations less attractive by decreasing their uniqueness. They suggest that a hotel's design should be inspired by its location in order to increase its localisation and uniqueness.

The relationship between hotel design and productivity has also been discussed by Ransley and Ingram (Ransley and Ingram 2001), who agree that a good design—the design approved by the designer and the hoteliers—can affect a hotel's bottom line. Effective designs can attract users from the desired target market, enabling a hotel to increase its prices accordingly and operate its unit in an efficient way (Ransley and Ingram 2001).

The present study attempts to raise the awareness of hotel directors of the practical and creative value of interior design, and to help identify the importance of Islamic patterns as an interior design element that affects spirituality. An understanding of the practical and creative value of interior design, and of the unique preferences and perceptions of spiritual aesthetics held by pilgrims, will enable various stakeholders to improve their hotels, which, in turn, will affect hotel income.

1.5.2 Academic Rationale

This study contributes to knowledge by identifying the capacity of Islamic patterns to enhance spiritual aesthetics in interior design. This research has explained the relationship between Islamic patterns in the interior design of hotel rooms and spirituality, by identifying the most significant elements of Islamic patterns in interior design and clarifying their effects through several theoretical lenses: the model of the stimulus–organism–response (S–O–R), the concept of servicescapes, the Gashoot framework and Gestalt psychology.

Research into perceptions of hotel interior design has been conducted previously in a more general sense, focusing on all physical environments in interior design rather

than on certain locations. Alfakhri (2015) relied on the servicescapes framework, service-dominant logic (SDL), and consumer culture theory (CCT) to form a “hotelscape” framework. Her study focuses on gaining an understanding of the foundations of hotel interior design and explaining its role, particularly in generating value, symbolising meanings, and shaping experiences from the perspective of cosmopolitan consumers.

In contrast, the present research adds to academic research on spirituality in the interior design of hotel rooms in the holy cities (Makkah and Medina) by focusing on Islamic patterns in particular, which is still relatively unexplored in the existing body of literature. As a result, this study paves the way for other researchers to develop their findings through the field of interior design, particularly the area of hotel room design in the holy cities; and it elaborates the notion of spiritual aesthetics in interior design. The study’s integration of several areas of knowledge enriches various fields of research, including spirituality, aesthetics, interior design, environmental psychology, hotel development, and holy cities (Makkah and Medina).

1.6 *Research Aim*

This research aims to help identify the preferences of pilgrims (hotel guests) for Islamic patterns in hotel room interior design by proposing a design guideline and visual perspectives that will assist designers in enhancing the spiritual-aesthetic experience of users.

1.7 *Research Questions and Objectives*

1.7.1 **Research Questions**

This study seeks to answer two main questions:

- i. **What are the preferences of pilgrims (hotel guests) as regards the interior design elements of Islamic patterns that enhance the spiritual aesthetic in hotel rooms?**

This question was developed in order to address interior design elements of Islamic patterns such as colour and material from a user's (pilgrim's) perspective, as they enhance the spiritual aesthetic, with particular attention to user preferences regarding hotel rooms in the holy cities.

ii. How is the Islamic pattern design element perceived by pilgrims (the users), and how does this reflect the spiritual aesthetic of a room's occupant?

The purpose of this question is to understand how users perceive Islamic patterns as an interior design element, how they are influenced by them, and what Islamic patterns mean to them. This understanding is based on several theories and models: servicescapes and Gestalt psychology, which together explain the perception of elements of Islamic patterns and their spiritual aesthetic meaning in hotel rooms (physical environments).

1.7.2 Research Objectives

The following main objectives were designed to support the research aims:

- 1- To identify the interior design elements of Islamic patterns in hotel rooms and their relationship to spiritual aesthetics.
- 2- To investigate the significance of Islamic patterns in enhancing spiritual aesthetics through understanding the philosophy behind it.
- 3- To understand the perception of Islamic patterns in relation to spiritual aesthetics.
- 4- To develop a theoretical framework of Islamic patterns for designing hotels rooms to fulfil spiritual aesthetics.

1.8 Theoretical Framework

This research investigation is embedded in four areas of the literature, informed by the knowledge available around these areas; this helps to fill the gaps in current

knowledge. It begins with the meaning of spiritual aesthetics, then proceeds to Islamic art philosophy and pattern forms, next it looks into the combination of interior design and hotel room design, and lastly, it provides a theoretical framework that supports this research.

Several theories have been reviewed which will be explained in detail in Chapter Two: starting with theories about environmental psychology and the effect of the physical environment on action and behaviour. This includes the stimulus–organism–response (S–O–R) model by Mehrabian and Russell (1974), and Kotler’s (1973) concept of atmospherics. Bitner’s (1992) servicescapes model which was developed based on the two previous concepts, is then reviewed. The development of Bitner's model was also studied to help arrive at the most appropriate model for this study.

Signs and significance (semiotics), perception theories such as the theory of mind, empirical theory of perception, phenomenological theory and Gestalt theory have also all been reviewed in detail.

In order to produce a comprehensive understanding of the spiritual aesthetics of Islamic patterns in interior design, the proposed theoretical framework in this study integrates more than one theory: the Servicescape model as a foundation, and development models such as the Gashoot model and Gestalt theory. Additionally, the framework contributes insights into the relationship between elements of hotel interior design, and the spirituality of customers, while offering answers regarding how this spirituality can eventually benefit the emotions and cognition of users. This can, moreover, be generalised to environments other than hotels.

1.9 *Research Methodology*

This research is based on a qualitative approach, exploring the preferences and perceptions of participants through a case study. The research categorises itself as taking an inductive interpretivist approach, which means that it incorporates an in-depth understanding of differences among individuals. Data was collected using a case

study strategy that involved the method of semi-structured interviews, which were subsequently analysed using thematic analysis techniques.

1.10 *Research Contribution*

The contribution made by this research can be distinguished in two divisions: the academic contribution and design contribution. The academic contribution reveals the spiritual aesthetics within the framework of Islamic patterns (spiritualscape via Islamic patterns). The design contribution lies in proposing design guidelines to help designers enhance the spiritual aesthetics in a hotel room within Islamic patterns in interior design. As mentioned previously, the outcome of this study has several targets: interior designers, academic researchers, developers, hotel directors and stakeholders.

Academic Researchers: Theoretically, the “spiritualscape via Islamic patterns” framework is the first to focus on spirituality from a user’s point of view, and the first to identify the signature design elements of Islamic patterns as well as the critical role of design in spiritual aesthetics. It is also the first to integrate the servicescape model and Gestalt psychology to produce a comprehensive understanding of the spiritual aesthetics of Islamic patterns in interior design. This study paves the way for other researchers to develop their findings through the field of interior design, particularly the area of hotel room design in the holy cities; and it elaborates the notion of spiritual aesthetics in interior design.

Interior Designers: The spiritual aesthetics within the framework of Islamic patterns address the physical environment and design elements in hotel rooms, and understanding the elements of preference and a user’s perception will allow designers to create an environment that satisfies the people who use it. The design guidelines will also help designers in enhancing the spiritual aesthetics in a hotel room using Islamic patterns in interior design.

Developers, Hotel Directors and Stakeholders: The research attempts to raise the awareness of hotel directors of the practical and creative value of interior design and

to help identify the importance of Islamic patterns as an interior design element that affects spirituality. An understanding of the practical and creative value of interior design, and of the unique preferences and perceptions that pilgrims have of spiritual aesthetics, will enable various stakeholders to improve their hotels which, in turn, will affect hotel income.

1.11 *Thesis Structure*

This thesis includes six chapters:

Chapter One is an introduction to the thesis, discussing the research background and rationale. It presents the research aims, research questions, and research objectives, and it briefly outlines the theoretical framework and research methodology.

Chapter Two is a literature review, which is divided into four sections. The first section explains the meaning of spiritual aesthetics. The second section examines Islamic art philosophy and forms. The third section identifies the meaning of interior design and the concept of hotel room design. The fourth section outlines the theoretical framework.

Chapter Three is a field study of current hotels in Makkah and contains interviews with developers, hoteliers, and hotel designers. It then presents the outcomes of this phase.

Chapter Four discusses the research methodology through presenting and justifying the research philosophies, approach, and design. It also explains the method selected to collect and analyse data and the sampling procedures. Finally, it addresses the ethical considerations regarding the research methodology.

Chapter Five presents the data collection, which contains the rich data for this research, and explores the views of pilgrims/users by conducting semi-structured interviews. This chapter then clarifies themes and codes before presenting the results

and discussions. It also expands on the steps used to validate the results and outcomes. It identifies the proposed guidelines and model. It also includes 3D perspective designs for a hotel room designed by interior design volunteers based on the proposed guidelines. Finally, it includes feedback from the designers on the guidelines, collected during interviews, and feedback from pilgrims on the proposed designs.

Chapter Six concludes the study by highlighting its results and contributions, and explaining whether it met the aim of the research. It also outlines the research limitations and recommendations for future research.

Chapter 2 Literature Review

2.1 Introduction

This chapter provides an overview of the existing literature related to this research topic, introducing the definition of spiritual aesthetics within Islamic patterns, explaining the meaning of spirituality, and clarifying the meaning of aesthetics in Islamic art. The chapter then presents Islamic pattern forms and their philosophy. It further identifies the current literature relating to the interior design of hotels. When considering this research, it is important to go beyond the current approaches of interior design and look toward human-environment interactive relations and theories. The chapter does this by allowing for different interpretations of the complexity of interior design, and by gathering some of the numerous theories aiming to support interior design schemes (Perolini 2011).

The literature review is divided into four sections, as illustrated below (Figure 2-1). The first section explains the meaning of spiritual aesthetics. The second section clarifies Islamic art philosophy and pattern forms. The third section provides the context of the study: a combination of interior design and hotel room design. The final section outlines the theoretical framework.

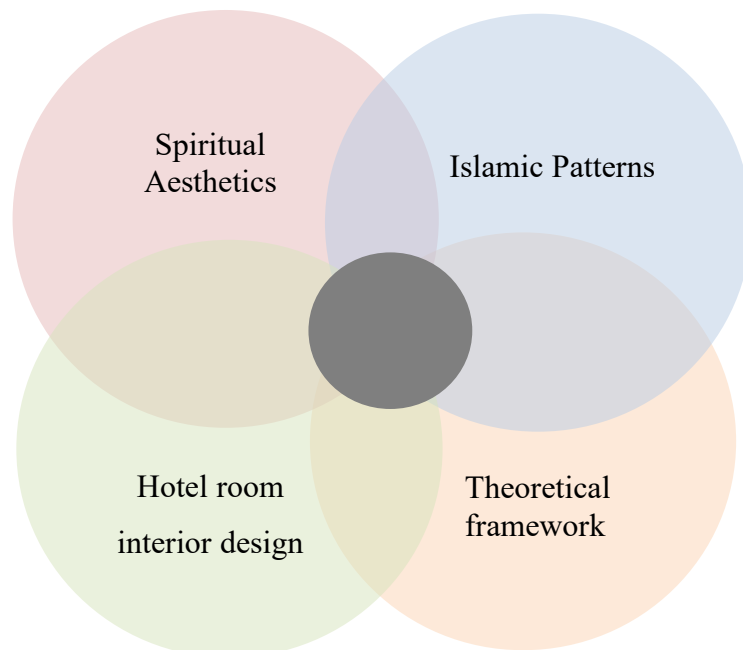


Figure 2-1: Research Content (Researcher)

The research strategy was based on an exploratory review of existing resources such as reports, theses, books, and journal articles. This review enabled the researcher to become informed on the area of study and helped identify the key focus points of the study. It also served as a means to formalise the phases of selecting, collecting, and analysing the study data, which was collected using the semi-structured interview approach.

2.2 *The Concept of Spiritual Aesthetics*

This research aims to enhance the spiritual aesthetics of hotel rooms using Islamic patterns. Definitions of aesthetics and spirituality are provided in order to explain the direction of this research.

2.2.1 The Meaning of Aesthetics

The definition of aesthetics has evolved through a series of stages spanning from ancient times to the present day. The word “aesthetics” is derived from the Greek word *aesthesis*, referring to perception by the senses and to understanding or sensuous knowledge. This means aesthetics is about knowledge that is formed from our sensory experiences. Aesthetics has existed as a concept since ancient times, but the term “aesthetics” was not formulated until 1735, when the study of aesthetics was founded by the German philosopher Alexander Baumgarten (Kul-Want 2014). The word ‘aesthetics’ was not used in the English language until the 19th century, when David Hume expounded his theory of aesthetics. Baumgarten defined aesthetics as “the science that explains how to know things through the senses.” Baumgarten classified aesthetics as a branch of philosophy that cares about the nature of beauty, art, taste, and creativity, as well as the appreciation of beauty (Taylor and Hansen 2005; Hekkert 2006; Kul-Want 2014).

2.2.1.1 Aesthetics and Beauty

Aesthetics and beauty are often used interchangeably, but Baumgarten distinguished the two, defining aesthetics as that which is concerned with perceptions, the perceivers, feelings, emotions, and the whole nature of experience, while considering beauty to be related to objects and appearances (Kul-Want 2014). Previously, from Plato to the Age of Enlightenment, beauty had been gauged according to the ideals of the metaphysical world and its traces within nature, making the judgment of beauty entirely objective, so that beauty could be objectively identified in physical objects and was not affected by personal or subjective desires.

Half a century after Baumgarten first published his definition of aesthetics, philosophers realised that enquiry into the nature of experience opened out into issues of subjectivity and identity, with the potential for transforming our understanding of values and beliefs. This is due to the way in which experience relates to consciousness, and, in consequence, the role that unconscious experience plays in shaping identity (Kul-Want 2014). In 1790, Immanuel Kant prompted a transformation of the judgment of beauty by formulating his *Critique of Judgment*. Kant claims that the judgment of beauty is basically concerned with feelings and non-conceptual reflection rather than with rational cognition, reformulating the judgment of beauty as a subjective exercise rather than an objective one (Kant 1987; Kul-Want 2014; McQuillan 2015).

The objective judgment of beauty remains useful, however, in explaining the aesthetics of Islamic patterns, because it helps to understand the shape grammar and formal mathematical rules that generate the beauty and strength of these patterns. The subjective judgment of beauty, in turn, can be applied to understanding the aesthetic spirituality of users according to their personal experiences and imagination.

2.2.1.2 Aesthetics, Beauty, and Art

Art is usually associated with beauty, but not all art is beautiful; sometimes art exists without beauty. In Kant's (2000) view, art is not a representation of something

beautiful, but is rather a beautiful representation of something. In contrast, Hegel writes that art has a purpose, and rejects the idea of art for art's sake, emphasising that all kinds of art—such as music, architecture, drawing, and design—play important roles beyond a purely aesthetic one. Instead, he claims that art is the sensuously presented expression of the idea; its purpose is not to create a new or strange idea, but to confirm good and helpful ideas and help us to remember them (Stejskal 2010).

Kant and Hegel, however, were predecessors to Baumgarten who changed the meaning of the word “aesthetics” to encompass an indulgence of the senses or sensuous delight (Goldman 2013), maintaining that works of art are primarily created for the purpose of gratifying the senses. This idea has since been applied to various aspects of the experience of art, such as “aesthetic judgment, aesthetic attitude, aesthetic understanding, aesthetic emotion, and aesthetic value” (Stejskal 2010). These are all recognised elements of the aesthetic experience, and, even though one can experience not only artworks but also nature or people aesthetically, the expression “aesthetics” is primarily used in relation to the arts, and particularly visual art (Hekkert 2006). Aesthetics is currently commonly viewed as a subdivision of philosophy which deals with art (Breitenbach 2015).

2.2.2 The Meaning of Spirituality

Now that a definition of aesthetics has been provided, the definition of spirituality also needs to be addressed. The term “spirituality” has multiple meanings depending on the discipline in which it is used, so that defining “spirituality” becomes a challenge. Spirituality has a diverse set of meanings, drawn from at least nine fields where the term spirituality is frequently used: social research, the study of religion, healthcare and related research, psychology and related disciplines, education, business, and the area that Lynch (2007) calls “belief beyond religion.” For all that, spirituality comes from the word “spirit”, where “spirit” as a verb means: “to make more active or energetic”; spirit as a noun means “the animating or vital principle in humans”; and “spiritual” refers to “soul, courage, vigour, breath.” Spirituality is founded on breathing, inhaling and exhaling, inside and outside, in and out, internality and

externality. Breathing, in other words, has meaning beyond inhaling and exhaling through the nose. Breathing is a connection between in and out, inside and outside, via the invisible source of life (Nejati 2012).

Spirituality is a connection between the surrounding environment and the inner body. For example, some people enhance their spirituality by spending time on the beach listening to tides, touching the sand and water, watching a beautiful sunset or sunrise, and their reflections in the water, and finally connecting the inner body to the broad outer environment containing the best resources for relieving my internal tension and pressure (Nejati 2012). This research is associated with this meaning of spirituality, and demonstrates that the elements of interior design in the surrounding environment affect an individual's inner spirituality.

However, “spirituality” can also be used in a less abstract sense to apply to work performance and business, as is the case in the recently established field of workplace spirituality. Kamil et al. (2010) connects workplace spirituality to morality and ethics, meaningful work, and business ethics. In a religious sense, it is the relationship between an individual and God, and the search for truth and peace (Kamil et al. 2010; Issa and Pick 2011). Spirituality can also refer to questions about the meaning of life, values, and beliefs. Some individuals define spirituality as a space in which they find meaning and peace. Others define spirituality as a subjective experience, unique to each person (Leibrich 2002). Sheng and Chen (2012) defines spirituality as the pursuit of meaning and existential essence. The term spirituality thus contains various meanings. Although it has been proposed that religion is the direct path to spirituality, spirituality does not belong solely to religion since, at times, it extends to the meaning of life or to principles or beliefs outside religion (Sheng and Chen 2012).

Although spirituality is related to feelings towards God as well as to values, beliefs, or aesthetic phenomena, its meanings all have an inner or outward motivation, depending on the type of spirituality. For example, the inner motivation in religious spirituality could be praying, while the outward motivation could be meditation, whether in nature or in artistic landmarks. This study focuses on the aesthetics of

Islamic patterns as a form of outward motivation in interior design that enhances spiritual aesthetics. According to Nejati (2012):

“...every person’s spiritual conception is really connected to personal background. Therefore, one has a particular and personal definition for spirituality that might be completely different from others. There is a common spiritual composition in all human beings, but there are numerous spiritual paths that pertain to each individual.” (Nejati 2012, p.32).

In light of this, it is essential to understand multiple preferences and perceptions in the application of Islamic patterns in hotel rooms. This aim has been fulfilled via interviews.

2.2.3 Spiritual Aesthetics and Art

Spiritual aesthetics in this study refers to the spiritual feeling that comes from the aesthetics of physical environments, which can be called physical aesthetics. Physical aesthetics is defined as entailing “cues in the social and physical environment in which people operate, and are therefore likely to call up a sense-making process” (Rafaeli and Vilnai-Yavetz 2004). “Sense making is inspired by the artefact’s characteristics such as colour and size, which are interpreted differently by individuals” (Nejati 2012).

The dynamic relationship between spiritual aesthetics and art can be seen in a number of arts where the artist attempts to convey spiritual feeling using elements such as lighting or patterns (Erzen 2007). A particularly well-known example of utilising lighting is Notre-Dame du Haut, a Roman Catholic chapel built by Le Corbusier in Ronchamp, France (Figure 2-2). The asymmetric light admitted by the wall openings emphasises the building’s sacred nature. Le Corbusier created a series of spatial dramas in which light animates the space by creating different moods at different times of the day and in different seasons (Ramzy 2013). The coloured glass in the splayed windows softens the incoming light and creates coloured shadows in delicate hues on

the roughly plastered surface (Lau 2008). Le Corbusier took turns utilising either lighting or colours as design elements to enhance the sacred feeling in the space. Another example of utilising light to enhance spiritual feeling can be found in several Islamic architectural designs such as muqarnas, which have been used to trap and spread light in places of worship (Figure 2-3). As Omer (2011) has noted, “It is for the same purpose that the Muslim architects transformed other surfaces, such as ‘Mashrabeyah’ screens, into perforated relief to filter the light”.



Figure 2-2: Ronchamp Chapel, Stained Glass Windows in Churches (Ramzy 2013)



Figure 2-3: Muqarnas in Suleymaniye Mosque (Ramzy 2013)

From the 16th century onwards, Ottoman mosques employed the Byzantine program of lighting with a ring of openings at the base of the dome. Light is introduced through a ring of small windows piercing the lower portion of the dome, creating dazzling interior light effects that make the dome look as if it is floating upon a wave of light, and maximise the reflection of light by intensively using shiny tiles and glossy surfaces (Ramzy 2013).

The Church of Hagia Sophia in Istanbul is the earliest application of this technique, and is, therefore, appointed to represent it. Lighting here is mainly produced by forty small windows that pierced the dome at its base. Procopius describes this dome as “standing upon the interior circle as if suspended from heaven” (Lethaby and Swainson 2005). Additional light is introduced through twelve windows in each of the spandrel walls, north and south, under the great arches that support the dome (Figure 2-4) (Ramzy 2013). The brilliant natural light of the east is tamed by the position of the windows, their relatively small size and their large number. It enters the space at a slant and “turns back on itself to be diffused everywhere” (Ramzy 2013). This mystic light gains an overwhelming character because of the nave’s gloomy lighting level; the daylight reflecting from the golden mosaics was used as a solution to illuminate the interior space, and gave further support to the spiritual effect (Ramzy 2013). This shows that material can be also utilised to enhance the feeling of spirituality.



Figure 2-4: The Dome in Hagia Sophia (Ramzy 2013)

2.3 *Islamic Art*

Islamic art has been studied by western scholars in the recent past, and especially in the last two or three decades, however, Islamic art is not exclusive to Islamic countries; numerous artists who are interested in and who produce Islamic art, at multiple levels of design, are non-Muslim (Blair and Bloom 2012). This context can be better understood by examining the meaning of the word “Islam.” In the Arabic world, “Islam” means “peace” – peace on various levels: the internal peace of the soul and external peace with the self and others (Osweis 2002). Islamic art is therefore broader than the religion of Islam, bringing peace and tranquillity to the viewer and imparting a spiritual feeling to the soul.

Islamic art is defined by philosophy rather than by material or colour (Nasr 1987). There is a distinctly unifying principle behind Islamic art, which has supplied stable characteristics to this art across time, geography, and culture.

“Islamic art aids man to be entirely himself; instead of projecting his soul outside of himself. Islamic art as a whole [aims to create] an ambiance which helps man realize his primordial dignity; it, therefore, avoids everything that could be an ‘idol,’ even in quite a relative and provisional degree; nothing shall stand between a man and the invisible Presence of God” (Burckhardt 1967, p.3).

Accordingly, the exclusion of all anthropomorphic images within spaces of worship has led to the creation of a non-figural style presented in three distinct forms: the calligraphic or Arabic script style (Figure 2-5); the Arabesque style, based on curving and branching plant forms (Figure 2-6); and geometrical patterns (Figure 2-7). In many cases, a single work or object features a combination of these three forms. Islamic art is primarily two-dimensional, decorating walls, doors, ceilings and carpets—but it can also be three-dimensional, as in the case of columns and pillars (Bonner 2003; Cenani and Cagdas 2006; Ebru 2009).



Figure 2-5: Arabic Calligraphy at Alhambra Palace (Vilchez 2011)

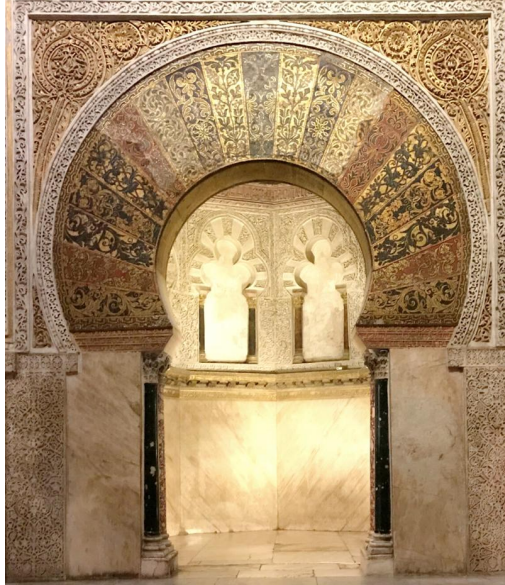


Figure 2-6: A Floral Pattern in the Great Mosque of Córdoba (Researcher)

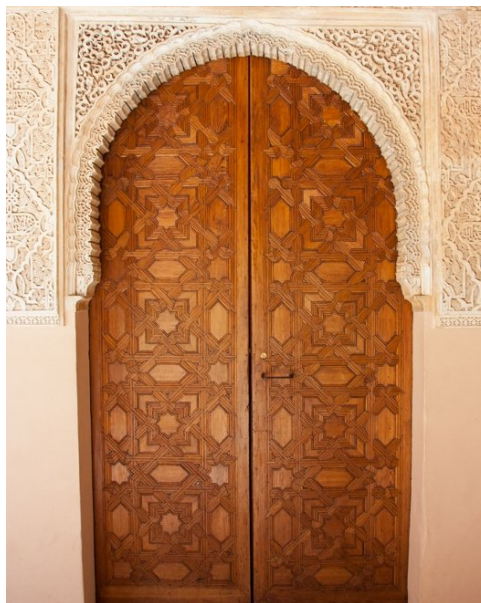


Figure 2-7: Geometric Patterns on the Door at Alhambra Palace (Vilchez 2011)

2.3.1 Islamic Geometry, Aesthetics, and Beauty

The importance of using Islamic patterns emerges from their uniqueness in integrating in-depth meaning and showcasing beauty in the interior environment. The ability of Islamic patterns to deliver a meaningful message arises from their representation of Islamic morals and principles, which are an essential part of the creation of such patterns. Islamic patterns not only work as a platform to transport Islamic values, but they also provide a sense of aesthetics and beauty in interiors. It is therefore crucial to examine how the implementation of Islamic patterns in interior design affects the spiritual aesthetic, taking into consideration its ability to accommodate both meaning and beauty simultaneously. Nasr has strongly supported this view, saying:

“Traditional Islamic art conveys the spirituality and quintessential message of Islam through a timeless language which, precisely because of its timelessness as well as its direct symbolism, is more effective and less problematic than most of the theological explanations of Islam” (Nasr 1987, p.195).

Geometrical patterns which are closely associated with sacred places such as mosques are instantly recognisable to people of all cultural backgrounds. The term “geometry” refers to the science of properties and the relationships of magnitudes such as points, lines, or surfaces, and to the way the parts of particular objects fit together. The word “geometry” comes from two Greek words strung together: *geo*, meaning earth, and *metry*, meaning to measure (Dabbour 2012). Islamic art was inspired by Greek art, as the work of Euclid and Pythagoras was translated into Arabic. Pythagoras explained that everything in the universe was defined by mathematics and held a specific meaning. For example, the world was represented by a cube and a square, fire was represented by a triangle and a pyramid, and the universe was represented by a dodecahedron (Cenani and Cagdas 2006). Accordingly, Islamic geometric patterns are symbols and thus evoke meanings, whereas aesthetics is about the knowledge that is formed from our sensory experiences. Whether the symbols are general, such as numbers and geometric forms and patterns, or particular, such as those that arise in

individual works of visual art and music, there is a logical link between meaning and form (Erzen 2007).

Geometry existed in all advanced civilisations and was used in the design of the earliest sacred and traditional sites. Geometry is built according to dimensions that integrate mathematical numbers, constants, and ratios, such as the “Golden Mean” (Dabbour 2012). Geometry thus embodies the sacred by following mathematical proportions and prime roots, and mathematical proportions also embody the proportions of beauty—an idea evident in Aristotle’s claim that “beauty is to maintain the just measure.” Mathematical proportions, in other words, explain the objective judgment of beauty. But this does not mean that judgment of the beauty of Islamic geometry cannot also be subjective. Islamic geometry depends on Islamic principles and the ideology of Islam; it expresses a relationship between Islamic art and Islamic worship, which can be interpreted or perceived according to the individual’s experience. It is its relationship to Islamic doctrine that has earned Islamic art its reputation as “sacred art” and for beauty (Burckhardt 2009; Dabbour 2012).

2.3.2 The Shape Grammar of Islamic Art

The shape grammar can be described as the aesthetic DNA of a design that supports a rule-based design method. According to Eves and Hewitt (2009), the aesthetic DNA of a style explains its aesthetic characteristics and meanings. According to Stiny (1980), the construction of the design language contains five stages: first, a vocabulary of shapes, which encompasses a set of shapes that are unique to each other; second, spatial relationships that give rise to a recognisable form of any collection of shapes; third, a shape’s rules that aim to work as a blueprint, in order to ensure the unity of the shape design through repetition, symmetry, and rotation; fourth, initial shapes formalised by combining the vocabulary of shapes; and fifth, a shape’s grammar is a product of combining shape rules and initial shapes (Figure 2-8).

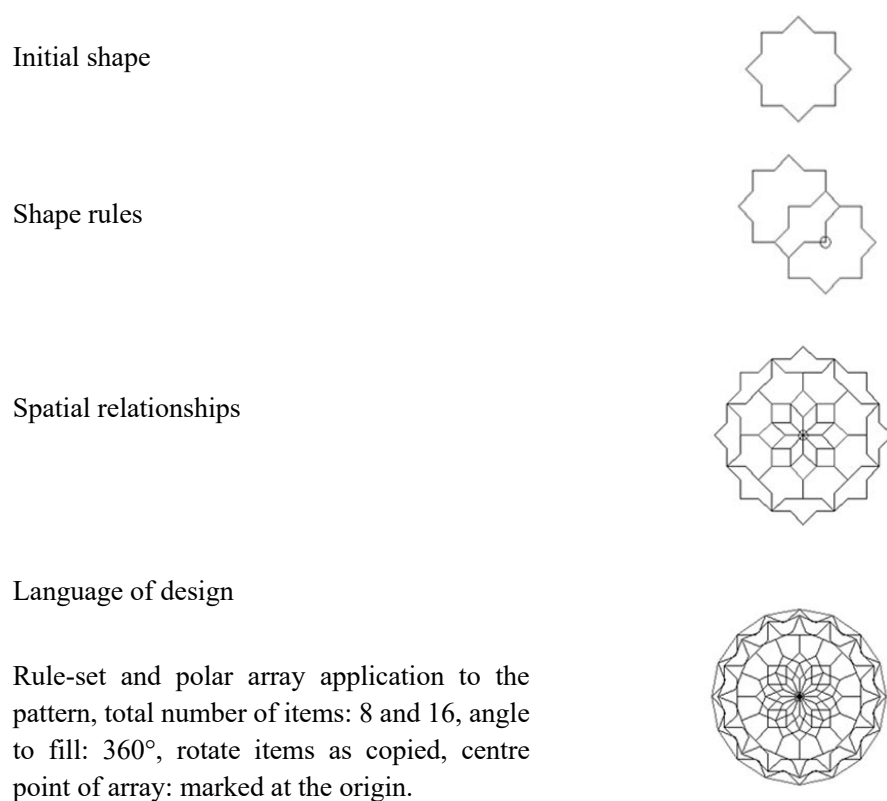


Figure 2-8: Shape Grammar Example (Cenani and Cagdas 2006).

Islamic geometric patterns have a shape grammar and design language, which are known as algorithmic systems, and can be used to analyse existing designs or to produce new ones to express abstract representations without using text or symbols (Cenani and Cagdas 2006). Geometric proportions in architectural patterns represent a design language in the same way that written words represent a spoken language (Dabbour 2012).

Studying the shape grammar (design language) enables us to confirm the existence of spiritual aesthetics in Islamic patterns, which are embodied in design rules such as repetition and rotations. Implementing the design rules in design provided Islamic patterns with characteristics such as unity, continuation and movement, and extension and expansion which is compatible with the principle of the soul that led to calm and peace, which in turn affects spirituality (Koç 2013).

“The epistemological purpose of Islamic art is to achieve the invisible behind the visible, not only to beautify the world and life” (Koç 2013, p.12).

The form of Islamic patterns is affected by the Islamic pattern types used, as well as by the shape grammar selected, such as repetition, and both affect the perception of Islamic patterns (Figure 2-9).

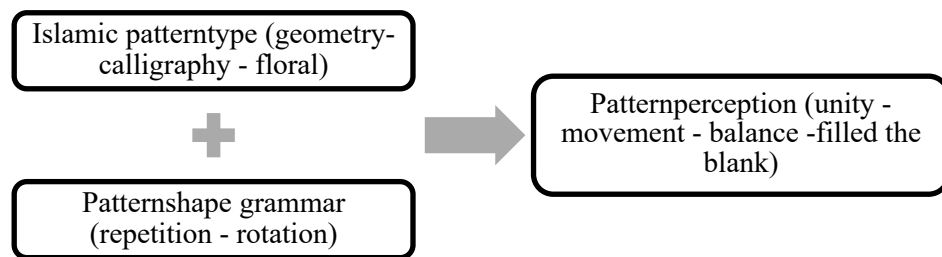


Figure 2-9: Islamic Pattern Perception (Researcher).

An example of Islamic aesthetics lies in the fact that Islamic principles emphasise a unity that supplies the same characteristics to the art over vast areas and across different cultures and times (Nasr 1987). Scholars (Bier 2002b, 2002a; Bonner 2003; Ebru 2009) agree that this unity is the reason for the spread of Islamic faith all over the world, and for the strong effect of Islamic principles on the unity of Islamic art. Unity is at the core of Islamic revelation; to embrace Islam, one must believe in unification (in Arabic, “Tawhid”), and bear witness that there is no God but Allah and that Muhammad is His servant/slave and His messenger. This indicates that Islam is not limited to worship but is a way of life that extends to society, literature, and art.

The meaning of unity is evident in patterns, both ostensibly and implicitly: ostensibly, by repeating one fundamental unit in the pattern in a coherent way to evoke a sense of unity and harmony; and implicitly, by having the meaning of unity symbolised by the circle, which is the main unit of these patterns and the most common shape in our environment - the universe, the sun, and the nucleus that is the origin of all creatures. It contains a circumference, which revolves around all constants, and one centre, which indicates the oneness of Allah (Bier 2002b; Bonner 2003; Ebru 2009). In

geometric patterns, the circle is the base unit for all the patterns which create the six, eight, and ten-pointed stars (Figure 2-10). The circle helps the viewer perceive the interlaced composition as a strong unity, which symbolises the one and only God, Allah (Jowers et al. 2010).

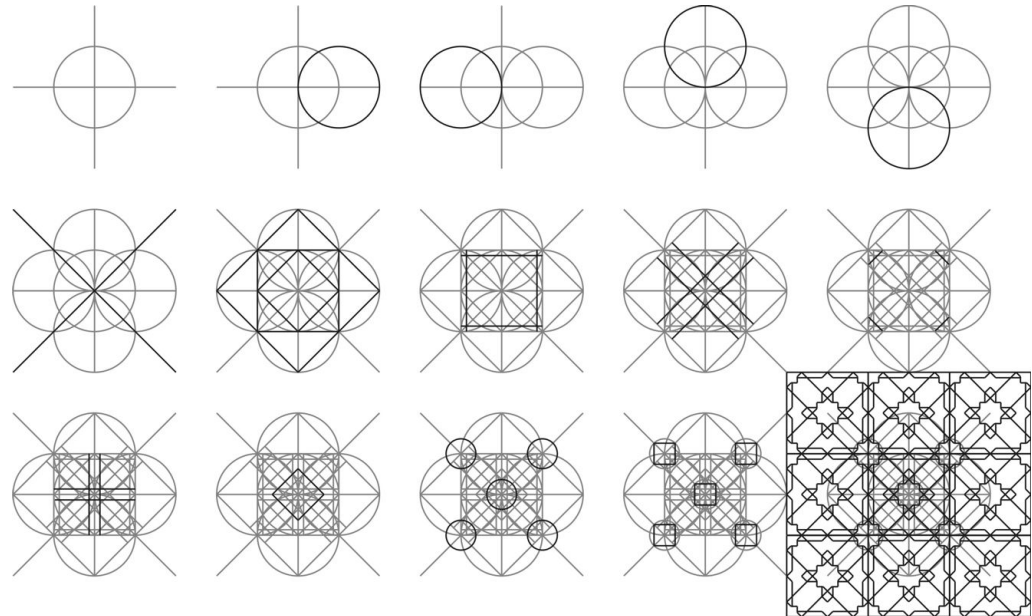


Figure 2-10: A Circle is the Base Unit for Islamic Patterns (Jowers et al. 2010).

Movement is key feature of Islamic art. Movement in Islamic art, whether in decoration or in engraving, is from a small unit to a design or a form, and from a particular form to other forms that, as a whole, constitute a continuous field of vision (Alfarogi 1981). As held by Gestalt theory, the continuation takes place when the eye is forced to move from one object's ending point and continue onto the next object (Pinna 2010).

Another feature of Islamic art is balance, which refers to the blocks distributed in a balanced way in a space, and includes pattern units, their sizes, and the interstitial spaces; balance also incorporates the method of distributing colours. The meaning of the word balance is "equal in weight," and what is meant in the field of design is the equivalent of the opposing elements in the design. Balance may be axial, that is, on both sides of a vertical axis, and the shapes and drawings may be identical and may not coincide, however balance may be achieved through colour, shape, or texture. Balance may be radiative, meaning that it revolves around a point or a focal mass.

Balance may also be illusory and not depend on an axis or apparent fulcrum, but rather depend on the sense of balance, by estimating the weight of colours and the proportion of the space, and the proximity or distance of the masses to the imaginary axis. The balance of blocks generates a feeling of comfort.

Extending and expanding is a feature of Islamic art design. The Islamic art of patterns pushes the viewer's gaze to follow its lines in all directions, and if the design ends within its confined spatial boundaries, the viewer find themselves pushed to follow the scene through their imagination, because the borders of the design could not limit or contain the scene (Alfarogi 1981).

In conclusion, as KoÇ (2013) said, studying shape grammar confirms the existence of spiritual aesthetics in Islamic patterns. For a deeper understanding of the spirituality of Islamic patterns, however, interior design elements will be studied.

2.4 *Hotel and Interior Design*

A hotel is defined as “an establishment offering accommodation and refreshment for travellers and a hotelier has a legal obligation to fulfil these basic needs” (Kerr Forster Associates 1993, p.17). The term “hotel” includes the physical building and its facilities, as well as its style, status, and ambience, which differs according to the rating, ranging from two-star hotels to luxury hotels (Kerr Forster Associates 1993).

The Design Hotel group was established in the early 1990s. Today, the group owns more than one hundred hotels located in over forty countries, and is known for setting exceptional criteria for each of their unique hotels. Although each hotel has its own individual architectural style, Design Hotel projects nonetheless share a sense of unity due to their common design language and sense of the aesthetic. Each hotel is seen as an individual artwork; taken together, the hotels form a gallery which coordinates, administrates, and represents the Design brand (Strannegård and Strannegård 2012).

Strannegård and Strannegård (2012) illustrate the significance of hotel design and how it is considered and practised by hotel managers in real life. They cite the manager of the Nordic Light Hotel, part of the Design Hotel group, who says the hotels aim for aesthetic perfection. If the physical building is allowed to decay, the image and brands will accordingly start to decay. Consequently, the hotel employs a full-time designer as a kind of concept police officer responsible for monitoring the aesthetics of the hotel design (Strannegård and Strannegård 2012).

2.4.1 Design Environment (The Physical and Non-Physical Elements)

An environment is comprised of both physical and non-physical elements. Nasar (1994) evaluates the quality of building exteriors by examining two kinds of aesthetic: formal and symbolic. Formal aesthetics is the study of structure, which consists of shape, proportion, colour, and rhythm. Symbolic aesthetics is the study of human responses to the content of forms and meanings. For (Butterworth 2000), in turn, spaces and places are not only part of people's everyday lives; they are embedded with deeper personal and cultural meaning, and symbolise personal histories, relationships, people's values, and a sense of belonging.

It is essential for interior designers to understand the impact of space based on aesthetics and feelings Nasar (1994). Using the term "visual quality," Nasar argues that physical elements such as symbols, colours, and furniture all combine to confer sense and meaning. Interior designers focus on visual quality such as colour, context, scale, spatial balance, and the complexity of space (Nasar 1994). They deal with peoples' ways of interacting with the surrounding environment and the aesthetic components of the interior environment that necessarily reflect the socio-psychological needs of the users. They also contribute to the well-being of humans by analysing a user's needs, values, functions, and aesthetics (Guerin and Martin 2010).

In other words, interior designers try to understand the perception of design. Perceived visual quality is a psychological construct that involves subjective assessments (Nasar 2007). People perceive different environmental elements in different ways. Their

perception is affected by subjective assessments, mood, feelings, personality and experience (Nasar 1987; Fottler et al. 2000). The perception of the physical environment leads to emotions and physiological responses which affect individual behaviour (Berglund and Halvarsson 2008). Perception is explained in more detail later in this chapter.

The study of non-verbal meaning in the environment of interior design is not new, and involves the study of the perceived meaning of, and preferences for, environments, both of which affect function. Several studies have discussed the non-verbal effect of symbols in interior design; for example, the study of the meaning of symbolism within the social environment is known as environmental symbology (ES) (Tan 2011). In other research on the understanding and measuring of the non-verbal meaning conveyed by place, Nasar (2007) states that interior environments create an atmosphere that evokes sensations and interpretations on the part of the occupant. Places can also convey several kinds of meaning, which carry different emotional responses, and these should be appropriate to their function (Nasar 2007).

In relation to hotel design, Ransley and Ingram (2001) assert that the atmosphere of a hotel's public and private spaces, including restaurants, lounges, bars, lobbies, shops, and bedrooms, can have a profound effect on visitors. They point out that good hotel design can be effective in both hard and soft ways. The hard factors include cost, safety, and space allocation, while the soft factors are concerned with image and style, and the way in which they signify and communicate messages of identity. These are subjectively judged by users based on their personal perceptions and frames of reference (Ransley and Ingram 2001).

The physical environment plays a major role in the success of any hotel. The physical elements and symbols are visibly communicated in the interior design of hotels to the visitor's senses and allude to sensory experiences (Alfakhri 2015). Mohsin and Lockyer (2010) explored luxury hotels and identified the importance of physical quality, as in room furnishings, value for money, and a prompt response to reservations. Kim and Perdue (2013) explored how customers choose hotels, and their

findings indicated that customers rely on three types of attributes when doing so: cognitive (e.g., price, food and service quality), sensory (e.g., general atmosphere, room quality), and affective (e.g., comfort, safety and entertainment feelings). Juwaheer (2004) included sensory factors such as hotel design, noises, bed comfort, and cleanliness, along with cognitive factors, and found these attributes to be significant in choice intentions and patronage.

Alfakhri (2015) enumerates the ten hotel attributes that influence hotel choice, which are: hygiene, price, loyalty membership, facilities, brand name, website photos, location, star rating, service, and design. Interestingly, a comparison of these attributes to hotel design factors from a customer point of view revealed that hotel design is more important than hotel prices, as customers are willing to reduce their trip to be able to afford a more expensive hotel whose design they prefer.

Nowadays, hoteliers must have a clear vision of their guests' design needs in order to achieve success (Yavas and Babakus 2005). Hotel design is a continuous activity: for example, hotel bedrooms are refurbished every seven years due to wear and tear (West and Purvis 1992). The higher a hotel is rated by the classification schemes, the higher customer expectations of the service and design will be, which prompts these hotels to spend more on design in order to meet those expectations. This should be based on critical analysis of customer profiles and behaviours (West and Purvis 1992), however, hotel managers often rely on their personal tastes and former décor standards, without considering customers. This is due to the criteria that hotels rely on to evaluate their design effectiveness, such as longevity, ease of maintenance, increases in room rates, and level of occupancy. Surprisingly, customer preferences, perceptions, and encouraging word of mouth are rarely considered, despite their direct link to profitability and the role of hotel design in service and marketing (West and Purvis 1992). Lea (2008) points out that aesthetically aware hotels have increased their profits considerably in the last decades. This suggests the value of understanding customers and designing hotels and choosing their aesthetics according to customer needs.

In order to do this, it is necessary to know how people evaluate and perceive their environment, and what meanings they see in it (Nasar 2007). Since the physical environment plays a key role in the success of hotels, it is important to understand how physical elements affect the perception of hotel users. This is the key research gap addressed in this study: examining the perceptions of different preferences for Islamic patterns in particular as one element of the physical environment that enhances the feeling of spiritual aesthetics, which is a customer desire. Since the importance of signs and symbols is that they act as essential elements in the physical environment, they been studied in depth through a field known as semiotics.

2.4.1.1 Semiotics

Semiotics is both the science of signs and the study of systems of signs, with a focus on how they convey and structure meaning (Kinross 1984). Semiotics can also provide crucial insights into the meanings behind human communication and behaviour (Echtner 1999). The term semiotics comes from the Greek root *sēma*, which means sign. The history of semiotics extends to Plato, who first pondered the meaning of language, and to Aristotle, who considers nouns in *Poetics* and *On Interpretation* (Cobley and Jansz 2010). However, modern semiotics as we understand it was not developed until the 19th century (Echtner 1999). Table 1-2 below presents the key contributors to semiotics, in chronological order (Johnson 2007).

Peirce	1839-1914	Logician
Saussure	1857-1913	Linguist
Jakobson	1896-1982	Linguist
Morris	1903-1979	Philosopher
Barthes	1915-1980	Critic
Percy	1916-1990	Author
Sebeok	1920-2001	Linguist
Eco	Present	Semiotician
Guiraud	Present	Linguist
Galan	Present	Critic
Chandler	Present	Instructor

Table 2-1: A Timeline of Modern Semiotics (Johnson 2007)

The philosopher Charles Sanders Peirce related semiotics to logic, seeking to understand and interpret signs and the relationship between semiotics and perception (Mick and Oswald 2006). His focus was on exploring the structure of meaning within the total human experience, and so he adopted the term “semiosis” to refer to verbal and nonverbal systems of signification and interpretation in the sign system (Echtner 1999). Peirce believed the universe was “perfused with signs if it is not composed exclusively of signs” (Peirce 1974). Peirce explains meaning through a triadic relationship represented by the “semiological triangle” (Figure 2-11), involving the *designatum* (the object or concept signified), the *sign* (the symbol or the signifier used to represent the object) and the *interpretant* (the one interpreting the sign). Thus, a sign not only stands for something, but it also stands for something to somebody (Echtner 1999; Hawkes 2003).

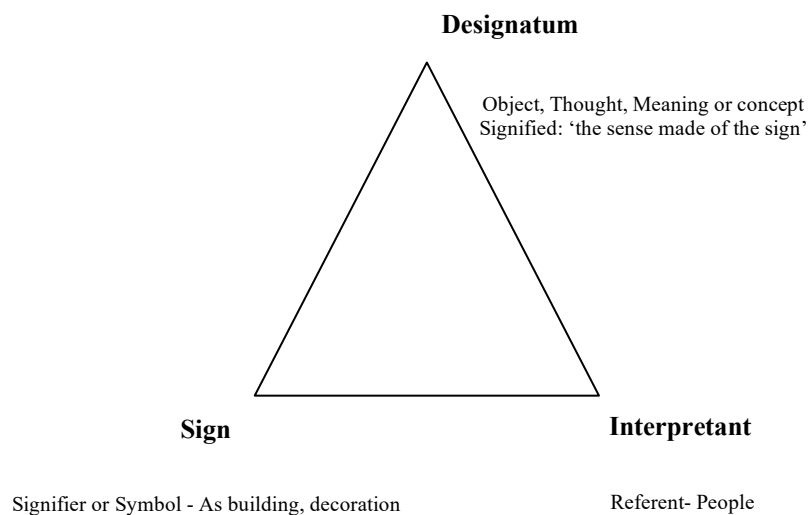


Figure 2-11: The Semiological Triangle (Lang 1988)

Ferdinand de Saussure defines the linguistic sign as a “dyadic” or two-part entity: a “signifier,” which is the form or the material aspect of the sign; and the “signified,” which is the mental concept that the form represents (Figure 2-12) (Cobley and Jansz 2010). It is worth mentioning that Saussure uses the term semiology rather than semiotics.

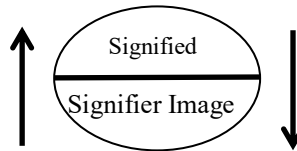


Figure 2-12: Saussure's Graphic Representation of a Sign (Cobley and Jansz 2010)

Many scholars from various disciplines have contributed to semiotics, including Jakobson, Morris, Barthes, Percy and Eco. It is not possible to summarise their collective works in this study, however, Umberto Eco (2011) proposed that semiotics is a science that studies every phenomenon from the perspective of signs, and his hypothesis that every cultural phenomenon is a system of signs is particularly relevant to this study.

Semiotic philosophy is the first philosophy used in this research, and it confirmed that each sign (signifier) indicated meaning (signified). The second step was to find the specific aspects of the sign that would enhance meaning and determine whether there are other influential effects on meaning, than the signs and objects themselves. For example, if a rose signifies love, what are the elements in the rose that convey the meaning of love? Similarly, what are the elements of Islamic patterns that convey the meaning of spirituality?

2.5 *Theoretical Framework of the Study*

The use of a theoretical framework aims to ensure the quality of the findings of the study whilst supporting and informing the design guideline. The specific focus of this research is on how Islamic patterns as elements of the physical environment in the interior design of hotel rooms enhance the spiritual aesthetics. In other words, it aims

to understand the individual perception that Islamic patterns enhance spiritual aesthetics. The focus is therefore on the theatrically-based frameworks addressing the role played by the physical environment in the perception of Islamic patterns.

A number of theories have been reviewed and will be expanded in detail below, beginning with environmental psychology and the effect the physical environment has on action and behaviour. This includes the stimulus–organism–response (S–O–R) model proposed by Mehrabian and Russell (1974) and the Kotler concept of atmospherics. Bitner’s (1992) servicescapes model, which was developed based on the two previous concepts, was also studied in detail to determine the most appropriate model for this study.

The idea of signs and significance (semiotics) has also been analysed alongside perception theories such as the theory of mind, empirical theory of perception, phenomenological theory and Gestalt theory.

2.5.1 Discussion of Different Models Related to the Effect of Physical Environment on Action and Behaviour

Academic interest in environmental psychology can be traced back to the studies of Mehrabian and Russell (1974) and Kotler (1973). Mehrabian and Russell introduced the stimulus–organism–response (S–O–R) model and Kotler introduced the concept of atmospherics (Jeon and Kim 2012). Bitner (1992) developed the servicescapes model on this basis, placing emphasis on the effect of the physical environment in which a service process occur. The goal of the servicescapes model is to explain the behaviour and actions of people within the service environment in order to design environments that accomplish a firm’s goals by achieving the desired behavioural responses of service providers (Hooper et al. 2013).

2.5.1.1 Environmental Psychology: (Stimulus-Organism-Response) Model

The effect of the environment on action and behaviour has long been recognised by landscapers, architects, and interior designers, and has also been acknowledged by far-sighted retailers. Competition in retail has intensified since 1974, so the relationship between the environment and behaviour has been researched by psychologists. This has led to a rapidly expanding discipline known as “environmental psychology” (Spence et al. 2014). This term was in fact coined by Mehrabian and Russell (1974), who argued, based on their research into environmental psychology, that environmental stimuli (S) cause an emotional reaction (O) which, in turn, drives a consumer's behavioural response (R) based on the stimulus–organism–response (S–O–R) model (Figure 2-13). According to Mehrabian and Russell (1974), there are three basic categories of emotional states: pleasure, arousal, and dominance. These emotional responses cause two different behaviours: approach or avoidance. Approach behaviour consists of a wish to stay, to look around, to discover the environment, and to connect with others in the environment, while avoidance refers to the opposite behaviours (Dedeoğlu et al. 2015).

In the stimulus–organism–response model, the stimuli are external to the person and contain different elements of the physical environment (Mody et al. 2017). This indicates

that the effect of the environment (the stimulus) on consumer behaviour is facilitated by the consumer's emotional state.

The SOR model therefore does not identify particular behaviours, and that there are other behavioural outcomes that may occur as a result of environmental stimuli. Mehrabian and Russell agreed that environmental stimuli cause a reaction, but they did not clarify the environmental dimensions. In a useful development of the SOR model, Bitner (1992) assumed three factors as dimensions of servicescapes: ambient conditions, space/function, and signs/symbols/artefacts. The SOR model was one of the foundations on which Bitner (1992) developed the servicescapes framework.

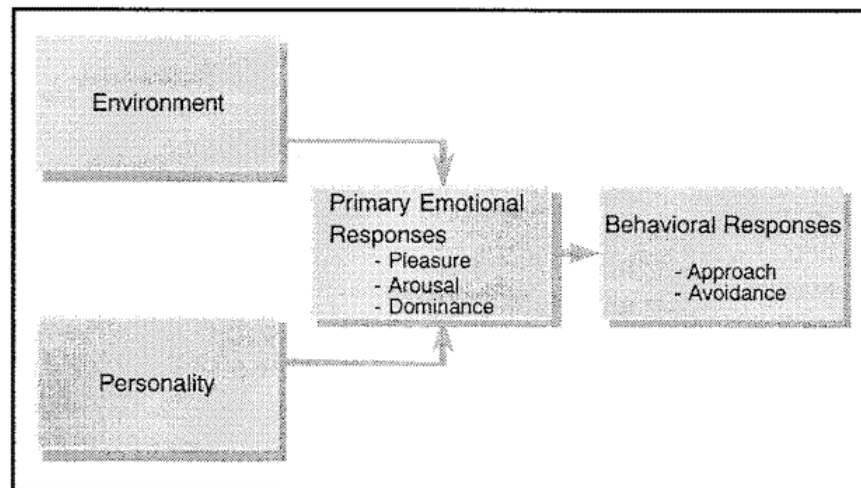


Figure 2-13: Classic Environment Model (Mehrabian and Russell 1974, p.8).

2.5.1.2 Atmospherics

Technically speaking, atmospherics involves the air surrounding a sphere, however, in terms of the literature, the meaning may slightly differ from the above definition. Kotler (1973), one of the pioneers of the servicescape concept, argued that atmospherics describes the quality of the surroundings. For example, the physical surroundings of a city, café, or the countryside can evoke pleasant feelings (good/positive atmospherics) or unpleasant ones (bad/depressing atmospherics). Kotler (1973, p.50) also stated that atmospherics is “the conscious designing of space to create certain effects in buyers.” This conceptualisation is similar to that of Mehrabian and Russell (1974), in that they

both conclude that environmental stimuli can be influenced so that certain behaviours can be manifest.

Kotler (1973) went on to categorise atmospheric sensory channels into four dimensions: sight, sound, scent, and touch. The main visual dimensions of atmosphere are colour, brightness, size, and shape. The main aural dimensions of atmosphere are volume and pitch. The main olfactory dimensions of atmosphere are scent and freshness. The main tactile dimensions of atmosphere, finally, are softness, smoothness, and temperature (Figure 2-14). Kotler’s model did not, however, take into account social dimensions.

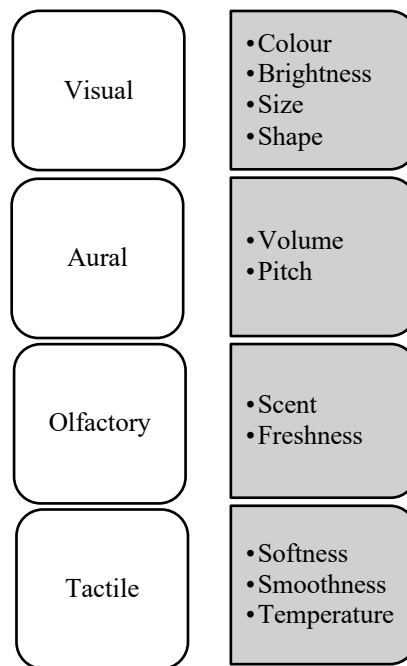


Figure 2-14: The Atmospheric Dimensions (Kotler 1973)

2.5.1.3 Servicescapes

The study of servicescapes was drawn from environmental psychology’s SOR model and from Kotler’s (1973) atmospheric dimensions. As we mentioned above, the servicescapes model developed by Bitner (1992) emphasises the effect of the physical environment in which a service process takes place (Figure 2-15). The term “servicescapes” is a compound of “services” (in other words, facilities) and “scape” (which refers to the environment, similarly to landscape (land and scape) (Jeon and Kim 2012)).

Servicescapes suggest that physical environments are perceived by both customers and employees, and this perception is considered an internal response (cognitive-emotional-physiological), which in turn influences behaviour (approach-avoid). Bitner (1992) classifies three main dimensions of the physical environment: ambient conditions, space/function and sign, symbols and artefacts, but also acknowledges that there are some responses affected by personal moderators and situational factors. This theory applies to perceptions of hotel room design; if environments are uncomfortable and make people feel isolated, they may wish to leave the room. Conversely, if they feel spiritual and comfortable, they will stay longer.

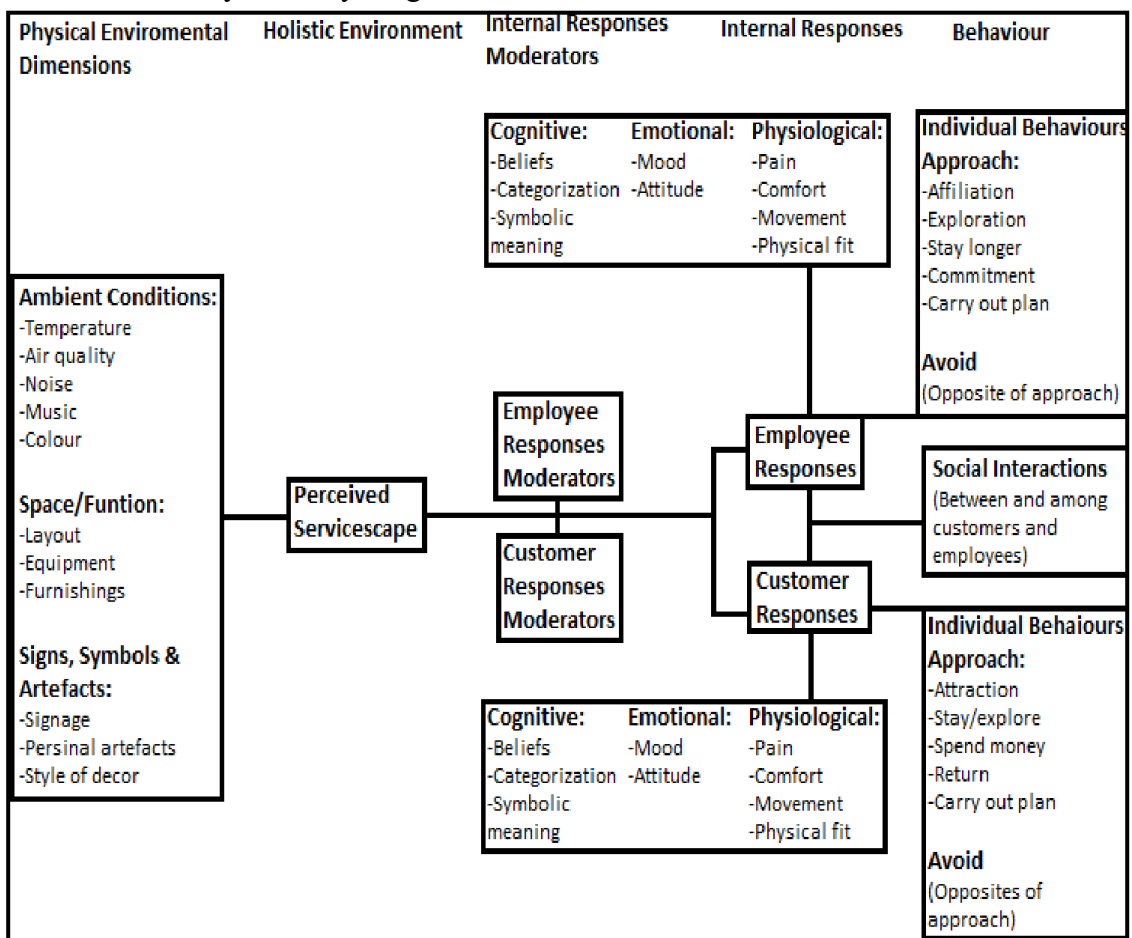


Figure 2-15: Servicescapes Model Developed by Bitner (1992).

2.5.2 The Evaluation and Development of Physical Environment Models

As evidence was amassed in relation to the impact of certain cues, scholars began to work on developing typologies and classification schemes (Table 2-2). Baker (1986) proposed a general typology that takes into account social factors (the people in a shop, customers and workers), design factors (visual prompts such as arrangement of a shop, clutter, cleanliness, and colour), and ambient factors (nonvisual cues such as scents and sounds). Although social dimensions were added to the typology, the author omitted the dimension of exterior design (Eroglu et al. 2003).

Bitner's (1992) typology was more attentive to the service retail context and was slightly more exhaustive, accounting for ambient cues (cues that affect the five senses), layout, functionality (store planning and ability to achieve consumer goals), signs, symbols, and artefacts (signals that pass information on to shoppers) (Eroglu et al. 2003).

Despite the comprehensive nature of the aforementioned typology, other researchers have offered their own classifications, which they have continued to develop depending on the particular service. The variations were developed according to the servicescapes typology (Rosenbaum and Massiah 2011). Evans and Berman (1995) offered their own classification, including interior design, layout, landscaping, and internal and external variables in their model, but not including the human component (da Costa Webber et al. 2018).

Turley and Milliman (2000) improved Berman and Evans's (1995) model and described five categories of atmospheric variables: external variables (signs, entrances, windows, and size and colour of the building); internal variables (floor, colours, lighting, music, aromas, corridor widths, materials, textures, lining, goods, temperature, and cleaning); layout and design variables (design of space, location of fixtures and equipment, distribution and correlation of departments and products, waiting areas, and circulation flow); decoration and sales points variables (display units, signs, wall decorations, and photographs); and human variables (employee and customer characteristics, uniforms, agglomeration, and privacy).

Rosenbaum and Massiah (2011) suggest their own classification, including the physical dimension, the social dimension, the socially symbolic dimension, and the natural dimension (Figure 2-16).

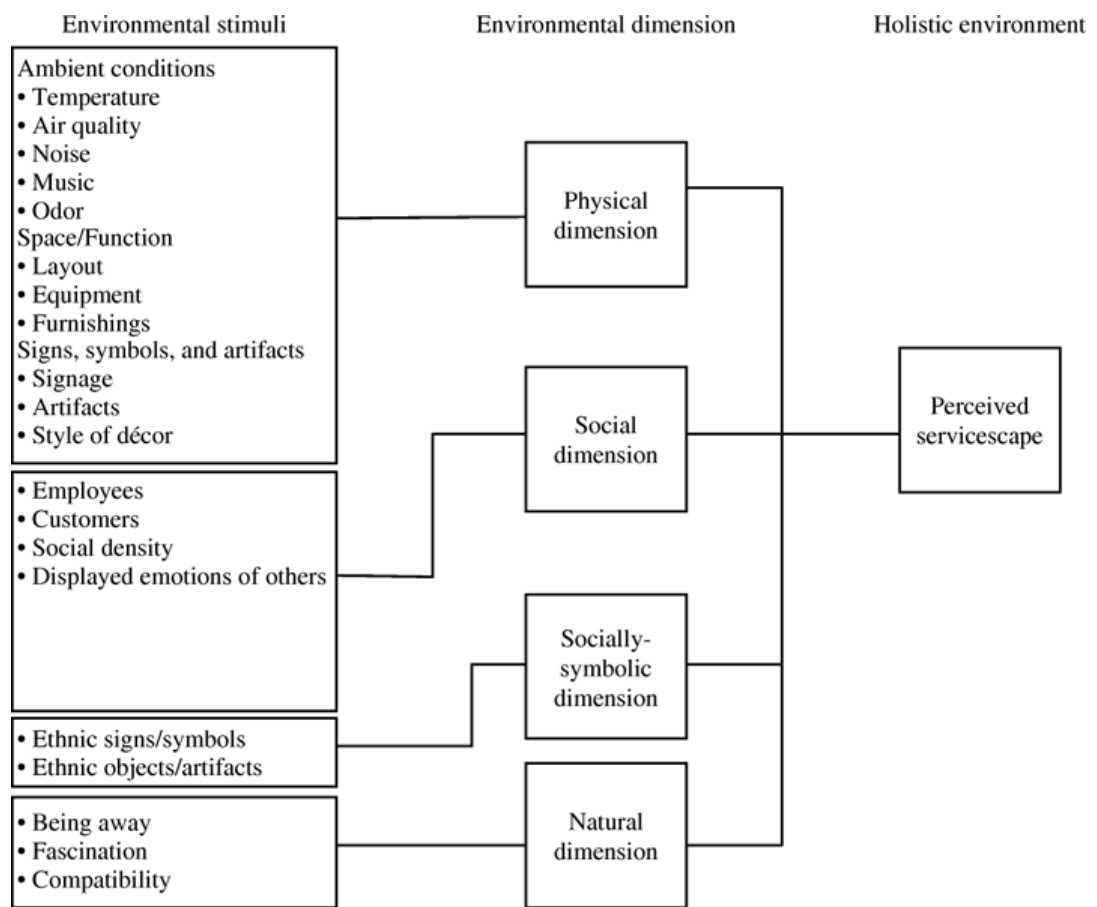


Figure 2-16: A Framework for Understanding Four Environmental Dimensions of Servicescapes (Rosenbaum and Massiah 2011).

Haug and Münster (2015) defined four categories using an abstraction level slightly higher than that described by Turley and Milliman (2000). The categories include exterior variables (facade design and other exterior elements), general interior variables (floors, ceilings, walls, technical installations, lighting, and operational manuals), layout and furniture variables (space design/allocation, furniture/inventory, traffic flow and places for merchandise) and decoration and display variables (decoration items, product displays, price displays, images and screens/monitors).

The developed framework shows that “servicescape” is no longer a singular concept useful only to marketers. Rather, it represents a multi-disciplinary paradigm that focuses on an array of person-place relationships (Rosenbaum and Massiah 2011).

Gashoot (2012) research studies the effect of interior design on wellbeing, relying on Bitner's servicescapes framework and eventually contributing to the servicescapes dimensions by adding a range of physical elements that enhance wellbeing, such as technology conditions (internet as laptop, entertainment as PlayStation) (Figure 2-17).

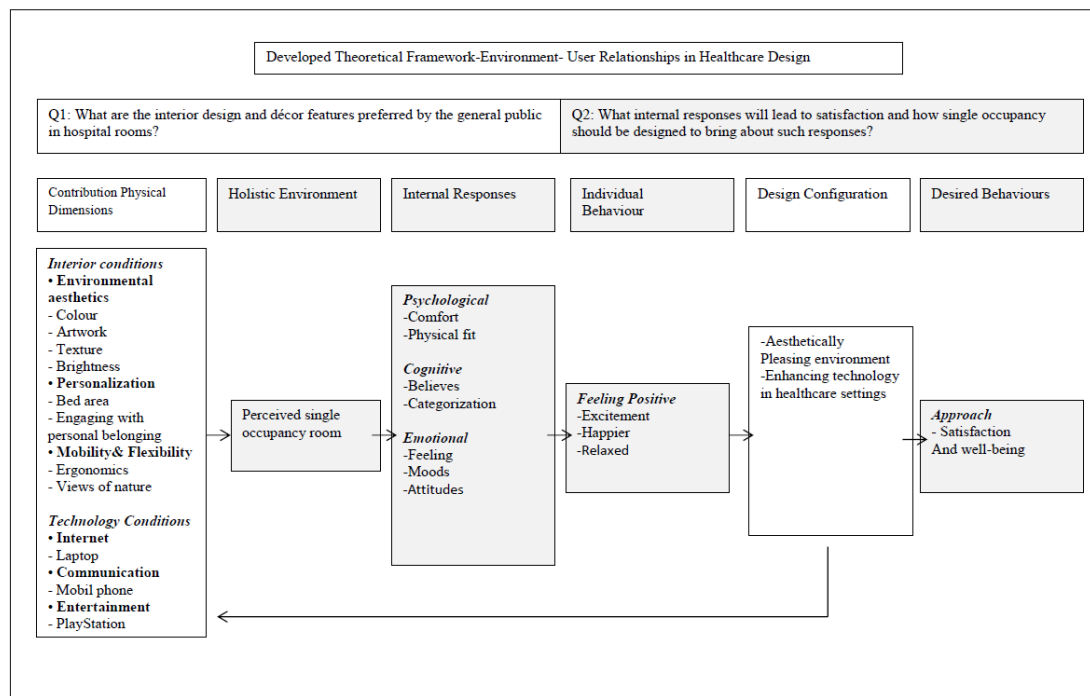


Figure 2-17: Developed framework by (Gashoot 2012).

In contrast, Alfakhri (2015) relied on the servicescapes framework, service-dominant logic (SDL), and consumer culture theory (CCT) to form a “hotelscape” framework. Her study is focused on gaining an understanding of the foundations of hotel interior design and explaining its role, particularly in generating value, symbolising meanings, and shaping experiences from the perspective of a cosmopolitan consumer. Cortes-Navas and

Rojas-Berrio (2018) states that the servicescapes model has been approached for diverse sectors; tourism and entertainment were the most commonly studied sectors with 61%. The hotel sector is linked to tourism, and several authors focused on the servicescape as it referred to hospitality such as Daunt and Harris (2012); Ariffin et al. (2013); Lim (2014).

Recent research thus supports and justifies the development of a framework based on the servicescapes typology (Jeon and Kim 2012); on the servicescapes dimensions (Gashoot 2012); or by merging several theories (Alfakhri 2015). As a result, this research will develop the Gashoot (2012) framework, which is similar to the direction of this research in adopting rooms and occupiers, instead of the service environment and employees. Despite studying interior design elements in general, the focus of the Gashoot (2012) framework is the closest to this research, which focuses on Islamic patterns as interior design elements. Alfakhri (2015) studied the hotel environment, but her framework was excluded because her focus was on guests rather than the room itself, albeit it was a valuable reference.

Author	Dimensions of Service Environment
Kotler (1973)	<ul style="list-style-type: none"> • Sight • Scent • Touch • Sound
Baker (1986)	<ul style="list-style-type: none"> • Social factors • Design factors • Ambient factors
Bitner (1992)	<ul style="list-style-type: none"> • Ambient conditions • Space/function and sign • Symbols and artefacts
Evans and Berman (1995)	<ul style="list-style-type: none"> • Interior design • Layout, landscaping • Internal and external variables
Turley and Milliman (2000)	<ul style="list-style-type: none"> • External variables • Internal variables • Layout and design variables • Decoration and sales points variables • Human variables
Rosenbaum and Massiah (2011)	<ul style="list-style-type: none"> • Physical dimension • Social dimension • Socially-symbolic dimension • Natural dimension
Gashoot (2012)	<ul style="list-style-type: none"> • Interior conditions • Technology conditions
Haug and Münster (2015)	<ul style="list-style-type: none"> • Exterior variables • General interior variables • Layout and furniture • Decoration and display variables

Table 2-2: Dimensions of Service Environments (Researcher)

2.5.3 Servicescapes Model Contents

2.5.3.1 Behaviour

The idea that human behaviour is influenced by the physical setting in which it occurs is essentially a truism (Bitner 1992). Environmental psychologists such as Bitner (1992) and Mehrabian and Russell (1974) mention that individuals react to places with two general and opposite forms: approach or avoidance. Approach behaviour involves a desire to remain, discover, and connect with others in the environment. It encourages enjoyment in shopping and spending money, which are all influenced by perception of the environment. Avoidance, meanwhile, refers to behaviours contrasting to these, based on a desire not to remain or explore (Bitner 1992). In this research, behaviours rely on the perception of a hotel room's design. If the environment of a hotel room is uncomfortable

and makes guests feel isolated, they may wish to leave the room, or if they feel spiritual and comfortable, they will stay longer.

2.5.3.2 Social interaction

The ability of the physical environment to influence behaviour is particularly apparent for businesses such as hotels, restaurants, offices, and hospitals. The physical environment is rich in such cues and may be very influential in communicating an organisation's image and purpose to its customer (Bitner 1992). The services generally are produced and consumed simultaneously; customer and employee interact with each other within the physical facility. The customer often experiences all elements of the service within the firm's physical facility. The place where a service is produced can't be hidden, and may in fact have a strong effect on a customer's perceptions of the service experience. Employees have been ignored in this research so far, however, the needs and preferences of both service employees and customers should be taken into account.

“Ideally, the organisation environment should support the needs and preferences of both services employee and customer simultaneously” (Bitner 1992, p.58).

Physical surroundings are generally more important in a service setting because it is something that both customers and employees experience. Yet not all service firms are alike, and the vertical diminution relates to the person who is performing the action within the servicescape; customer, or employee, or both. Bitner classified a services organisation according to three levels: a self-service organisation in which few if any employees are present and the level of customer activity is high, such as a golf course; interpersonal service, where customer and employee are present and perform actions within the servicescapes, as in a hotel; and remote service, where few customers see or experience the firm's physical setting, as in a utility or insurance company. Although the hotel in general is considered under interpersonal service, in this research a hotel room is not considered interpersonal service. Because only customers are present in the servicescape (the room), it is considered self-service. The employee has no role here, and there is no interaction between customer and employee in the servicescape (Bitner 1992).

2.5.3.3 Physical environment dimensions

A complex mix of environmental and psychological factors influences the internal responses and external behaviours of customers and employees. A number of studies suggest several factors of the physical environment are involved. There are no unified environmental factors for all services; in other words, the determinants physical environment factors vary with the nature of the service (Jeon and Kim 2012). Mazuch and Stephen (2005) mention various physical environment design factors relating to interior environments, such as colour, artwork, form, arrangement of furniture, scale and proportion, aroma, sound, texture and materials, natural light and artificial light, and indoor and outdoor plants.

Bitner (Bitner 1992) lists some of the many physical factors which can enhance a user's actions and internal representation, such as lighting, colour, signage, textures, quality of materials, style of furnishing, layout, wall décor, signs, symbols and artefacts, and classified the physical environment as including three main dimensions: ambient conditions, space/function and signs, and symbols and artefacts. In contrast, Gashoot (2012) classified the physical environment as including interior conditions and technology conditions (Figure 2-15). Alfakhri (2015) developed the hotelscape model and classified the physical environment as consisting of interior design elements (key elements and supplemental elements). There are differences in the classification of the physical environment, and the most frequently mentioned elements in the literature will be identified next. The specific focus of this research is the sign, or, in other words, the patterns used in interior design, but this does not mean that other interior design elements are ignored. They are all, necessarily, intertwined, since the perception of interior design is holistic, and each element affects and completes the others.

“Customers and employees perceive the environment holistically, as a composite of three dimensions: ambient conditions; spatial layout and functionality; signs, symbols, and artifacts. Each dimension may affect the overall perception independently and/or through its interactions with the other dimensions”. (Bitner 1992, p.65)

2.5.3.3.1 Ambient conditions

Several authors have identified ambient conditions as a factor that affects perceptions of, and human responses to, the environment (Baker 1986; Bitner 1992; Rosenbaum and Massiah 2011). Ambient conditions include background characteristics of the environment such as temperature, lighting, noise, music, air quality, and scent. As a general rule, ambient conditions affect the five senses (Simpeh et al. 2011). Some studies add colour, furniture, and visual attractiveness as factors of ambient conditions (Lee 2011).

2.5.3.3.2 Colour

Eiseman and Hickey (1998, p.16) have argued that “colour is the most important design element in creating spaces and environment that reflect mood and style” It is widely known that colours have a strong effect on emotions. The relationship between colour and emotions is connected to colour preferences, and it has also been found that particular colours are strongly preferred due to their positive or negative effects, regardless of age, racial group, or culture (NAZ and Epps 2004). Carl Jung was a pioneer in colour psychology and interested in the properties and meanings of colours. His studies in, and writings on, colour symbolism cover a broad range of topics. He argued that a colour can carry a specific meaning, which is either based on learned meaning or biologically innate meaning. The perception of a colour automatically entails evaluation by the person perceiving it (Sengupta et al. 2020).

2.5.3.3.3 Lighting

Lighting is responsible for controlling the appearance of colour, which also affects cognitive abilities such as memories, and emotions such as mood (Singh 2006). “Interior environments and their design are profoundly influenced by how designers integrate colour and light with form and space” (Poldma 2009, p.19), and so all of the design elements work together to affect our psychological responses (Poldma 2009).

2.5.3.3.4 Furniture

Furniture plays a very important role in interior spatial layout, and is the interior-environment material function carrier as well as a manifestation of cultural and personal status. Along with the furniture's development, people pay great attention to furniture's function and the inspiration and taste in interior space, so the function of furniture must make sense to people, and furniture must be comfortable in use. Furniture can also embody culture, style, and characteristics of environment (Xiangzheng 2009).

2.5.3.3.5 Material or texture

The term “texture” originally referred to the art of weaving, and the qualities of woven materials, but gradually expanded to encompass the tactile, material quality of objects generally, and the synesthetic interaction of tactile, visual and aural features (Djonov and Van Leeuwen 2011).

Texture is used for depth, and will change the way light reflects across a room. Texture can be added by using rugs, blankets, wallpaper, cushions and accessories. Using a rough texture can create a cosy, homely feeling, whereas smooth and shiny materials create a more formal, sophisticated appearance. Texture is a powerful dimension in any room. Using texture in spaces affects the atmosphere and provides warmth and elegance (Cenani and Cagdas 2006). This also affects emotions, mood, and sensations.

2.5.3.3.6 Spatial Layout Functionality

Spatial layouts involve the way in which machinery, equipment, and furnishings are arranged, the size and shape of those items, and the spatial relationships among them. Functionality refers to the ability of an item to facilitate performance and accomplish goals (Bitner 1992).

According to Bitner (1992), layout accessibility, facility aesthetics, electronic equipment, seating comfort, and cleanliness all have an effect on the perceived quality, which in turn positively or negatively affects a user’s satisfaction (Wakefield and Blodgett 1996). The

layout design of hotels is therefore crucial. Interior designers play a key role in planning and shaping the interior spaces of hotels, and thus they are responsible for designing spaces that satisfy specific functions and meet the needs of users (Perolini 2011).

2.5.3.3.7 Style

Style is defined as repeated characteristics and recognisable modes in the design process that generate common features (Chan 2001). Style is a mode of expression in a work of art, and designers use style to characterise relationships between different persons, periods, or regions (Chan 2001).

There are many different styles in interior design and architectures that influence designers and are recognised by the common features of their products, which can be traditional, modern, classic, or contemporary. There are methods for classifying a style: characteristics of structure such as the roof, walls, and columns; characteristics of lines; and characteristics of ornament (Whiton 2013).

2.5.3.3.8 Sign and symbols

Bitner (1992) considers signage, personal artefacts, and style and décor as a third component of the physical environment. Signs and symbols are important physical elements of the human experience. “Human beings are symbol mongers,” writes Lang (Lang 1988), implying that people communicate with each other via symbols.

A sign can be understood as anything that communicates and indicates a meaning or represents something else; signs can include sensory information or cultural forms in order to create and convey meaning, and they are used in language, art, films, religion, and architecture (Sarpiya 2018). The terms “symbol,” “image,” and “sign” are often used interchangeably (Lang 1988; Echtner 1999; Alfakhri 2015).

Many items in the physical environment serve as explicit or implicit signals that communicate information about the place to its user. Other environmental objects may communicate less directly than signs, giving implied cues to users about the meaning of

the place. The quality of material used in construction, floor coverings, artwork, the presence of certificates and photographs on walls and personal objects displayed in the environment can all communicate symbolic meaning and create an overall aesthetics impression (Bitner 1992).

2.5.3.4 Internal Responses

Perception does not directly lead to behaviours, although it leads to certain emotions, beliefs, and physiological responses, which in turn influence behaviours (Bitner, 1992). Bitner and other environmental psychology researchers have shown that users respond to their surroundings in three dimensions: cognitively, emotionally and physiologically.

2.5.3.4.1 Cognitive response

“Cognitive” means relating to the mental process involved in knowing, learning, and understanding things. Cognitive responses involve an individual’s beliefs about a place that are a combination of views and meaning, which affects people’s perceptions of their physical environments, so the environment can be viewed as a form of nonverbal communication (Rapoport 1990). Sometimes people use cognition and perception alternately, but cognition is one of the factors affecting perception.

2.5.3.4.2 Emotional response

Russell and Snodgrass (1987) argued that attending to pleasure-displeasure and degree of arousal is the only way to capture emotional response to the environment. In contrast, Bitner (1992) added the impact on mood and attitude to the debate about emotional response to the environment, when he developed his framework for understanding environment-user relationships. Emotions are one of the internal responses when perceiving the physical environment that affect behaviour. Research suggests that emotional responses to the environment may transfer to people and/or objects within the environments (Maslow and Mintz 1956).

2.5.3.4.3 Physiological response

Perception also affects users in purely physiological ways. Research shows that when people are physically uncomfortable due to the ambient temperature, their effective response is less positive (Bitner 1992). Bitner, similarly, noted the effect of physical elements on internal responses and perception. Perception is affected by factors other than physical elements, however, and theories of perception will be discussed next in order to understand it more deeply.

2.6 *Sensation and Perception Theories*

Sensory perception is the first connection an individual makes with the environment. There is a close link between perception and the way in which human behaviour interacts with, and responds to, the environment, as these interactions and responses occur due to our perceptions. Consequently, the behaviour we exhibit depends on how we perceive the environment. The perceptions and awareness levels of adults and young people differ, and therefore so do their behaviours and reactions (Foley and Matlin 2015; Goldstein and Brockmole 2016; Mather 2016).

Sensation can refer to the effect of alerts on sense organs or to the reaction of an organ arising from excitement; it is a simple primary phenomenon. In contrast, perception is a more complex, compound reality, involving many factors, such as intelligence, wisdom, memory, past experiences, and imagination. Perception is thus a mental process that takes a sensation and converts it into knowledge through a process known as adaptation (Matlin and Foley 1992; Foley and Matlin 2015). Sensation in its basic form is a physiological process that occurs when nerves have been touched by external stimuli. Conversely, perception, as mentioned above, is a mental process that depends on how an individual interprets the world around them and makes sense of it in their brain (Ries and Ries 2009). Perception is the process of selecting, organising, and interpreting information (Ries and Ries 2009). This process includes the perception of select stimuli that pass through our perceptual filters, are organised into our existing structures and patterns, and are then interpreted based on previous experiences. Although perception is a largely cognitive and psychological process, the way we perceive the people and objects around us affects our

communication. We respond differently to an object or person that we perceive favourably than when we find something unfavourable.

The concept of perception has been subject to many approaches and theories, with debates surrounding its origin. Some have suggested perception stems from the mind, whilst others have argued that it originates from the senses and feelings (Goldstein and Brockmole 2016).

2.6.1 Theory of Mind (Abstract Perception)

Philosophers of the mind such as Descartes and Alan have argued that perception stems from the mind, and is therefore a mental activity that serves the purpose of communicating and sharing knowledge with the outside world. Descartes and Alan relied on evidence and arguments which suggest there is a difference between perception and sensation, in that sensation is related to the body, whereas perception is a subjective expression related to the mind (Clarke 2003; Davenport 2006).

Perception is not seen as a set of sensations, but is rather seen as a series of complex mental activities and structures in which both mental processes and functions contribute the following: recall, imagination, interpretation, judgement, explanation, analysis, and conclusion. Descartes considers the objective knowledge of material reality to be a mental judgement and not a sensory impression, as the senses may at times be misleading, and things may not be as they are sensed (Clarke 2003).

In the event that perception stems from the mind only, someone who sees calligraphy patterns and cannot read and understand the meaning of the patterns will not perceive or be affected if the patterns are present or not. Thus, their spirituality will thus be uplifted for people who understand the written meaning, but not for others. This research will demonstrate whether this claim is true or not.

There are some criticisms of the school of perception theory. Ascribing perception to the mind alone is not justified in reality, considering that a pure perception of an external subject does not exist, for every perception carries within it sensory seeds. This means

that feeling is the bridge through which the mind crosses toward the perception of things. Advocates of the theory of mind followed by Descartes and Alan were not correct when they distinguished between sensation and perception, and separated the function of each in knowledge. Those advocates also focused on the perceived self (mind), and did not take into account the perceived subject (external objective factors; the factor of rising, growing, and social education; economic factors; and psychological factors such as feeling, inclination, and desire). As a result, the theory of mind created a distinction between the perceived topic and perception itself, and it decreased the importance and role of the senses in the process of perception (Clarke 2003; Davenport 2006; Mather 2016).

2.6.2 Empirical Theory of Perception

Proponents of an empirical theory of perception view sensory experience as the true source and measure of every form of knowledge. Ibn Sina suggested that the perception of external things takes place through the action of the sense organs and the feeling in them. The process of perception occurs as a consequence of the senses being affected by external stimuli, and so sensory perception, according to Ibn Sina, is represented in the meanings that were imprinted in the mind by the action of the senses.

David Hume is a supporter of this theory, seeing perception as mere impressions of perceptions, as a consequence of the senses being affected. The role of the mind is limited to recording and receiving sensory impressions, and ideas are only images of these impressions. Experimentalists confirm that knowledge arises through senses and not the mind. Among the advocates of this proposition is Kundiak, who believed the senses were a tool for knowledge, but this idea of the senses being the source of knowledge may make human knowledge indistinguishable from animal knowledge (Stroud 2011).

Bitner (1992) noted that the physical elements affect internal response and perception, and thus affect the physiological response (e.g., comfort, pain), but did not address whether the physiological condition, when not in a healthy state, such as when feeling tired and exhausted, or with an inability to see clearly, affects the perception of the elements of a physical room.

If the empirical theory of perception is applied to the perception of decorations in a hotel room, then perceiving and clearly seeing the patterns differs between a strong-sighted person and someone with weak vision. But is it the feeling only that affects perception?

This theory has also been subject to criticism. It has been said the role of the mind has been neglected and restricted to receiving and recording sensory impressions only, when feelings often provide us with suspicions, or unconfirmed knowledge. The senses may be intact, but the perception process may be lacking due to a defect in mental abilities (such as mental impairment). The role of the senses cannot be denied, but the absoluteness of this view, which underestimates the mind and the great role it plays, does not explain the benefit of sensory impressions in the absence of the mind.

2.6.3 Phenomenological Theory: Perception and Coexistence with Things.

Edmund Husserl and Maurice Merleau-Ponty argued that perception neither originated from the mind nor was it connected to the mind; external objects could not be connected to sensation or the mind. External objects are mundane experiences that an individual life in and are based on feeling. If this feeling is characterised by continuity and change, then our perception of external objects is required to change. However, if our feelings are fixed, our perceptions will remain fixed (Hopp 2008). This implies that our perception of objects varies in accordance with our situation and environment, for example an individual's perception of a circus lion will greatly differ from the perception of the same lion in a forest (Davies 2019).

The phenomenology of perception refers to descriptive knowledge that leads towards feeling, and if there is no object, no perception or feeling can take place. This school of perception, in contrast to the view of the Gestalt school, states that perception has no relation to objective external factors but is rather related to psychological subjective factors; thus, feeling plays a great role in influencing the perception process. This school argues that perception relies on two factors: feelings and perceived subject matter. For example, our perception of a subject in a state of despair will differ from our perception of the same subject in a state of happiness. This is because the emotional state differs in each case.

There have been some criticisms of this theory. Firstly, it has been argued that this theory places far too much emphasis on the interpretation of perception through feelings whilst ignoring sensory data and the mind. Interference from the psychological factors in our perception without objective external factors can turn our perception into an illusion (Davies 2019)

2.6.4 Gestalt Theory: Regularity of Things, Psychology of Forms

Gestalt, a German word referring to form and shape, has no direct translation into the English language, but it can be understood as indicating the way in which an object has been put or placed together. Gestalt psychology, or the Gestalt theory, was developed in 1910 through the collaboration of three German psychologists—Max Wertheimer, Kurt Koffka, and Wolfgang Kohler—and has since gained prominence in several disciplines, including web design, graphic design, interior design, and art.

This highly influential theory emphasises the role of the mind's perspective processes and the objective factors associated with images and external shapes (Todorovic 2008; Wong 2010). Consequently, there is no distinction between feelings and perceptions, as their role is to receive images just as they are in the world outside, without any form of explanation or interpretation. The psychologists argued that perception is a three-stage process through which the external world can be known, with the foundation of perception being the form and the overall picture, then the partial analytical image, and then a return to the overall picture by connecting these parts together (Todorovic 2008; Pinna 2010).

The principal assertion of Gestalt theory is that when an environment is looked at, it is viewed as a whole picture as opposed to being seen as composed of separate parts. Within the environment are images that people are aware of, known as figures, as well as images that people are unaware of, which make up the background. In terms of visual perception, the background is an indistinct area containing elements of similarity, whilst the figure appears clear and distinct from it. Although both the figure and the background can be pleasant to the eye, they exert different levels of influence. Without this differing influence, there would be no perception (Todorovic 2008; Pinna 2010; Wong 2010).

There is no single correct interpretation of what the figure and the background entail, and it is left to the individual to decide, as each individual has different experiences and memories that affect their perception of images. The significance of something can also determine the area that an individual sees as a figure. This is because when something carries significance and is of importance, it tends to become more obvious and noticeable. The prominent and familiar objects with which we interact regularly are part of our awareness, and therefore it is impossible to perceive other things if they are undistinguishable from the forms that surround them, including the background. All the changes that occur to the structure of the perceived subject affect the perception process. The external world that we perceive around us is controlled by external objective laws that affect our perception. These are a collection of independent factors that make things livelier and more fascinating. According to Gestalt theory, these factors include similarity, closure, and continuation (Mather 2016). Experimental psychologists such as Kohler and Kovka described laws of perception, which include the following:

1. Proximity: components are generally grouped together in accordance with their closeness. "Objects or shapes that are close to one another appear to form groups." This means shapes, objects, and sizes will appear as a group, even if they vastly differ from one another.
2. Similarity: objects that resemble each other in some forms are usually grouped together. Different objects look similar to each other according to colour, form, brightness, and size of the elements. This law states people often perceive objects as a group or as one pattern, as our minds are wired to group similar-looking elements into one entity.
3. Closure: objects that complete an entity are grouped together. Shapes are incomplete or are not closed. Our minds, however, are wired to add the missing elements to the shapes in order to complete them. When a person's perception completes a shape, there is closure.
4. Continuation: the eye is designed to identify one object and then advance to another object. There is continuation when the eye is compelled to move from one object's ending point and continue onto the next object.

Outlined above are the most prominent laws that regulate our perceptions, and that have worked together to create the field of vision and other areas related to the senses. The objective factors are insufficient by themselves because perception is equal for all, and because there is a single subject. Gestalt theory further suggests that perception relies not only on objective factors, but that people also affect perception. This results in the subjective factors, which include the past experiences of individuals, the psychological state of a person, and the degree of attention exhibited by a person. The fundamental principle of Gestalt theory asserts that the whole is greater than the total sum of its parts. When the “whole” is being seen, a cognitive process begins to take place and the mind switches from grasping the parts to understanding the whole. Gestalt theory is widely recognised as one of the most significant theories to have contributed to the field of interior design (Todorovic 2008; Pinna 2010; Wong 2010).

In general, it is not possible to determine whether perception comes from the mind, sense, form of objects (shape), or feeling, but it is certain that their consistency and interaction leads to better perception. The environmental psychology literature suggests that perception leads to internal responses that are cognitive, emotional, and physiological. Bitner referred to some response moderator; the perception affected by an individual’s response and situational factor, such as the time and purpose of being in the environment, each individual mood, and individual expectation. Environmental psychologists, however, contend that people respond to their environments holistically. That is, although individuals perceive discrete stimuli, it is the total configuration of stimuli that determines their responses to the environment. The dimensions of the environment are thus defined independently here, and it is important to recognise that they are perceived by employees and customers as a holistic pattern of interdependent stimuli (Bitner 1991). The servicescapes based on a single stimulus, the objective factors of the objects, have not previously been proposed as a factor influencing perception or behaviour.

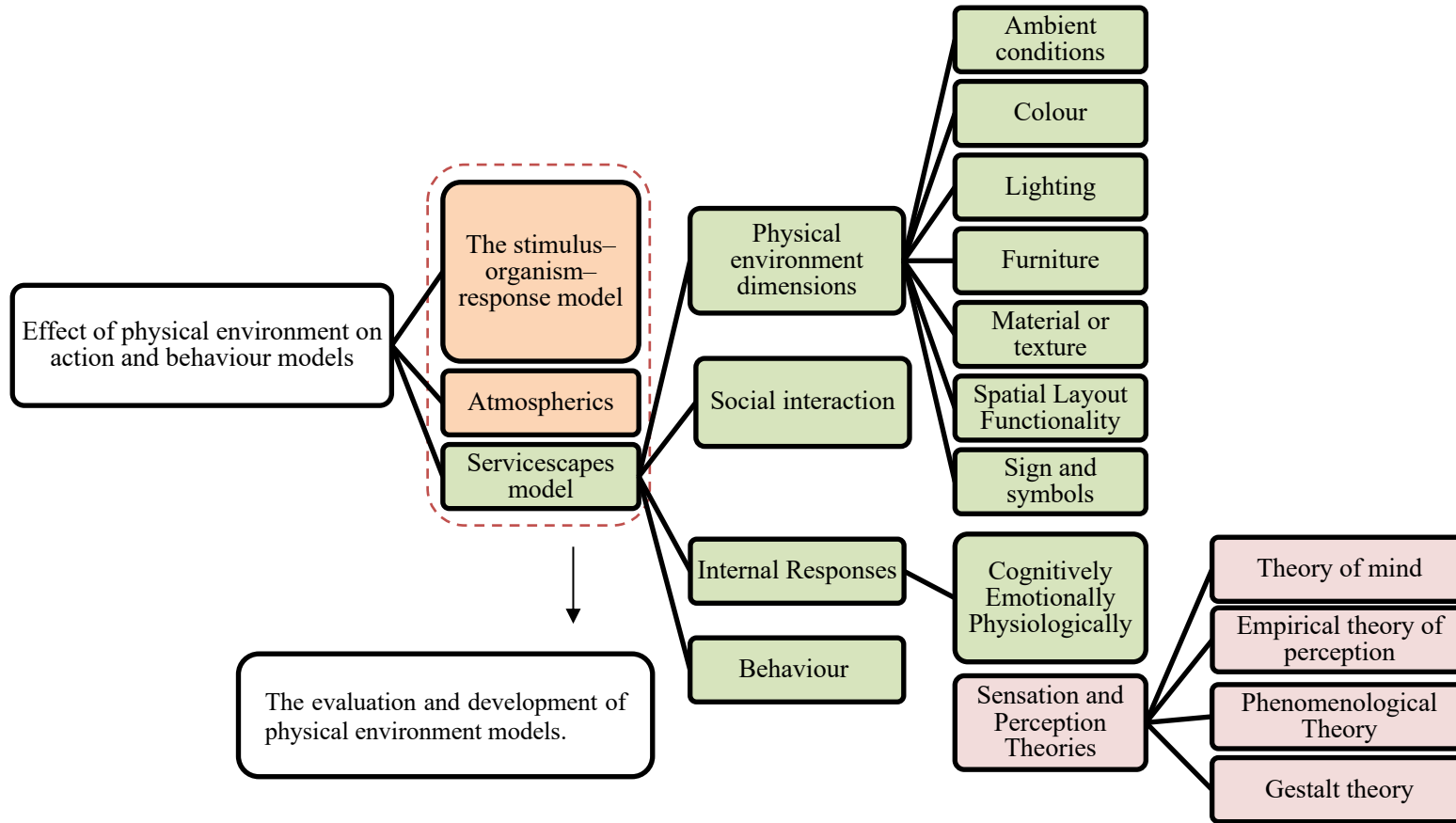


Figure 2-18: Study Theoretical Framework Content (Researcher)

2.7 *Summary*

In summary, Chapter Two dealt with four areas of the literature, and was informed by the knowledge available around these areas, describing the current gaps in knowledge that need to be filled.

As explained earlier, the research is divided into four sections, the first of which is aesthetic spirituality. The topic of aesthetics is a broad and ancient subject. It extends from the Pythagorean era onwards, but in this study, the emphasis is placed on the definition formulated by the German philosopher Alexander Baumgarten, from which the modern meaning of “aesthetics” emerged. The study focuses on the idea of subjective and objective judgments of beauty.

It must be noted that spirituality has a diverse set of meanings, drawn from at least nine fields where the term spirituality is frequently used: social research, the study of religion, healthcare and related research, psychology and related disciplines, education, business, and the area that Lynch (2007) calls “belief beyond religion.” This research focuses on spirituality from an aesthetic viewpoint, considering spiritual meanings derived from art and design. There are a number of studies that discuss spirituality and aesthetics together, but in disciplines other than interior design. There is limited research that discusses spiritual aesthetics through interior design.

The second section of the literature review concerns Islamic art. Islamic art has its origins in ancient times, and has rich and unique forms and traditions. This research on Islamic art is based on the features and elements of Islamic art, rather than on its religious affiliation, its chronological development, or the land in which it is created. This section briefly explains the three types of Islamic patterns: the geometric pattern, floral design, and calligraphy. There is an abundance of research into Islamic pattern and spirituality, however none pertains to utilising Islamic patterns in the interior design of hotel rooms.

The third section relates to the significance of interior design in hotels in particular. Concepts and elements of interior design are discussed. In this section, the emphasis is placed on the design meaning of the interior environment and the way it is perceived. Semiotics philosophy has been discussed as a major since for understanding the signs and symbols.

The last section discusses theoretical frameworks in relation to environmental behaviour and the physical setting, individual behaviours, and internal responses. This is to understand how Islamic patterns, as elements of the physical environment in the interior design of hotel rooms enhances spiritual aesthetics. In other words, the focus is on understanding how individual perceptions of Islamic patterns enhance spiritual aesthetics.

The purpose of reviewing the literature was to identify the interior elements that are important for the feelings of spirituality experienced by hotel guests and their satisfaction, through Islamic patterns. The main dimensions of the physical environment that have been reviewed in previous research include ambient conditions, colour, light, materials, style, space layout and furnishings.

Several theories of perception have been presented, which contribute to explaining the perception process and identifying the most important factors affecting the mental or emotional, sensory or subjective factors of the perceived element. This will help to determine the factors that affect the perception of Islamic patterns. The following chapter reports on a field study of the current hotels in Makkah, and presents the views of hoteliers, developers, and designers regarding hotels design in the holy city.

3.1 *Introduction*

This chapter aims to identify the gaps that this research, which is a field study of current hotels in Makkah, is filling, by visiting selected hotels and taking photographs. This is in addition to conducting interviews with hoteliers, developers, and designers to understand how they design hotels in holy cities and whether they follow design guidelines that enhance spiritual aesthetics in hotel rooms.

As the first stage of this research, emphasis is placed on studying the existing situation of hotel rooms to determine the type of gaps and the associations responsible for hotel rooms, in order to try to provide applicable results and recommendations. Applications of Islamic patterns in hotel rooms in the central area around the Al-Haram in Makkah were initially observed in order to determine the potential and modality of using Islamic patterns. The researcher visited the Jabal Omar project and analysed its environmental design. The Jabal Omar Project (an architectural icon) (see Appendix A) is built near the Holy Mosque of Makkah. Once complete, it will include 40 towers, four- and five-star hotels, as well as residential towers of more than 2 million square metres with a capacity of 36,000 guests during regular times, and up to 100,000 guests during the Hajj and Umrah seasons (JODC 2018). The Jabal Omar Marriott, Hilton Suites, and Hyatt Regency hotels were all visited and photographs of each were taken after obtaining the permission of the gatekeepers. Interviews were then conducted with the designers and hoteliers of current hotels in Makkah as a second step.

3.2 *Designers and Hoteliers Interviews*

The purpose of the interviews with the designers and hoteliers is to understand the process of designing a hotel, and to find out who is responsible for taking design decisions in order to discover whether the spiritual aesthetic is considered in hotel room design. A further purpose was to determine whether design guidelines to enhance the spiritual aesthetic were available and followed in hotel rooms in the central area around the Al-Haram in Makkah. A final purpose was to determine whether designers and hoteliers

would be willing to follow a design strategy to reflect and enhance the spiritual aesthetic in hotel rooms.

The interviewees were selected by non-probability sampling. The participants were chosen simply because they were "convenient" sources of data for this phase (Lavrakas and Battaglia 2008). The researcher began searching for the companies and businesses responsible for designing hotels in Makkah. Once found, emails were sent to request participation in the study. In addition to this, colleagues were asked if they had any personal or professional contacts responsible for designing hotels, and if so, to provide contact details in the form of a telephone number or email address. In total, 12 invitations to participate were sent, but there were not many responses to the invitation. Some invitations did not receive an answer at all, whilst others received apologies and explained they could not participate in the study. Interviews were thus conducted with six people, who were either designers, developers or hotel managers. The gender, nationality, occupation, and position in the organisation of the six participants who took part in this phase of the interviews are given in Table 3-1 below.

Designer and Developer Participants	Gender	Nationality	Occupation
Participant #1	M	Lebanese	Designer
Participant #2	M	Egyptian	Designer and developers
Participant #3	M	Saudi	Developer
Participant #4	M	Egyptian	Hotel manager
Participant #5	M	Saudi	Developer
Participant #6	M	Egyptian	Hotel manager

Table 3-1: Overview of Participants (Researcher).

3.3 *Conducting Interviews*

The list of questions used in the interview was in two forms in this phase of the research: one form for the designers and developers and another for the hoteliers. Despite being separate forms, they had many questions in common.

The interview guide is designed in four sections: the introduction, opening questions, key questions, and closing questions. The first section included introductory questions designed to gather information related to the participants' backgrounds and previous experience, as well as projects that their organisations have worked on before. The second section explored the procedures for designing hotels and attempted to discover the bodies responsible for design decisions. The third section aimed to discover whether the spiritual aesthetic was actually considered in hotel-room designs. The fourth and final section explored the willingness to use design guidelines to enhance the aesthetic spirituality, based on the preferences of visitors and pilgrims; and it explored the obstacles that they may face when attempting to carry out this design.

These interviews included four video interviews, one face-to-face interview, and one email interview during the period of 1st January 2019 to 15th February 2019. All the participants were sent the interview guidelines, an agreement form, and the participant information sheet (See Appendix C) . This sheet, which explained the research aim and objective, the responsibilities of the researcher, and the rights and requirements of the participants, was sent via email prior to the interviews being conducted.

The participants were based in Saudi Araba, whereas the conductor was in Bournemouth, UK, and therefore, the interviews were conducted via video calls because the designers and developers had rejected the idea of face-to-face interviews when the researcher travelled to Saudi Arabia. This was due to their busy schedules and lack of time, so the option of holding a video interview was selected to facilitate the interview process. The first video interview showed that this was an acceptable method for conducting the interviews. It lasted fifty minutes and provided a great many details and much information, with the designer answering all the questions asked. With the participant's

consent, the interview was recorded using an audio recording device to help facilitate the transcription and analysis phase.

The remaining interviews took around 30–50 minutes each to complete; the variation in length was due to the level of detail, depth, and richness that each participant provided. The interviews were helpful as they gave practical and information about the institutions and the way in which they worked, without including personal preferences or feelings. This affected the number of notes taken during each interview, as most of the valuable information was obtained directly from the participants. Once the interviews were completed, the data was transcribed. The interviews were then analysed using thematic analysis.

The information gathered from the six interviews was rich, and provided an interesting background to help the researcher to understand the current situation of hotel room design. The researcher did not end with the formal interviews, and occasionally asked the designers other questions and read a great deal on the topic.

3.4 Interview Outcomes

3.4.1 Hotel Design Procedures

The interviews revealed that there were two contradictory types of cases reflected in the steps of developing and designing a hotel; an explanation of this will follow. This prompted the researcher to hold additional interviews after the analysis, and to present the results to other developers in order to ascertain the benefits and drawbacks of each method.

The land in the immediate vicinity of the Grand Mosque in Makkah is owned by the government or by private companies and individuals. Occasionally, a landlord may want to develop the land, but landlords also rent the land to a developer for a certain period, such as 25 years. In this case, the tenant takes the following steps without the landlord's interference.

In the first possible scenario, the owner conducts bidding (invites tenders) or selects a real-estate developer to develop the land according to the required specifications and criteria. Once the landowner accepts a bid from the developer, the designer proceeds to take control of the design process. Alternately, there may be another scenario where a competition is held with a group of design consultancy firms. This occurs in two stages. The first stage is where the firms make a proposal based on their previous work in similar projects, the design firms are evaluated based on these submissions and the most suitable are selected by the developer, allowing the firms to move on to the second stage. The second stage is where technical and financial proposals are submitted by the design consulting firms for the required designs, which are based on brief information about the required design, including the spaces required for the design, the time program required to complete the designs, and the scope of the designer's work. The developer selects the most suitable design firm according to specifications and criteria such as previous experience in similar large projects, previous work in the area where the project will be implemented, technical and engineering capabilities in terms of numbers and efficiency at the design office, and the possibility of the firm dealing with other firms to complete the engineering designs, if necessary. The operator begins to create the designs with the designer, according to the required standards and specifications.

Several standards are followed: international standards, called codes, such as the International Building Code (IBC), and the Americans with Disabilities Act (ADA) Standards for Accessible Design. The building codes proposed by the International Code Council (ICC) outline the standards that buildings and constructions must comply with. The IBC can be applied to most types of new buildings and seeks to ensure efficient and adaptable building designs that safeguard health and safety regulations, and that encourage the use of technological developments. The International Housing Law, and international building codes are also relevant. The Americans with Disabilities Act is used in Saudi Arabia as a framework to ensure accessibility. The Saudi version of this act requires that provide goods and services to the public to take minimum action to in order to increase and maintain access to existing office complexes. This includes providing enough space for wheelchairs to access buildings, and addressing the heights of fixtures,

standard doors, bathroom sinks, grab bars, and appropriate floor materials, which can be slippery and put users at risk (<https://www.iccsafe.org/>).

Firms follow the outlined by the Tourism Authority in the Kingdom of Saudi Arabia, and governmental laws for hotels situated in Al-Haram area. The owner or real estate developer may make some recommendations and suggestions for the design to ensure that it does not conflict with the operator's concept.

“Of course, the policy of international companies such as Meridian and others is fully applied, but not when it is in contradiction with the sanctity of the place and the laws of the Kingdom of Saudi Arabia” (Participant #2).

The real estate developer then begins an engineering consultation. The consultant working with the designer begins to review the designs while they wait to obtain building permits, which are issued in the name of the owner. Then the construction process begins, with either one consultant or a group (project manager, electromechanical, finishing) and a manager is appointed for the project. After they finish, the operator also selects the furniture and finishing company.

When a hotel is designed by the owner through the owner's own company, without developers or operators, they select designs based on their previous experience. After completing the design of the hotels, they begin searching for a hotel operator. This can cause significant costs, delays, and some penalties and losses, because each operator, especially global operators such as Hilton, Sheraton, and Meridian, has precise specifications in terms of space and design. Operators can request modifications to spaces in the hotel that the owner designed themselves, and this can be to the owner's detriment. This does not happen when the hotel is given to local operators; the standards of local operators are less complex, even as, at the same time, they may be less experienced.

“The first method is correct; I know some cases followed the second method and lost large amounts in adjusting the hotel according to the specifications of the operating company. Due to this, they were very

late in opening because of the time lost on amendments” (Participant #6).

It was important to learn about the stages of hotel development in detail in order to find out who is responsible for hotel interior design, its decisions, and its amendments. Once the design of the hotel is completed, the person responsible for making the decision may wish to renew parts of the hotel. This helps to determine who, for the purposes of this study, is the target person who is knowledgeable about the design guidelines, and who might help enhance spiritual aesthetics.

“The operator company is the one that has the right to make modifications in the official design... The operator must agree to any renewal and the issue can become a mess” (Participant #1).

It turned out that no part of the hotel can be modified except by referring to the operator. The owner can redecorate rooms only when local operators are running a hotel, and not in the case of a global operator. This is the current situation in hotels, as far as the investigator understands. Modification decisions are taken by the owner rather than by specialised designers; there was therefore no design unit in place and psychological aspects of design were not taken into account, so the final product was a pastiche of Islamic design. Figure 3-1 shows that the fabric of the curtains is a different pattern, but it is consistent with the framed flower picture and with the pattern on the floor. When the hotel was renovated, the curtains and the accessories on the bed were changed to a material printed with Islamic geometric patterns that were not connected to the floor pattern or the headboard motif.



Figure 3-1: Examples of Current Hotel Rooms (MadaTourism 2016)

3.4.2 Special Design Specifications for Hotels around Al-Haram

One of the most important findings from the interviews with designers and developers, which could not have been found through observation or literature reviews, is that the interior design of hotels in the central area around the Al-Haram in Makkah is a special case. This is because the hotels need to increase the number of guests they can accommodate per room in certain seasons of the year, such as Ramadan and Hajj. For example, a room for two people can be made to accommodate four to six people. In order to do this, some furniture in the room (such as chairs or the office) must be removed to make space for additional beds. To enable this, the furniture must be flexible, easy to move, and not built in. The ceiling lighting must also be sufficient so that if a floor lamp or desk lamp is removed, the lighting in the room is not affected. It is also necessary for hotels to have huge storage areas to fit the furniture removed from the rooms, in addition to the large storage areas required for large quantities of food and water to accommodate the large number of pilgrims. This is due to the difficulty of catering and driving large delivery vehicles in the crowded streets during the Hajj period.

“The furniture must have flexibility; there must be large storage areas and the ceiling lighting must be sufficient to light the whole room because everything in the room, including the floor lamp, is going to be removed to increase the space in the room and to add beds in its place” (Participant #4).

Additional sinks that are not inside the bathrooms are also required, as all guests are required to perform ablutions (wudu') before performing their prayers. Having only a toilet prevents others from preparing for the prayers at the same time (Figure 3-2). The huge pressure of people performing their ablutions and using their sinks at the same time means that pipes can become blocked, so drainage pipes with large diameters are needed to prevent these problems. Figure 3-2 shows a sink placed inside the room and outside the bathroom.



Figure 3-2: A Sink Placed Inside the Room and Outside the Bathroom (Elliott 2011)

What makes matters worse is that all the towers in the King Abdullah Endowment (Abraj Albaet) were initially designed not as hotels but as apartments (Swiss Hotel, Zamzam Hotel, or Al-Marwa Rotana Hotel). The only building pre-designed as a hotel is the Clock Tower (The Fairmont Hotel). This means that the plumbing and sanitation facilities did not take such potential problems into account when the residential units were converted into hotel buildings.

The choice of furniture differs from one hotel to another, depending on the standard of accommodation, which is broadly related to the price charged, as well as to the purpose of the hotel. Furniture, such as beds, wardrobes, cupboards, bedside tables, luggage racks, and desks are required in a hotel bedroom (Laraba 2008).

3.4.3 Spiritual Aesthetic Existence in Hotel-Room Designs

It became clear that owners do not consciously wish to include a spiritual Islamic character in the interior design, whether with Islamic geometric patterns or Qur'anic verses (calligraphy). Elements are included without a specific aim to increase spirituality: these patterns are added in a rather random, haphazard way to simply hint at the Islamic character.

After visiting hotels and holding interviews, it became clear that most hotels are more focused on the public places than on the guest rooms when considering design; and this is true despite the fact that guests spend more time in their rooms. The primary means of enhancing spirituality within public spaces is the placing of large screens intended for direct transmissions from the Grand Mosque.

All hotels make sure to place the Qur'an and a prayer rug in their rooms, and they also indicate the direction of the Qiblah, "the Kaaba direction." They also equip the rooms with a live sound system connected to the Al-Haram to enable guests to listen to the Azan and prayers live. This is so that guests can pray in their rooms if the rooms overlook the Al-Haram. This is in line with the model of servicescapes developed by Bitner (1992), wherein the ambient conditions affect internal responses.

The ambient conditions play a strong role in influencing spirituality, whether through sound, room temperature, or lighting degree. This study, however, focuses specifically on the role of Islamic patterns in increasing spirituality, which could be a limitation of the research, and a direction for future study. Several participants of this study indicated the importance of temperature, and the effect of the call to prayer on spirituality as an element of sound amidst the ambient conditions. These elements were excluded because this study focuses on the role of Islamic patterns in aesthetic spirituality, but this does not diminish their importance. Lighting is a factor of ambient conditions more generally, but it has been adopted as a major code in the study because it can affect or be affected by Islamic patterns.

3.4.4 The Acceptance of Design Guidelines to Enhance Aesthetic Spirituality

Participants agreed that they relied on their previous experience in design, and that there were no written guidelines for reference in choosing elements of interior design in order to increase spirituality.

“There are no books about increasing spiritual feelings in hotel rooms, so we resort to our experiences and do not turn to any other reference point” (Participant #2).

Some respondents defined the conditions necessary for providing design guidelines: research that is up to date, compatible with current technological developments, and in compliance with the holy cities, civil defence, and the Ministry of Tourism.

“The strategy must comply with the requirements and desires of the pilgrims, and with the requirements of several parties in order to be applied, such as the secretariats of the holy capitals, the civil defence, and the Ministry of Tourism” (Participant #3).

No conditions or specifications were noted by other respondents, but the idea was welcomed.

3.5 Summary

This chapter described the results of a field study of current hotels in Makkah. It contains interviews with developers, hoteliers, and hotel designers. This phase showed the increased need to find design guidelines to enhance spirituality in hotel rooms in holy cities in Saudi Arabia. It shows that there are no standardised design guidelines. The literature review found that no research has been conducted or documented in this field. The willingness of the participants—the hoteliers and designers—gives impetus to the creation of such guidelines.

The next chapter describes the methodology of this study and outlines the research philosophy underpinning it, and proposed study methods. The technique used for data analysis and the coding process is then outlined. Finally, ethical considerations are addressed.

Chapter 4 **Research Methodology**

4.1 *Introduction*

This research aims to identify the preferences of pilgrims (hotel guests) as regards the application of Islamic patterns in the interior design of hotel rooms by proposing design guidelines and visual perspectives that will assist designers in enhancing the spiritual-aesthetic experience of users.

Any proposed methodology should take into consideration the nature of the research questions and its aims. This means that the method must consider the perspective of participants in the process of the research. Spiritual aesthetics were thus not considered as a social phenomenon, but rather as a set of psychological meanings that required a deep understanding of the perceptions of “social actors” (participants), and theories that explain the reasons for and means of this perception process.

This chapter outlines the research methodology by presenting and justifying the research philosophies, approach, and design. It explains the methods that have been used to collect and analyse data. The sample size and procedures, and ethical considerations are also discussed in this chapter.

4.2 *Research Philosophy*

Philosophical assumptions (worldviews or paradigms) are considered the lenses through, or ways in which, researchers see the world (Cameron 2011; Creswell 2014b). Paradigms involve ontology (the way that we see the social world and the nature of reality that forms the social world) (Matthews and Ross 2010; Cameron 2011; Creswell 2014b) and epistemology (ways of knowing the truth or, in other words, ways of exploring ontology) (Chilisa and Kawulich 2012). In order to enable clear vision, a philosophical worldview is composed of certain assumptions that guide and direct thinking and action. The three widely discussed philosophical worldviews in literature are post-positivism, pragmatism, and constructivism.

The post-positivism assumption is also at the core of positivist and empirical science. Knowledge of a social phenomenon is based on what can be observed and recorded, rather than on subjective understandings (Matthews and Ross 2010). Post-positivist assumption is associated with the realist ontological position, meaning that it can be explored from an objective epistemological position (Chilisa and Kawulich 2012; Flick 2018). Commonly, data is collected through quantitative approaches, and existing theory is used to develop and test hypotheses. Statistical analysis is usually used in this type of philosophy (Mark et al. 2009; Matthews and Ross 2010).

The second assumption is pragmatism, which encompasses many forms. This assumption is concerned with applications and solutions, rather than with methods, so that the problem is highlighted and understood through any approaches available to solve it. It is associated with mixed methods studies (Creswell 2014a). In this type of philosophical research, data is collected using both quantitative and qualitative approaches, and analysis takes various forms (Mark et al. 2009; Matthews and Ross 2010).

The third assumption is constructivism or social constructivism, which is often combined with interpretivism (Cameron 2011; Creswell 2014b). It is seen as the opposite of positivism. In constructivism, knowledge collected from people's interpretations and understandings of social phenomena is used to generate theory. The interpretivist assumption is thus associated with the relativist ontological position, which can be explored through the subjective epistemological position (Corbetta 2003). Typically, in constructivism, data is collected using a qualitative approach to define and understand meaning in detail (Mark et al. 2009; Matthews and Ross 2010).

An inductive constructivist approach was more appropriate in this research, as it was not the aim to test an existing theory because of the lack of studies in this area of research, but rather to understand user preferences and perceptions of spiritual aesthetics in hotel rooms in depth. The research follows an inductive approach that seeks to generate or develop a theory from the data; proposing research questions based on current theory and developing or connecting the data to theory will guide the interpretation of meaning.

This research excludes the deductive approach that seeks to test a theory using data, as this study does not contain any hypotheses to test before data collection (Matthews and Ross 2010).

4.3 *Research Approaches*

Research approaches are the procedures, methods, and steps for data collection, analysis, and interpretation used in a study. There are three kinds of research approach: qualitative, quantitative, and mixed methods. The quantitative approach is concerned with testing objective theories by examining the relationship between variables and gathering data that can be represented numerically (Creswell 2014a). In contrast, the qualitative approach is not concerned with numerical data but rather with data that may include subjective understandings, feelings, thoughts, meanings, and beliefs. This research is based on a qualitative approach since it is attempting to explore the meaning of the spiritual aesthetic according to the participants, and does not attempt to gather numerical data (Dawson 2009).

4.4 *Research Strategy*

Research designs or strategies of enquiry, as they are often referred to (Denzin and Lincoln (2011), are types of enquiry within the chosen approach. Whether the methods are qualitative, quantitative, or mixed, they provide specific direction for procedures in the research design. There are many types of research design, as shown in Table 4-1.

Quantitative	Qualitative	Mixed Methods
<ul style="list-style-type: none"> • Experimental design • Nonexperimental design, such as surveys 	<ul style="list-style-type: none"> • Narrative research • Phenomenology • Grounded theory • Ethnographies • Case study 	<ul style="list-style-type: none"> • Convergent • Explanatory sequential • Exploratory sequential • Transformative, embedded, or multiphase

Table 4-1 :Types of Research Design (Creswell 2014a).

This research follows a qualitative approach, and the research design involves a case study. Case study research can focus on examining and gathering information on the features of multiple cases, or it can examine a single case from different perspectives. It can be studied in a single period of time or across multiple periods of time (Neuman 2013b). Case studies, which focus on several details and link the details together, have many strengths, as Neuman (2013b) has explained. The most important is that they clarify our thinking and increase the strength of the research, particularly if combined with theory.

Accordingly, this research is arranged as a multi-stage case study. The first phase was interviewing customers of hotels and pilgrims who met certain criteria through semi-structured interviews. The interviews were analysed in order to propose draft design guidelines. Interior designers then tested the design guidelines and applied them to 3D hotel room design perspectives. Next, the designers were interviewed in order to assess whether the draft guidelines were applicable and clear. To ensure the guidelines helped enhance the spiritual aesthetics of hotel room designs, the researcher presented the hotel room perspectives to participants to obtain and assess their opinions, and to consider whether they enhanced the spiritual aesthetics of the rooms and why. The chart below explains the level of this research case study (Table 4-2).

Phases	Questions	Objectives	Methods	Outcomes
Phase 1	<p>1- What are the preferences of pilgrims (hotel guests') regarding the interior design elements of Islamic patterns that enhance the spiritual aesthetic in hotel rooms?</p> <p>2- How is the Islamic patterns design element perceived by the pilgrims (user) and how does this reflect the spiritual aesthetic of a room occupant?</p>	<p>Identify interior design elements of Islamic patterns in hotel rooms and their relationship to spiritual aesthetics from the pilgrims' perspectives.</p> <p>Understand the perception of Islamic patterns in relation to spiritual aesthetics.</p>	<p>Interviewing pilgrims (semi-structured interviews)</p>	<p>- Analysed the data and reflected on model and theory to propose the "spiritualscape" model.</p> <p>-Draft design guidelines using Islamic patterns to enhance spiritual aesthetics.</p>
Phase 2		<p>Ensure the applicability and clarity of the guidelines.</p>	<p>Interior designers apply the guidelines using 3D perspective designs for hotel rooms.</p> <p>Interviewing the designers who followed the guidelines.</p>	<p>-3D perspective designs for hotel rooms.</p> <p>-Ensured the applicability and clarity of the guidelines.</p>
Phase 3		<p>Validate the fulfilment of spirituality in the proposed design of hotel rooms.</p>	<p>Present the 3D designs to pilgrims for feedback while interviewing them.</p>	<p>Pilgrims preferred the proposed hotel rooms design which in turn influences the meaning of the spiritual aesthetics. The results from the interviews were taken into consideration, and will serve as recommendations and amendments to the proposed guidelines.</p>

Table 4-2: Case Study of This Research (Researcher)

4.5 *Data Collection*

As mentioned earlier, this research followed the qualitative approach. The method of data collection in the qualitative approach can be a single technique, which is a mono-method, or it can be more than one technique, which is known as a multi-methods approach (Matthews and Ross 2010). A single method was followed in this research, however, choosing the data collection method depends on the research aim and research questions. According to Creswell (2014a), the method that most helps to answer the research questions should be selected. The research approach identifies the method and the research design also directs the researcher towards the most suitable research method.

There are several methods and types of technique depending on the type of approach. For example, quantitative research deals with numerical descriptions and the relationships between attributes; it includes the collection and analysis of highly structured data in the positivist tradition. Data can be collected through a survey (Bowling 2014; Creswell 2014b). Conversely, in the qualitative approach, the case study design is associated with interviews, documentary materials, focus groups, and observations. In an ethnography design, the researcher's data collection method involves spending more time in the field and taking notes (Myers and Avison 2002). The data in this research was collected through semi-structured interviews. The observation method was excluded due to issues of maintaining privacy in a hotel room, and the impossibility of capturing the spiritual states of mind of the participants, as there is no workflow to observe or way to explore their preferences from observation. Focus groups were also excluded as the participants can affect one another in the process of sharing thoughts, which may result in inaccurate and unreliable findings.

The data in this research was collected through face-to-face, semi-structured interviews. Semi-structured interviews with the customers of hotels and pilgrims must meet certain criteria. These were conducted in order to contextualise the meaning of spiritual aesthetics from the pilgrims' perspectives by understanding their preferences and perceptions of Islamic patterns.

4.5.1 Semi-Structured Interviews

Interviews can be defined as a qualitative research technique which involves “conducting intensive individual interviews with a small number of respondents to explore their perspectives on a particular idea, program or situation.” (Boyce and Neale 2006). The interview method allows an exploration of the senses, concepts, and points of view of the informants, and permit the reconstruction of actions, which are difficult to observe directly from people’s behaviours (Burns 2000). Interviews further help to record the history of people (Seidman 2006) and help gather reliable data relevant to the research topic (Mark et al. 2009). In qualitative research, particularly social research, people are of primary importance; each word of their story is crucial as it helps elucidate the experiences that the interview enabled them to express.

In this research, the semi-structured interviews are associated with the research objective and research question. The semi-structured interviews are linked with qualitative data: this study is interested in understanding a pilgrim’s perceptions and preferences, and is able to investigate what people think and perceive (Matthews and Ross 2010). The format of a semi-structured interview is sufficiently flexible so as to obtain other important information and give the participant an opportunity to ask for any further explanations (Dawson 2009; Al-Salem 2014). Semi-structured interviews follow general guidelines; however, the open-ended nature of questions helps stimulate participants in providing an answer. Should the interviewer want to gain a more in-depth understanding of a comment made, they are free to temporarily change the trajectory of the semi-structured interview. As a result, respondents tend to feel freer and gain confidence as they begin to see themselves as the source of the research; this encourages them to speak more. They symbolise their experience through language and the researcher symbolises their language in the results of the research (Seidman 2006).

The purposes of the research and the research strategy help determine which type of interview should be used (Mark et al. 2009). The purpose of an interview is not to get participants to answer research questions; the purpose is in fact to understand their experiences in depth, and the meaning of these experiences from their point of view.

Analysing these experiences allows researchers to form knowledge and develop theories (Seidman 2006).

There are many types of interviews that can be selected for use in research, but the selection of a specific type of interview depends on a number of factors. Firstly, the level of the structure in an interview affects the type of interview selected (this ranges from formalised and structured, to informal and unstructured). Secondly, the way in which an interview is conducted (telephone, email, post, or face-to-face) affects its selection for use in research. Lastly, the appropriate method for interviews depends on the number of participants (one or a group) (Mark et al. 2009). There are several benefits and drawbacks to consider when selecting the interview type: for example, telephone interviews pose less of a financial burden for researchers compared to other types of interviews (Ryan et al. 2009). According to Mark et al. (2009), postal interviews or, in this case, questionnaires are less secure and participants tend to avoid dedicating time to respond, as they may not have met the research host before.

The most appropriate option for this research was the face-to-face interview method, however, a telephone interview was conducted once, and an email-based interview was conducted once due to certain circumstances; these will be explained in detail in the following chapter. The primary reason for selecting face-to-face interviews was that they allowed more flexibility for both the interviewer and the participants, in order to discuss the questions and answers. This type of interview also encouraged the participants to answer with more in-depth responses. Face-to-face interviews additionally ensured that the participants were comfortable and in an appropriate environment. Although face-to-face interviews were selected for use in this study, Ryan et al. (2009) have shown that this method of interviewing can have several problems, including the difference in status between interviewer and participant.

Kvale (1996) outlines seven stages that should be followed when conducting in-depth interviews: thematising, designing, interviewing, transcribing, analysing, verifying, and reporting. The first stage of thematising explains the purpose of the interviews and determines the concepts that will be explored; from this, the interview sample can be developed. The second stage is designing an interview guide; this will be expanded on in

detail later. The third stage is interviewing, which refers to the actual interview process, starting with an introduction to the researcher and topic and continuing to outline the interview procedure such as duration and audio recording. Once this has been completed, participants are asked the interview questions. This stage concludes by thanking the participants and asking if they would like to add any useful information or make any further comments. The fourth stage, transcribing, refers to writing down the interviews. All information gathered, whether it is questions, answers, or comments, is transferred into written form. Analysis is the fifth stage and is of utmost importance, as it is key to answering the research questions. There are number of methods for interview analysis, although the most popular and most common method is thematic analysis. After this, the sixth stage is verifying, the purpose of which is to check the credibility and validity of the information gathered and analysed. The seventh stage is reporting, which includes writing and sharing the results of the research. Each of the seven steps has been followed in this research and next will be explained in more detail.

4.5.2 Interview Sampling

The sample is the segment of the population that suits the aim of the research. There are two methods of selecting a sample: the probability and non-probability approaches. The most suitable sampling design in this research is non-probability sampling (purposive sampling design) (Aparasu 2011; Denzin and Lincoln 2011; Neuman 2013a). This is also known as the judgmental, selective, or subjective sampling. In purposive sampling, the selection of the participants is based on the objective of the study, and participants are chosen based on the purpose of the study, so that the research question can be explored. This method of sampling is associated with small, in-depth studies that are based on gathering data via a qualitative approach, and for which participants are selected based on specific characteristics (Matthews and Ross 2010; Creswell 2014a). In this type of sampling, the participants are chosen based on the research objectives. The participants are selected based on certain characteristics that are suitable for in-depth interview studies (Bernard 2012).

This research aims to discover the preferences of users, and therefore people were chosen and selected based on the following criteria:

1. Over 18 years old
2. Spoken command of the Arabic language, as this was the interview language
3. Guests who had spent more than three nights in a hotel in the holy city of either Makkah or Medina, so that they had a chance to notice and observe the interior design in the rooms

These criteria were used because, in accordance with the Bitner model, perception is affected by an individual's response and situational factors, such as the time and purpose of being in an environment, their individual mood, and individual expectations (Bitner 1992). Users perceive the interior design of hotels holistically as a first impression, and, over time, certain design elements increase in importance relative to others (Alfakhri 2015).

The initial plan for participant recruitment was to send an invitation to a group of people who had spent three nights in the Hilton Suites hotel in Makkah in agreement with the hotel managing group, however, this plan was changed because it meant that the study would be limited to only one case. As an alternative, an invitation that included the inclusion/exclusion criteria and provided some details of the study and researcher's contact details was designed. The invitation was sent by email to colleagues at Bournemouth University, who were asked to send it to people they knew who matched the criteria. The invitation was also displayed on notice boards in the Islamic Centre in Bournemouth. All participants were volunteers. After matching the identified criteria, the researcher was eager to include multi-national participants of both genders (male and female) and different age categories. This judgement was based on preliminary phone calls made prior to the interviews to decide on the place and time for the actual interview session. Once a participant who complied with all the sample criteria was identified, a meeting was scheduled with them at their convenience.

Sample sizes vary depending on the complexity of the inquiry (Bryman 2016). The sample size in qualitative studies in general and in in-depth interviews in particular is determined by saturation; the point at which no new concept emerges from the data (Grbich 2012). The sample size therefore cannot be decided in advance in this phase of the research.

The size of the sample has generated discussion among qualitative researchers. Qualitative samples tend to be small because of the emphasis on intensive contact with participants, and thus the findings are not expected to be generalisable. The principle of “data saturation” has become an accepted standard to determine sample size within qualitative designs (Bradshaw et al. 2017), however, Matthews and Ross (2010) suggest that a maximum of 20 individual interviews will be feasible for a qualitative study (although in some circumstances it may be less), since having too many subjects could complicate the process of data analysis. In this study, the researcher’s primary plan was to conduct between 15 and 20 interviews, however, interviews were conducted until reaching saturation point. As Ness (2015) states, “Data saturation is reached when there is enough information to replicate the study when the ability to obtain additional new information has been attained, and when further coding is no longer feasible” (Ness 2015, p.1408).

In this research, the saturation point was reached after the 14th interview, when the information received from participants began to be repeated, meaning that the same ideas and concepts were stated, and the research question was sufficiently answered. Despite arriving at the saturation point, three further interviews were conducted; in total, 17 interviews were conducted. The 17 participants who took part in this research had diverse demographic characteristics and included eight males and nine females. The participants ranged from 20 to over 60 years of age, with an average age of 30-39. Table 4-3 illustrates the main characteristics of these participants, including their age, gender, and nationality. These participants were contacted after obtaining their permission to do so, signed an agreement form and were provided with a participant information sheet before they proceeded with the interview process.

Pilgrim Participant	Age	Gender	Nationality
Participant #1	30-39	F	Saudi
Participant #2	40-49	F	Saudi
Participant #3	50-59	M	Saudi
Participant #4	20-29	F	Saudi
Participant #5	30-39	M	Saudi
Participant #6	30-39	F	Omani
Participant #7	20-29	F	Omani
Participant #8	40-49	F	Egyptian
Participant #9	30-39	F	Kuwaiti
Participant #10	40-49	M	Kuwaiti
Participant #11	50-60	M	Syrian
Participant #12	30-39	M	Palestinian
Participant #13	40-49	M	Libyan
Participant #14	20-29	M	Libyan
Participant #15	40-49	M	British-Iraqi
Participant #16	30-39	F	Turkish
Participant #17	20-29	F	Jordanian

Table 4-3: Participant Characteristics (Researcher).

4.5.3 Interview Guidelines

The interview guidelines are a list of questions and topics designed to guide the interviewer through the interview process (Kvale 1996). The guidelines ensure that all the important questions are asked and that the interview stays on track should the participants digress from the main topic of research. A standard interview guide may contain up to four sections: introduction, opening questions, key questions, and closing questions (Mark et al. 2009). The introduction is general in its nature and contains introductory questions, which are designed to contextualise the research to participants and make them feel at ease. The opening questions are in line with the topic of the research, while the key questions have the objective of gathering the data essential to the study, and, as such, these questions are an essential component of the interview guidelines. The fourth and final section of the interview guidelines involves closing questions. These questions ask participants if they have any further comments to make and then conclude the interview (Hennink et al. 2020).

There are several ways in which interview questions can be designed. According to Bryman (2016), previously developed theories and models, or previous data analysis from research, can inspire and direct the development of interview questions. Robson (2002) asserts that interview questions should be short in length and unbiased in their wording, and should not be leading or use unfamiliar terminology. Aside from the questions, a form is used to write notes during the interviews with a section at the end of the interview guide dedicated to taking notes on feelings, interpretations, or any other aspects after the interview (Guion et al. 2001). The factors outlined by Robson (2002) were carefully considered in the preparation of the interview guide, and the guidelines pursued a similar approach to that utilised in other research.

In this research, the interview guidelines were designed for hotels guests, containing specific questions that focus on the research topic (spiritual aesthetics) (see Appendix E). The interview guidelines were first designed in the English language, then translated into Arabic in accordance with the translation stages explained later in this chapter.

After asking a few introductory questions designed to make the participant feel at ease, topic-based questions were asked. The questions were divided into four sections, and all questions divided into two parts: what the interviewee prefer and why; this is known as an open-ended question technique. This is based on a core aspect of the semi-structured interview, which aims to minimise researcher intervention and bias.

During the first section of questions, different pictures were presented with each question to help the participant identify the differences. For example, the first question, about pattern types, was accompanied by pictures showing different types of patterns on the same elements and the second question, about style, similarly came with a picture to clarify the question, and after the participants had chosen what they preferred, they explained the reasons for their choices.

The second section of questions was related to participant preferences for the patterns (type, size, colour, and material) found on four elements: walls, floor, ceiling, and furniture. For example, they were asked what kind of Islamic patterns they prefer on floors and why.

The third section of questions was about participant preferences for lighting, for example whether they preferred natural or artificial lighting, and about their preferences for using Islamic patterns on the lighting units or windows. The questions also asked about the reasons for their preferences.

The last question differed in its nature, as participants were asked about the meaning of spirituality in design and to briefly describe their views.

4.5.4 Interviewing

The interviews were conducted face-to-face in different locations in Saudi Arabia and the United Kingdom. All interviewing stages started by presenting some ethical considerations as highlighted on the participant information sheets and the participant agreement forms. This was coupled with an introduction to the researcher herself, and some brief points related to the interview process, such as the estimated time of the

interview (30-60 minutes), the reason for conducting the interview, and the research aim and topic. An audio recorder was used during the interview process, with prior approval from participants.

4.5.4.1 Pilot Study

A pilot study is a small study that takes place prior to the actual research (Ghauri and Grønhaug 2005). According to Sampson (2004), a pilot study is used informally. In this research the pilot study was conducted to become familiar with the interview environment and procedure. Conducting the pilot study helped clarify unclear questions, and improve the efficiency and effectiveness of the questions in serving the research aim. As a result of this, some questions were reworded. The pilot study also enabled the researcher to determine the quality of the method used (Al-Salem 2014).

The pilot study was conducted with eight participants: two academic professionals and six volunteers from different backgrounds and two different nationalities met the participant criteria. The pilot sampling was based on convenience sampling.

A mock interview was undertaken with two PhD supervisors before conducting the pilot interviews. This was the most difficult interview since no interviews had yet been conducted. As the supervisors settled into the role of participants, they pretended that they did not understand the questions and needed more clarification. The mock interviews made the first actual interview with the participants much easier, however.

It was apparent in the eight interviews that the questions were clear and easily understood. The interviews were recorded using two recorders in case one suffered from technical difficulties. The interviews were conducted face-to-face except for one, which was conducted by telephone. The researcher intended to conduct one interview by telephone, in order to understand the extent to which this method could be applied, unfortunately, the telephone interview was the shortest interview—around 15 minutes—and did not contain many details compared to the other interviews. The face-to-face interviews took around 20 to 25 minutes to complete, although the researcher had expected them to last longer.

Conversely, applying the results to design three-dimensional perspective based on the user preferences took longer than planned (see Appendix H). This led to a change in the procedure for applying the results: instead of doing it at the time of the interview it was postponed until after the interviews were analysed. This postponement reduced the number of perspectives and integrated similar results into one 3D perspective. Due to the difficulties of gaining access to the same participants again, it was decided to present the perspective to other participants to validate the results instead of presenting the perspective to the same participants. Similarly, the way some of the questions were ordered was changed to support the flow of the interviews. Once an interview was completed, the data was transcribed before conducting any subsequent interviews to avoid mistakes.

4.5.4.2 The Actual Interview Sessions

The seventeen face-to-face interviews were conducted from 1st March 2019 to 15th April 2019. Participants were asked to sign an agreement form and provided with an information sheet (see Appendix C and D) that explained the research aim and objective as well as the responsibilities of the researcher, what was required from participants, and their rights as participants.

Some interviews were conducted at Bournemouth University, and others were conducted at the Islamic Centre in London, the Islamic Centre in Bournemouth, and Islamic Centre in Saudi Arabia, as these were public places yet have a quiet, comfortable, and formal atmosphere. The researcher avoided hotels to preclude the surrounding environment influencing the participants, and to make sure they relied on their previous experience. This is consistent with phenomenology, which relies on a participant's experiences for data. The influence of context, and various factors in actual hotel settings could have affected the results, especially when trying to focus on the physical part of the design (Countryman and Jang 2006). With the participants' consent, two audio recorders were used to record the interviews, this was to enable the interviewer to remain focused on the interviews and to help facilitate the transcription process. Brief notes and memos were, however, taken by the interviewer during the interviews (Dawson 2009).

The interviews differed in length due to the level of details each interviewee provided, and the depth and richness of the information given when describing their feelings and providing mental images of the interior designs, however, they generally lasted around 20–35 minutes each. Overall, the positive and pleasantly surprising part of the process was that the participants gave detailed responses when they described their preferences in for applying patterns in the rooms; this was an initial concern for the interviewer who thought detail would be difficult to describe.

Once the interviews were completed, the data was transcribed before the next set of interviews were conducted in order to ensure notes and memos were not lost or forgotten. The interviews were then analysed using thematic analysis.

4.5.5 Transcribing

After conducting the interview, the interviews were transcribed using Microsoft Word software in preparation for analysis (the analysis technique is explained in detail later in this chapter, in Section 4.6. The use of only one language during the interviews was helpful for analysis and assigning codes. Intended meanings can often be lost during translation or certain words and phrases cannot be accurately translated into another language. Restricting the interviews to only one language helped to minimise bias in the analysis process. The results and some codes have, however, been translated to English to support this study.

4.5.5.1 Translation

The data was collected in the Arabic Language, which falls into the category of cross-cultural qualitative studies. Cross-cultural qualitative studies endeavour to gain an understanding of an individual's actions based on how they see their own world within their cultural contexts (Abalkhail 2018). A number of factors can affect the quality of translation in qualitative research, including the language, the translator, back-translation, and culture (Chen and Boore 2010).

Initially, the interview questions, the participant information sheets, and the participant agreement forms were translated into Arabic, as this is the common language shared across Islamic culture. Once the interview process was complete, the transcription process in the Arabic language began. Some of the data has been translated into English, alongside some quotes to be used as support for the results. Translating all the transcribed text into English was avoided.

Abalkhail (2018) found the process of translating qualitative data from the Arabic language into English to be far from simple. In fact, he stated, the process was complicated and challenging, as translating thoughts conveyed from the source language to the target language is a multi-layered process engrained in the sociocultural language of a specific context. As a result, it cannot be done via a simple word-for-word translation. For these reasons, translating the whole interview into the English language was avoided. This is important since the content of the interviews is an expression of perception and feelings, and there are a number of Arabic terms offset by only one term in English, which can lead to limited interpretation.

Once the interview data is gathered, translation and analysis can take place, however, these two processes are not without their challenges. Despite the fact that only part of the interviews was translated into English, it was essential that a suitable translation strategy was selected. This is primarily due to the fact that specific words may not have direct equivalents in the target language. As a result, it is imperative to ensure the meanings of these words and phrases are not “lost by the translation” (Filep 2009) process. When translating one language into another, translators undertake a multifaceted task of information processing. Translators thus play a direct role in establishing a meaning in the second language as accurately as possible (Bundgaard and Brøgger 2019). Collecting qualitative data in one language whilst presenting the results of the data in a different language requires the translators to make translation-related decisions that directly affect the validity of the research (Abalkhail 2018).

The most common and highly recommended procedure for translating is back-translation. Back-translation involves translating from the target language (e.g., English) back to the source language (e.g., Arabic) so that the equivalence between the source and target

versions can be evaluated (Phongphanngam and Lach 2019). Back-translation is appropriate, whether the research goals are comparative or operational, once the content of the items has been established. Back-translation procedures should be applied to the test instruments as well as the items themselves. The back translator should be highly knowledgeable about both the original and the target languages, and should be truly bilingual and familiar with the area under study in the source materials (Bundgaard and Brøgger 2019).

A second method of translation to ensure data is translated as accurately as possible, suggested by Saunders et al. (2012), is the parallel method. This method necessitates two translators translating the data into the second language; once this is done the translation produced by each translator is compared and a final version is created (Zikmund and Babin 2006; Easterby-Smith et al. 2008). This method of translation means that data is translated accurately, and that the meanings of words closely match the original.

The translation method outlined by Brislin (1970) was chosen as a tool to guide the translation. This method was originally devised for translating questionnaires, but has since been adopted for use in interviews to ensure that the accuracy and meaning of the translated text is safeguarded (Lopez et al. 2008). An Arabic–English and an English–Arabic dictionary was used for unfamiliar terminology when translating the interview questions, the participant information sheet, the participant agreement forms, and quotes (see Appendix I). Once the transcripts were translated from Arabic into English, the researcher proceeded to back-translate the English into Arabic. This followed the advice of Bryman and Bell (2007), who suggested that this method filters out discrepancies in the translation by ensuring that word equivalency is maintained. The original Arabic transcripts and the English translations were then both given to an independent translator, fluent in both Arabic and English, to verify the accuracy of the translation. The translations were then revised based upon the independent translator’s recommendations.

It is important that the translator is fluent in both the source language and target language, and is knowledgeable about both cultures. The positions of the researcher and the translator relative to each other may be important. For example, researchers who use translators need to acknowledge their dependence on those translators, not just for words

but also to a certain extent for perspective (Bundgaard and Brøgger 2019). Translators make decisions about, for example, how much detail to include, how to punctuate, or where to note the tone in which a comment was made. When different cultures and languages are involved, epistemological difficulties in identifying similarities and differences are compounded. These aspects of translation require the involvement of both researcher and translator (Chen and Boore 2010).

4.6 *Data Analysis*

Data analysis involves restructuring the data log to gain a better understanding of the data collected. This means working with the data, organising it, and breaking it into manageable units (Akinyode and Khan 2018). The data in this research will be analysed using thematic analysis techniques to identify concepts and issues (Grbich 2012) and to form common ideas (Creswell 2014a). Thematic analysis is “a process of segmentation, categorisation and relinking of aspects of the data prior to final interpretation” (Grbich 2007, p.16). This method of analysis also helps explore the meaning of data and search for relationships, similarities, and differences among different parts of the data (Matthews and Ross 2010). Thematic analysis is commonly used in qualitative analysis. Flexibility is the key benefit of thematic analyses and a useful research tool, which can potentially deliver a rich and detailed account of data (Gashoot 2012).

This research used digital analysis software MaxQDA (computer-based). The transcribing and coding processes were digital, through the use of MaxQDA 12 qualitative software, which is supported in the Arabic language. Although Nvivo software was available for use at Bournemouth University, it was excluded because it did not support the Arabic language.

The steps of analysis outlined by Creswell (2014a) and Braun and Clarke (2006) were followed. Creswell (2014) outlines six steps for conducting an inductive thematic analysis. Braun and Clarke (2006) also outline a six-step procedure for this purpose. This study attempted to combine and follow both sets of steps in analysing the interviews. The first step suggested by Creswell (2007) is to organise the raw data, and the second step is to read carefully through the data. Braun and Clarke (2006) combine Creswell’s (2014)

first two steps into one, which is that the researcher familiarise themselves with their data. The interviews were manually transcribed using Microsoft Word, as mentioned earlier in this chapter in the transcribing section, and they were then read several times, in the hope of understanding their meanings and focusing on the common repetitive, as well as distinctive, answers.

The second step recommended by Braun and Clarke (2006) is generating an initial code, whilst Creswell (2014) lists it as the third step. Coding can be seen as the first step in developing themes and is the naming or identification of meaningful and interesting data by bracketing chunks of responses and creating a word for each category. In this study, the coding processes were performed digitally using MaxQDA.

The next step was searching for themes. Braun and Clarke (2006) argued that the themes emerging from data-driven analyses are not completely free of theoretical and epistemological commitments. After identifying the themes, a deeper review of identified themes should be considered. Following this step entails defining and naming the themes. Creswell (2014) merged the last two steps by interrelating the themes.

The sixth and final step for both is to interpret the meaning of the themes and produce a report. The report must go beyond a mere description of the themes and demonstrate an analysis supported with empirical evidence that addresses the research question. This means not only outlining the results, but also discussing them with reference to previous studies (Braun and Clarke 2006; Creswell 2014a).

4.6.1 Themes and Codes

Themes and codes began to be defined at the pilot study stage (see Appendix G), but they were modified at the main data stage. After reading through the transcripts and becoming more familiar with the data, the relevant, unique, and valuable quotes were highlighted. The related quotes were then categorised into groups, which are the codes categorised under the main themes. The data for this research was coded according to research questions and following the servicescapes model which was mentioned on detail in the theoretical framework (Chapter 2). There were 96 codes (see Appendix J, K) after the

interview analysis was completed. These codes were then grouped together according to their commonalities and relationships to create conceptual themes, which were developed by interpreting and linking selected key codes.

The themes were categorised into two main themes, preference and perception, which are derived from the research questions. Figure 4-1 demonstrates the second stage of codes identified for this research; 54 codes emerged from the data. The codes in the environmental dimensions theme of preference were then classified into three main codes: key design elements (colour, texture and material, lighting and style), secondary design elements (pattern format, pattern size and pattern form), and supplementary elements (room view, natural material, space and layout and multi-layer of patterns). The codes in the theme of perception were then classified into three main codes: cognitive, emotional, and physiological. The perception codes were built on the servicescapes mode.

Some codes and themes were eliminated from the first stage analysis because they were not significant to the research topic and did not add any valuable insights to this study, but they can be recommended for future study, especially those codes and themes that were repeated in a number of participants' responses. They arose in responses to the last question, "do you have anything to add?" They include, for example, the theme "surrounding environment," with the codes the high buildings around Al-Haram and their style, crowds, transportation and distance from the hotel to Al-Haram). Another eliminated theme was "ambient conditions," with the codes sound, temperature, and odours, since this research is about hotel room design with Islamic patterns in particular.

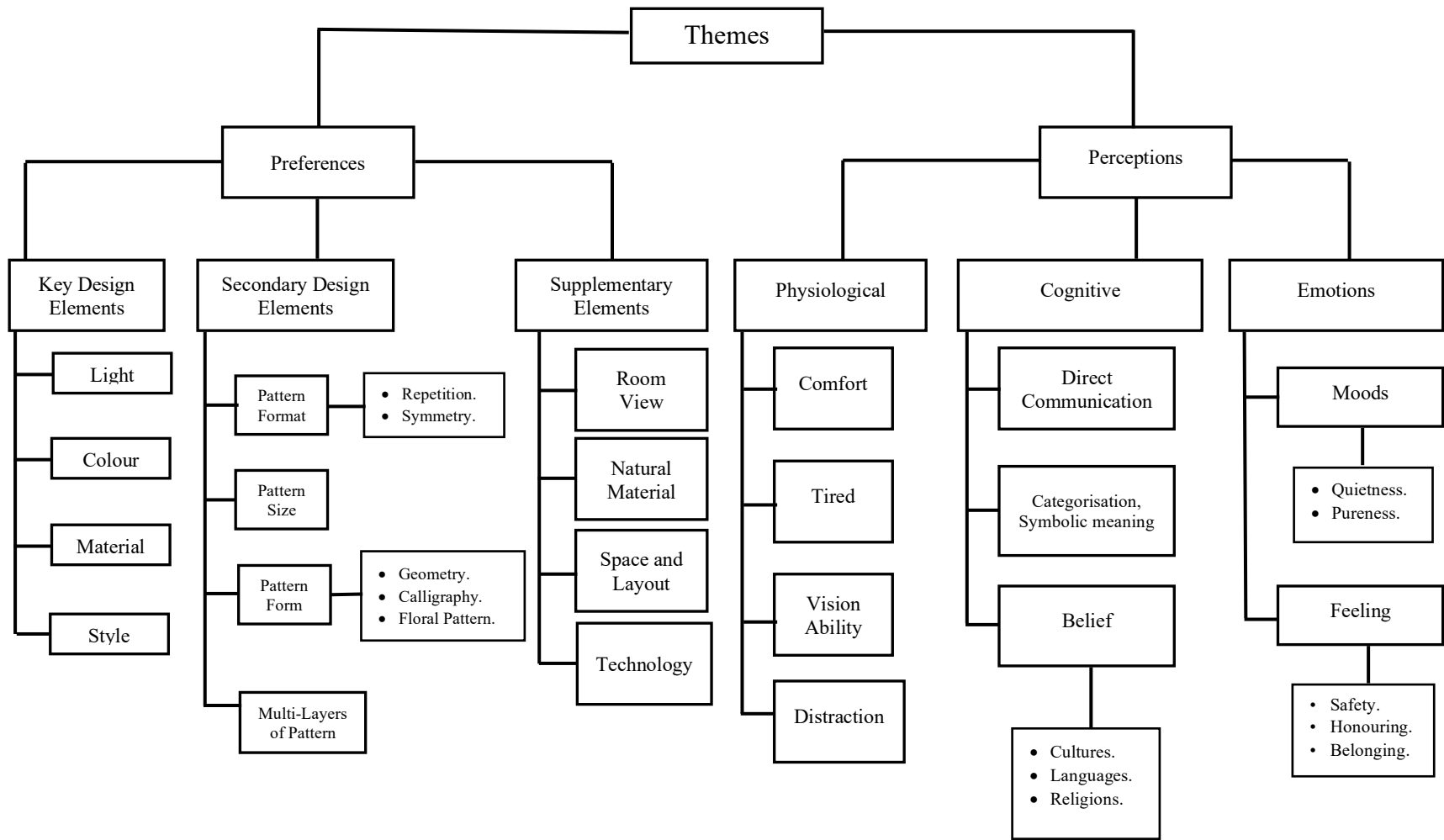


Figure 4-1: The Final Themes and Codes (Researcher).

4.7 *Validity and Reliability*

Validity and reliability are essential concepts in quantitative research (Golafshani 2003; Ritchie et al. 2013), and ensure the high quality of qualitative research, since, according to Neuman (2013b), the validity of the data suggests truthfulness. Several arguments have been put forth in relation to the possibility of evaluating validity in qualitative research. This is because qualitative research is open-ended and less structured, by its nature, and the interpretation of results depends on the researcher, so the possibility of researcher bias is greatly increased (Johnson 1997). As a result, validity has at times been referred to by alternative terms in qualitative research, such as credibility or plausibility (Neuman 2013a; Bryman 2016). Others have kept the term as it is, but have broken validity in qualitative research down into different types, such as descriptive validity, interpretative validity, theoretical validity, and internal and external validity (Johnson 1997).

In contrast to validity, reliability is concerned with the replicability of the research findings using the same or similar methods. The term reliability is often used interchangeably with the terms confirmability or dependability in relation to qualitative research (Neuman 2013a; Ritchie et al. 2013).

Lincoln and Guba (1986) established the concept of trustworthiness in qualitative research instead of reliability and validity, outlining four aspects of trustworthiness: credibility, transferability, dependability, and confirmability. Credibility refers to internal validity, transferability refers to external validity or generalisability, dependability refers to reliability, and confirmability refers to objectivity (Shenton 2004). Guba and Lincoln went on to suggest specific guidelines that researchers could use to achieve trustworthiness in their research, including prolonged engagement, peer debriefing, persistent observation, and member checks. Also of importance were the researcher's characteristics, in that they must be able to adapt and respond to changing circumstances whilst being holistic, sensitive, and able to summarise and clarify (Guba and Lincoln 1981; Johnson 1997; Morse et al. 2002).

Taking into account the difference in views, this research followed the concept of trustworthiness outlined above. The concept was applied in this research by implementing

several guidelines. The researcher sought to ensure credibility by making sure the findings correspond to reality (Shenton 2004) by adopting the research methods appropriate to qualitative data, and by drawing on previous research of a similar nature and following the methods used therein (Gashoot 2012; Alfakhri 2015; AlKhateeb 2015).

Another method for ensuring the credibility of a study is random sampling. Although the sample in this research followed certain criteria, the opportunity was equal for all participants, as participants of differing cultures, ages, nationalities, and genders were chosen to participate in the study. Frequent debriefing sessions were held between the researcher and the team of supervisors, with the aim of reducing any form of bias. These debriefing sessions helped widen my vision as a researcher through the knowledge and views shared by the team of supervisors. In these sessions, we discussed types of the researcher bias and preferences, and how to identify when any form of bias is taking place (Shenton 2004). This strategy is also referred to as member-checking, and involves the researcher sharing interpretations with other members of group.

A final strategy used in this research was the use of audio recording during the interviews, which was adopted primarily to allow the interviewer to focus on listening to the participants whilst conducting the interview. This decision was made in accordance with the advice of (Wolcott 1990), who suggested that researchers should minimise their own talking during interviews, and that they should listen attentively when collecting data, whilst simultaneously taking precise and accurate notes that are comprehensive enough for sufficient data to be collected. The use of multiple inference descriptors in the report is also recommended by (Johnson 1997), who highlighted their importance in allowing readers to experience the participant's actual language.

4.7.1 Transferability

External validity has been defined as “the extent to which the findings of one study can be applied to other situations” (Merriam 1998). Shenton (2004) noted the difficulties of ensuring external validity for qualitative data, stating that findings are usually restricted to a small number of individuals and environments, and that it is therefore difficult to demonstrate that results will be applicable to other situations and other groups of people.

In contrast to this view, Stake et al. (1994) argued that the findings of qualitative data should not be instantly dismissed, as those in similar circumstances as described in the study may be able to relate to the findings. The sample demographics such as age and location, as well as the sample size, have clearly been described in the research, as well as in the method of data collection to ensure external validity, length of the data collection sessions, and the period of time over which it was collected.

4.7.2 Dependability

Dependability in research is the act of ensuring that similar findings are obtained if a study is repeated with the same methods, context, and participants as the original study. Dependability is closely related to credibility and it has been argued that dependability can be assured only once the credibility of the research has been ascertained (Lincoln and Guba 1986). In order to tackle the issue of dependability in research, a detailed account of the processes used in the study should be provided, with which future researchers can replicate the study. Details should include sections dedicated to:

- a) The research design and how it was implemented, with a description of what was planned and carried out;
- b) Details of how data was collected, with emphasis on what exactly was done in the field; and
- c) An appraisal of the research, with an evaluation of the overall effectiveness of the processes undertaken during the research (Shenton 2004).

4.7.3 Confirmability

The concept of confirmability is the final criterion of reliability and refers to the researcher's level of confidence that findings of the research are based on the words, ideas, and narratives of participants as opposed to potential researcher preference or bias (Shenton 2004).

4.8 *Ethical Considerations*

The research was conducted in accordance with the Bournemouth University Ethical Code of Practice, and ethical approval was obtained from the board by the researcher (Appendix B). In this study, the data collection involved human participants answering interview questions. The interviews were conducted in a safe, public, and quiet place with all male and female participants. The research aims and the phases of the study were explained, and also who may benefit from its results; this was done by providing participants with a participant information sheet and an agreement form to be signed before the interviews were conducted (see Appendices C and D).

All questions in the interview contextualise the spiritual aesthetic and Islamic patterns from the perspective of the participants. No sensitive or private questions were asked, nor were any questions asked about the participant's past experiences; all questions related to their opinions on interior design elements. All participants were volunteers, and the privacy of the participants will be protected; no names or any personal information will be published, and the data will only be used for academic purposes. The interviewer explained that the interview would be audio recorded and transcribed. All the information that was collected during the interviews will be kept on an encrypted and locked flash drive. All data relating to this study will be kept on the Bournemouth University password-protected and secure network, and it will be destroyed after the study.

4.9 *Summary*

In summary, the methodology of this research is interpretivist and associated with the case-study strategy. A qualitative method that provides rich details with which to understand user perceptions and preferences of interior design was selected. Semi-structured interviews were thus the most appropriate research method for collecting data. This chapter has explained in detail the interview procedure and the sampling process and techniques. Thematic analysis, which is commonly used for qualitative analysis, has been selected as the data analysis technique. Ethical considerations were addressed at the end of this chapter to improve the research quality. Figure 4-2 summarises the research methodology.

Research Philosophy	•Inductive - Interpretivism
Research Approaches	•Qualitative
Research Strategy	•Case Study
Data Collection (method)	•Semi-structured Interviews
Data Analysis	• Thematic Analysis.

Figure 4-2: Research Methodology (Researcher).

Chapter 5 Findings and Discussion

5.1 Introduction

This chapter is the result of analysing semi-structured interviews with pilgrims and users. It clarifies preferences and perceptions regarding the role of Islamic patterns in enhancing the spiritual aesthetics of hotel rooms. It then explains the findings and outcomes. It notes the proposed spiritualscape via an Islamic pattern framework and proposed spiritual aesthetics via Islamic pattern guidelines. It also contains 3D perspective designs for hotel rooms designed by volunteer interior designers based on the proposed guidelines. This chapter also contains feedback from the designers on the proposed guidelines and proposed design evaluations.

5.2 Preference for Islamic Pattern Applications in Hotel Rooms

The first question and objective of this research is to discover preferences for Islamic patterns and their applications in hotel rooms or, in other words, the physical elements that pilgrims prefer in Islamic patterns within hotel room interior design in holy cities in Saudi Arabia. The interview questions regarding preferences were open-ended, without any interference from the interviewer in the answers.

The physical factors are classified into three main dimensions based on the Bitner framework: ambient conditions (temperature quality, noise and colour), space/function (layout, equipment and furnishing), and signs, symbols and artefacts (signage, personal artefact and style of décor) (Bitner 1992). Bitner noted that:

“Not easily generalized, the effect of a single dimension on customers and employees is difficult to forecast. However, relevant dimensions of the servicescape can be isolated and general patterns can be explored” (Bitner 1992, p.65).

In contrast, Gashoot (2012) classified the physical into two main dimensions: interior conditions and technology conditions. There are three categories under the interior condition: environmental aesthetics (colour, artwork, texture and brightness),

personalisation (bed area and engaging with personal belonging), and mobility and flexibility (ergonomics and view of nature). Alfakhri (2015) classified the physical elements in the interior environment of hotels in general into key elements and supplementary elements. Key elements include colour, material, furniture, lighting, and design styles, while supplementary elements include artefacts, layout, view, technology, nature, and ambient conditions.

This research created a classification for Islamic patterns in hotel rooms based on all previous classifications which were helpful in guiding the codes that emerged from data analysis. The codes under the preferences theme were classified as key design elements (colour, texture and material, lighting, style), secondary design elements (pattern format, pattern size and pattern form), and supplementary elements (room view, natural material, space and layout and multi-layer of patterns), which will be discussed in detail.

5.2.1 Key Design Elements

The key elements are the most important elements to be considered while designing Islamic patterns for hotel rooms, and have a significant effect: colour, texture or material, light, and style (Table 5-1).

5.2.1.1 Colour

Bitner, in the servicescape model considered colour an ambient condition, and Gashoot (2012) considered colour one of the main elements of environmental aesthetics. He stated that colour should be used based on a deep understanding of its message to the user of the environment.

When the participants of this research were asked about the preference for colour the majority responded that they prefer white and beige as basic colours. In addition to the basic colour, more than half preferred blue and green colours for Islamic patterns, and some preferred brown as an additional colour. Only one preferred red.

“I prefer beige and brown with light blue” Participant #1.

“I prefer white and grey and the patterns can be green” Participant #6.

Different colours are associated with different religions and cultures. Blue is known to be the most popular colour among different cultures. Some studies have suggested that cool colours, mainly blue, arouse pleasure and encourage customers to spend time in a space. Researchers note that even if there are universal colour preferences, they may reflect universal features of human ecology rather than innate preferences: for example, the clear sky and clean water are universally blue (Palmer et al. 2013; Faslija et al. 2020).

The different nature of colours has spiritual and material value in Islamic culture and civilisation. Blue represents perfect peace, and is the colour of stillness and balance. Nejad et al. (2016) state that “Blue is sign of cleanness and spirituality” (p.1084). Green represents the will at work and self-awareness, and is the colour of health and safety. It is used as a physical sign of safety, and is a symbol of faith and heaven. Brown indicates social security and the need for physical comfort and pleasure. White is a symbol of innocence and purification; white cloth is a sign of happiness and brides usually wear white clothes. Indian people wear white cloth in their mourning ceremonies, symbolising the escorting of the dead to heaven and perfection. Islam is based on cleanliness, true nature, and purity: it has emphasised wearing white as the best colour for pilgrims. White is a symbol of faith and happiness; the Quran describes the happiness of the faithful with a white face (Nejad et al. 2016).

The classification of this research for the colour under a key element is supported by Kontic (2016), who stated colour is the first key element in design, influences moods and feelings in a positive or negative way, and has lasting effects on the perception of a hotel space. He stated that hoteliers and designers should recognise the importance of the colours they choose, and although tastes differ, they should focus more on white, light, and natural colours as their findings demonstrated that they are generally preferred by customers. It is also important to note that the preference for colours is connected to

highly individual, early life experiences, and the symbolism of colours is not strictly confirmed (Kontic 2016).

5.2.1.2 Texture and Material

The current research found that materials that can be used to create Islamic patterns are divided into two forms: natural (e.g., wood, leather, and marble) and artificial (e.g., paints, fabrics, and ceramic). The material in this research concerns all the wall, ceiling, floor and furniture material. Painting and wallpaper were the most preferred materials used on walls. The material in ceilings was less important to most participants, but most of the participants focused on bright colours and lighting. Those who did mention the material for the ceiling preferred the use of gypsum, except for one participant who preferred a mixture of wood and gypsum. The interview analysis showed that preferences for the material used on the floors were divided into marble and carpet, and that there were only two preferences for hardwood or parquet floors. Finally, the preferred materials for use on furniture were velvet, satin, linen, and cotton.

“I prefer the ceiling as plain gypsum plaster; what matters most to me is light” (Participant #2).

“The wall could be painted, or it could be wallpaper. The most important thing I need is to have a feeling of something corrugated or vintage” (Participant #4).

“I prefer carpets, I personally love being on the ground, especially when I worship” (Participant #13).

“The best linen and velvet, linked in my brain with our culture, ‘feels oriental’” (Participant #8).

Texture, in this research is classified as a key design element that enhances spirituality. Fasllija et al. (2020) note that colour and texture are complementary to each other in design fields. Similarly, Cenani and Cagdas (2006) state that using texture in spaces

affects the atmosphere and provides warmth and elegance. It also affects emotions and moods.

The present findings seem to be consistent with the research conducted by Gashoot (2012) which considers texture the second main element of environmental aesthetics. He noted that the use of texture in interior design offers a wide variety of interior finishes as it creates an interesting finish, producing shadows and visual variety within the room through wall texture. Wall texture brings a richness of material and colour contrast.

These findings suggest that designers should recognise the importance of the texture in a hotel room so as to enhance spirituality. They should focus more on natural materials, as the findings suggest that they are generally preferred by occupants.

5.2.1.3 Lighting

All participants agreed that sunlight was the most preferred type of lighting. While some preferred to combine lighting with patterns, indicating that the shade reflected from patterns enhanced spirituality, they also noted that shadows should fall on areas that are not decorated (whether the floor, walls, ceiling, or furniture) because the overlapping of multiple patterns causes dispersion and discomfort. This is well known, and supported by Kontic (2016), who shows that the shadows, which are always connected with lighting, have a special psychological effect. They contribute to feelings, so the domination of bound shadows, for instance, may provoke an unpleasant tension (Figure 5-1). The type of lighting is also of considerable interest, for it appears to be connected to the perception of quality and definition of space, and it reflects on the perception of other elements such as colours and textures.

“I prefer lighting according to time, which means that, during the hour of worship, I do not like strong light; rather, I like soft light. But throughout the day I like the light to be natural sunlight” (Participant #17).

“If the room has pattern decorations, I do not prefer the lighting to be decorated because I will feel uncomfortable. But if the room has no pattern decorations, then the lighting may have patterns that reflect its shade on the room” (Participant #13).



Figure 5-1: An Islamic Pattern Portrayed through Light and Shadow (Shaza Madinah Hotel)

Lighting is considered in this research to be a key design element. Lighting is responsible for controlling the appearance of colour, which in turn affects cognitive abilities such as memories, as well as emotions such as mood (Singh 2006). Incorrect lighting design can have negative effects, such as glare, vision problems, and headaches, however, natural light can heal and affect moods positively.

In poor lighting, aesthetically appealing textures or patterns are useless and are not noticeable. From another point of view, a certain lack of colours or furniture may be perceived as more pleasant if the lighting is appropriately organised around them. Some researchers from the field of the psychology of perception maintain that light affects the senses more than any other attributes of interiors (Kontic 2016). Countryman and Jang (2006) have observed that the trend in the hotel industry is to provide more lighting, with a large proportion coming from natural lighting during daylight hours. Hoteliers should be concerned with lighting, and what is deemed appropriate by their guests.

5.2.1.4 Style

This study has presented two styles, traditional and modern, and shown three different pictures (Figure 5-2) for each style without naming the style so as not to influence participants to choose a certain style merely because of its name. The participants style preferences varied. Most preferred a modern style of interior room design. Some suggested combining two styles. This is compatible with Shelter (2015), who noted that a simple, plain style, with the hotel's design, helped people feel more comfortable and relaxed.

“I like the simple thing, meaning that it has an Islamic motif, but I like it simple. The picture in Style 1 is in the middle, and likewise the picture at the end feels calm and simple, while the picture in Style 2 uses strong colours, and the patterns are crowded everywhere, even the tables are decorated by patterns, and this sense of crowding makes me feel distracted” (Participant #9).

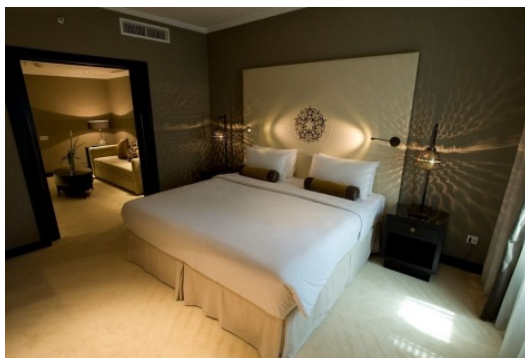


Figure 5-2: Styles Presented in the Interviews (Researcher)

Bitner considered style and decor as elements under the sign and symbols dimensions, which affect a user's behaviours in the environment. This is consistent with the results of this research, where the style of the hotel room has a major effect on the users.

Participants	Key Design Elements																						
	Colour						Material										Light				Style		
	Brown	White	Beige	Blue	Green	Red	Floor			Wall		Ceiling		Furniture				Natural		Artificial		Traditio nal	Modern
							Car	Mar	Par	Pan.	W.P.	Gyp.	Wood.	Cot	Lin	Sat	Vel	W/P	Wo/P	W/P	Wo/P		
P1			*	*	*			*		*		*		*				*		*		*	
P2	*	*	*						*	*	*		*				*			*		*	
P3		*		*	*		*	*		*		*				*		*	*		*	*	
P4		*	*					*		*	*	*					*		*			*	
P5						*	*			*	*					*		*	*			*	
P6	*		*	*				*	*	*	*			*			*		*			*	
P7	*		*					*	*	*	*				*		*		*			*	
P8	*							*	*	*	*					*				*		*	
P9		*		*	*		*		*	*	*		*			*				*		*	
P10		*	*				*		*		*		*			*		*		*		*	
P11		*	*	*			*		*	*	*					*		*		*			
P12	*	*			*			*	*	*	*			*		*		*		*			
P13		*		*	*		*	*	*	*	*				*	*			*	*		*	
P14		*			*		*		*	*	*	*			*	*			*			*	
P15	*							*		*	*				*	*			*			*	
P16		*		*	*		*	*	*	*	*			*			*		*	*	*	*	
P17			*	*				*		*	*						*		*	*	*	*	

Material: Floor (Car = Carpet, Mar = Marble, Par = Parquet). Wall (Pan = Panting, W.P = Wallpaper). Sealing (Gyp = Gypsum). Furniture (Cot = Cotton, Lin = Linen, Sat = Satin, Vel = Velvet). Light: Natural and Artificial (W/P = With Pattern, Wo/P = Without pattern).

Table 5-1: Preferred Key Design Elements by Participant (Researcher)

5.2.2 Secondary Design Elements

Other elements emerged from the interview analysis, such as pattern form, pattern size, pattern format and multi-layering of pattern design. These elements were not noted by either Bitner or Gashoot, but they play a critical role in enhancing spiritual aesthetics via Islamic patterns. The researcher thus suggested a classification called secondary design elements that includes these elements (Table 5-2).

5.2.2.1 Patterns Form

Form refers here to types of Islamic patterns such as geometric patterns, floral designs, and calligraphy. These pattern types are explored because each individual has different preferences, and there is a reason behind these preferences, which this study seeks to identify. These preferences were explored by visually presenting the three pattern types to help participants notice the differences between them (Figure 5-3). The same question was repeated for different elements of rooms, such as the wall, ceiling, floor, and furniture.

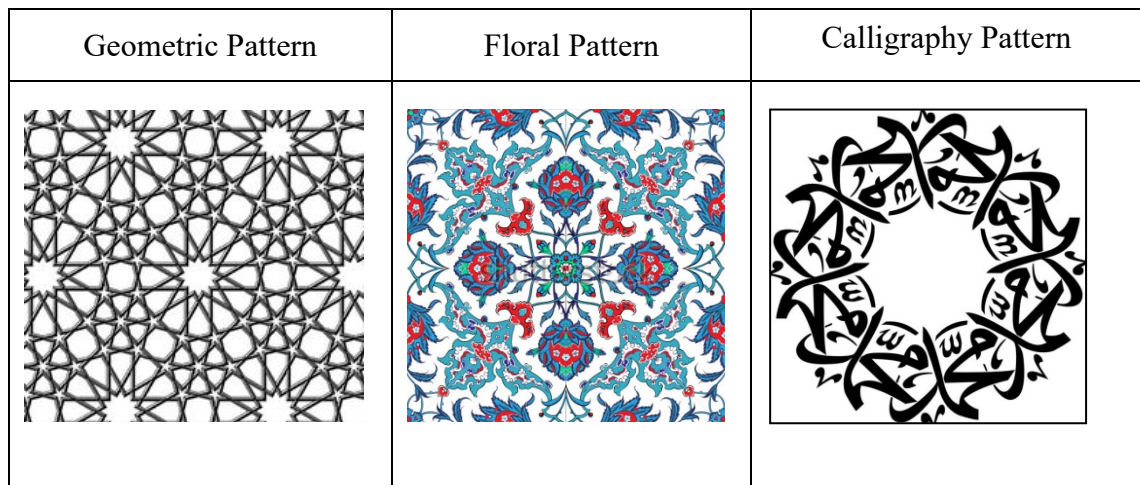


Figure 5-3: Pattern Form Presented in the Interviews (Researcher)

It is clear from the analysis of the interviews that the majority of the participants preferred geometric patterns on the floor. Some participants preferred geometric patterns on the wall, and some preferred calligraphy. Most of the participants preferred the ceiling to be

plain, although one participant preferred a floral design on the ceiling. All participants preferred patterns on the small areas and accessories of the furniture, such as cushions, rather than on the furniture itself.

“I prefer the first and third types, namely the Islamic calligraphy in the Qur’an, and geometry. The first kind because, when one sees the calligraphy in which the Quranic verses are written (such as ‘There is no god but God’ or ‘Muhammad is the Messenger of God’), then something involuntary happens, you feel that there is a psychological comfort within you. As for geometry patterns, I feel that’s the closest thing to Islam; when I visited Spain and saw the Islamic monuments, most of them were decorated with writing (There is no god but Allah, Muhammad is the Messenger of Allah), or decorated with geometric patterns” (Participant #9).

5.2.2.2 Pattern Size

Size concerns the scale of patterns used in the room. Analysing the data revealed that most of the participants preferred one large pattern on floors, but it is worth noting that some of the participants preferred several units of medium patterns on the floor as long as the pattern is not cut off.

Medium-sized and small patterns were the most preferred on ceilings and walls, according to the data: not too small so it would cause dispersion and discomfort, and medium so that patterns could be seen from a distance: no one preferred the big size because it would cover the wall,

“I don't want to see the floor in one colour... I prefer it with an octagonal or hexagonal pattern. I prefer it medium-sized and dense; it gives me the feeling that the place is wider, the size of 30 by 30 is comfortable to my eye. I do not want it to be small, like 10 by 10, because then it becomes annoying” (Participant #3).

5.2.2.3 Pattern Format

As noted previously in Chapter 2, studying shape grammar allows the spiritual aesthetic of Islamic patterns to be explained. Examining the design language confirms the existence of spirituality in Islamic patterns, embodied in design rules such as repetition or rotation. Implementing the design rules provided Islamic patterns with characteristics such as unity, movement and balance.

The interviews revealed that the participants preferred balance in the location of the patterns. Some indicated a preference for two particular walls over two other walls. Some indicated that even if there is a pattern on the floor, it is preferable to reflect it on the ceiling, for example using the pattern in a balanced way through its reflection in the bed runner and top of bed (Figure 5-4). This is compatible with Islamic principles of balance in all of life, where a sense of balance is considered a way of achieving spirituality (Erzen 2007).

“Usually, I do not prefer having patterns on the ceiling, but if there are floor patterns, it’s possible they have a reflection on the ceiling, but it is light in the same colour as the ceiling” (Participant #6).



Figure 5-4: An Example of Balance (Steigenberger Alcazar Hotel in Egypt)

Repetition means copying or redrawing a pattern unit or single element multiple times and in specific dimensions. Repetition is one of the most prominent ways in which balance and symmetry can be achieved. It is most characteristic of Islamic patterns. Some participants in this research preferred repeating patterns, and others excluded repetition for its exaggerated and distracting aspects.

“I like one unit of pattern and its size is large. I don’t like repetitive ones... because it bothers me. I would like to focus on whether they are alike or not and if their number is good or not... are they disturbing you or distracting you? Both, especially in prayer, I feel are a distraction” (Participant #11).

“I like repetition, repeating the pattern gives me a feeling of connection and infinity” (Participant #3).

There are many ways in which the art pieces may contribute to the overall positive perceptions of the hotel interior. If a hotel space is fragmented into different subspaces, then the repetition of art in the same or a similar style creates an impression of unity (Kontic 2016).

5.2.2.1 Layering of Pattern

Some of the more interesting answers relate spirituality to the layering of Islamic patterns. For example, one of the participants preferred the patterns in the ceiling to be in two layers: one could be hollow wood, and there could be light between them to enhance spirituality. Another participant preferred the colour of the patterns on the wall to be the same colour as the wall but in lighter or darker tones, so that the wall had a multi-layered effect that enhanced spirituality. Figure 5-5 presents an example of multi-layering achieved by repeating the calligraphy patterns as shadows. The data analysis found that multi-layering indicates spirituality has a hidden meaning. This aligns with the argument of Trivedi (1989) regarding the use of geometry in multiple dimensions as a way to express a spiritual quality, by detaching from the physical world in order to reach the spiritual dimension.

“I prefer the pattern to be light, not visible... as if it were a shadow on the walls” (Participant #6).



Figure 5-5: An Example of Multi-layering Patterns (Artsouk 2017)

Participants	Secondary Design Elements								
	Pattern Form			Pattern Size			Pattern Format		Multilayer
	Geometry	Calligraphy	Floral Pattern	Big	Medium	Small	Balance	Repetition	
P1		*		*					
P2	*		*		*		*		
P3	*	*			*	*	*		*
P4	*				*		*		*
P5	*				*			*	*
P6	*				*				
P7		*				*		*	
P8	*	*		*				*	
P9	*					*			*
P10	*				*		*		
P11	*	*			*			*	
P12	*	*			*				
P13	*				*		*		*
P14	*	*			*	*			
P15	*	*			*	*		*	
P16		*		*		*	*		*
P17	*			*			*		

Table 5-2: Preferred Secondary Design Elements by Participant (Researcher)

5.2.3 Supplementary Elements

Analysing the interviews identified some factors related to the Islamic patterns, such as room view, room layout and space, and the relationship with nature and technology. These elements have also been noted by Bitner (1992) and Gashoot (2012), however, they were classified in a different category (supplement elements) because their role in enhancing the aesthetic spirituality in the hotel room is not as great as that of the key element (Table 5-3).

5.2.3.1 Room View

The view from a room is quite often taken into account by the managers of tourist accommodations (hotels and apartments) when determining the price of rooms. This is mainly because most guests prefer a room with a view of the natural environment around the premises (e.g., an aquatic/coastal environment, forest and/or mountainous areas) rather than an identical room without such a view. Many guests/tourists are willing to pay higher prices for a room with a view, thus assigning an economic value to this attribute. This value is directly linked to the aesthetic value of the natural environment (Latinopoulos 2018).

Pilgrims to the holy site prefer rooms with a view of the Kaaba, which directly affects the room price, in addition to their preference for rooms overlooking the Haram in general. The reason for this is not only aesthetic but also religious, because pilgrims can pray in the congregation from the room if the room overlooks the Haram, and watch the rows of worshippers.

Since this research focuses on Islamic patterns, one of its aims was to identify preferences for Islamic patterns in windows in enhancing spirituality. The results showed that participants do not prefer patterns on the windows when the room has a view of the Haram because it blocks the view. Some also did not prefer patterns on windows in any situation, whether there is a view of the Haram or not, because they collect dust and reduce the natural light. Figure 5-6 an example of patterns on a hotel room window with a view of the Haram.

“In cases where there was a view, it is not preferable to have Islamic patterns, so as not to impede the clarity of vision, but in the absence of a view, the Islamic patterns play a role in enhancing spirituality, especially when the shadow of the Islamic patterns is reflected in the room” (Participant # 6).



Figure 55-6: An Example of Patterns on a Hotel Room Window with a Haram View (Researcher)

Most participants expressed a preference for large windows, perhaps because they connect the outside with the inside. This was also described by Kontic (2016), who noted that the provision of glass and windows makes a positive noticeable difference to hotel guests too, by making the outer view more accessible, and increasing light. Kontic therefore suggested that hoteliers should try to provide glass walls and windows whenever possible.

A limited number of participants said that the view of the room was not important to them in increasing spirituality, as some preferred isolation in order to enjoy and increase the spiritual feeling.

“The first thing in the room that grabs my attention is the curtain, I like the subject of the curtain, ... this attracts me a lot. If they are heavy, lavish, I think it helps me sleep, helps me focus, and helps my isolation, for me it is the idea of spirituality” (Participant #12).

Gashoot (2012) added a natural outside view to Bitner’s (1992) framework, as an element that directly affects users and improves wellbeing. According to current research, the view from a room is one of the elements that affects a user’s spirituality when combined with Islamic patterns. I therefore recommend that designers consider the implementation of a pattern on the window in an appropriate way that does not block the view and allows for cleaning. It should be separated by a slight distance from the glass, so that it can be cleaned or moved.

5.2.3.2 Room Layout and Space

Layout accessibility refers to the way in which furnishings, service areas, and passageways are arranged and spatially related (Bitner, 1997). An effective layout provides ease of entry and exit, and will make ancillary service areas more accessible, and layouts in which customers cannot move freely and easily will make them frustrated (Bitner, 1992). This indicates the importance of the internal layout of the rooms and furniture, and the circulation plan.

The analysis of interviews in this research found that the locations and layout of Islamic patterns in the room are also important. For example, the bed should not be placed towards the direction of the Qiblah, “the Kaaba direction,” as it is usually preferred that legs don’t face a direction of the Qiblah, and that calligraphy patterns do not point towards people’s legs when they are in bed, out of respect for the verses and hadiths of the Prophet. This was noted by participants:

“When calligraphy is used, I prefer that it is not in the bedroom, where you lie down, in order that my feet are not pointing towards it” (Participant #16).

This research suggested that designers should focus on the areas that attract a guest's attention. The interviews suggested that the headboard and the sitting area are the two most attractive areas to room users.

Space involves the spatial relationships between different objects (e.g., furniture) in an area or an environment. Ideally, hotel spaces should be large enough to allow guests to browse freely and easily, with intuitive clues as to which directions to undertake (Wakefield and Blodgett, 1996), however, this research found that the spatial arrangement of the room should be consciously designed. Regarding the quantity and size of Islamic decorations, a participant said:

“...if the room area is big, I prefer having Islamic patterns on the walls, but if it is not, it is better to have Islamic patterns only on some simple accessories, such as cushions” (Participant #3).

5.2.3.3 Relationship to Nature

Natural materials emerged as a code after analysing the data, even though there were no questions regarding this category. Many participants, however, stated that the reason for their preference was their relationship with nature. For example, the preference for blue and green colours was because they are the colours of gardens, the sky, and the sea. There was a preference for marble and wood because they are natural materials, which indicates that there is a link between natural materials and spirituality—perhaps because they both have a spirit.

“I prefer natural materials as the material for a floor, whether marble or wood, because it connects me with nature and the brown colour makes me feel it is dust, which is our origin as humans. We were created from clay” (Participant #8).

Bitner's research has shown that people respond positively to nature and prefer natural to artificial elements (Bitner 1992). This is supported by the research undertaken by Gashoot (2012), which indicated that the availability of natural cues seems to have a positive effect

on guests, including the use of fresh flowers, greenery, and water in hospital rooms. This research recommends that, as a result, hoteliers should similarly consider natural in design.

5.2.3.4 Technology

Gashoot (2015) classified technology under the physical dimensions of his developed framework. He finds that technology in hospitals, such as the internet and mobile phones, is one of the most important elements in healing, and that it provides the occupant of a room with connections to the outside world; this makes them feel less removed from their normal lives outside the hospital. The participants in this research were therefore asked about the effect of technology in enhancing spirituality.

Bilgihan et al. (2016) suggest that advances in technology and in subsequent guest-related amenities have the potential to improve guest experiences, and also increase both guestroom revenues and ancillary room revenues. High-speed internet access and connectivity for a guest's devices were perceived as more important by business travellers than by leisure travellers

Similarly, Cobanoglu et al. (2011) notes that technology is a critical determinant in hotel guest satisfaction. Hotels often use technology as a value-added amenity to help promote differentiation and increase guest satisfaction. The results of Cobanoglu et al. study indicate that there is a significant positive relationship between three factors— “business essentials for travellers,” “in-room technologies,” “internet access”—and hotel guest's overall satisfaction. “Comfort technologies” was not found significant as a factor in predicting a hotel guest's overall satisfaction.

This research found that technology did not have a significant effect on enhancing spirituality. Most of the participants did not prefer having the Islamic patterns used electronically, for example, on a projector or screen. Controlling furniture by closing or opening curtains, controlling the intensity of lighting electronically, or having the internet has no direct relationship to spirituality, but is connected, instead, with luxury and comfort.

“I prefer patterns to be stable... I do not prefer having a screen, whether it displays the Haram live or displays Islamic patterns... because the screen does not give the same feeling as the real thing. When it is electronic, it does not touch the soul” (Participant #10).

Participants	Supplementary Design Elements							
	Room View		Room Layout and Space			Relation to Nature	Technology	
	With Pattern	Without Pattern	Pattern Position	Room Point of Attraction	Room Size		Yes	No
P1		*	Wall	Headboard	*	Water and Sky		*
P2	*		Ceiling and Wall					
P3		*	Floor and Wall	Setting area		Waves and Trees		*
P4		*	Floor and Ceiling	Desk	*			
P5		*	Floor	Room view				
P6	*	*	Ceiling			Sky		
P7	*		Floor and Wall	Room view				*
P8	*		Floor					
P9	*		Wall	Headboard		Sky and Grass		*
P10	*		Wall					
P11		*	Wall and Floor	Headboard	*	Nature		
P12	*		Wall and Floor	Setting area	*			
P13	*		Floor			Nature		*
P14	*		Wall	Setting area			*	
P15	*		Wall	Bed area				*
P16		*	Wall and Floor		*	Sea and Waves		*
P17		*	Wall	Setting area		Waves and Sky		*

Table 5-3: Supplement Design Elements Preferred by Participants (Researcher)

5.3 *Perception of Islamic Pattern Applications in Hotel Rooms*

The second question in this research seeks to understand user perceptions of Islamic patterns in the interior design of hotel rooms, which would explain how Islamic patterns in design influence a user's spirituality. As discussed previously in the theoretical framework section (Chapter 2), perception is a mental process involving the way a person interprets the world around them and makes sense of it in their brain (Ries and Ries 2009). Although perceived visual quality may depend in part on perceptual/cognitive factors, it is by definition an emotional judgment involving evaluation and feelings (Nasar 1987).

Mehrabian and Russell (1974) suggest that conscious and unconscious perceptions and environmental interpretations affect feelings (Hetharie et al. 2019). They continue that there are three basic groupings for emotional responses: arousal, dominance and pleasure. Two differing behaviours may occur as a result of these emotional responses: avoidance or approach. Approach behaviour is when there is a desire to remain, observe and discover the environment. It also includes attempting to form connections with others in the same environment. Everything in contrast to this is known as avoidance behaviour (Dedeoğlu et al. 2015). On the other hand, Bitner (1992) concludes that individuals in servicescapes respond to their physical surroundings cognitively, emotionally, and physiologically. The perceived environment does not directly lead to specific behaviours but, rather, the perceptions of that environment lead to certain emotions, beliefs, and physiological responses, which in turn influence behaviours. This leads to the conclusion that there are two kinds of relationships between cognitive responses, emotions, and perceptions: in one, cognitive responses have an emotional influence on perception, while in the other perception causes cognitive and emotional responses (Zadra and Clore 2011).

Based on previous frameworks (Bitner 1992; Gashoot 2012), this research classifies the theme of perceptions into three codes: physiological, cognitive, and emotional. Under each category there are sub-codes generated from the analysis of the interviews.

5.3.1 Cognition

Cognition refers to the mental processes involved in knowing, learning, and understanding things. Cognition entails a combination of beliefs, views, and meanings, which affect people's perceptions of their physical environments. At the same time, the environment perceived may elicit cognitive responses, influencing an individual's beliefs about a place and about the people and products found in this place, so the environment can be seen as a form of nonverbal communication (Bitner 1992). Sometimes cognition and perception are used interchangeably.

The analysis made it clear that all previous beliefs and past experiences, as well as ethnicity—which refer to shared cultural characteristics such as language, practices, and beliefs—will draw on the perceptual, which in turn evokes an understanding of symbols, meanings, and categorisations. The data analysis identified the following aspects that influence cognitive responses to Islamic patterns, and are compatible with Bitner's framework: beliefs, culture, language, symbols meanings, and categorisation.

5.3.1.1 Beliefs

The perceptions of participants are connected to their beliefs. Beliefs can involve religion, politics, values, and so on. The Islamic religion is one of the main belief systems affecting the perception of Islamic patterns, whether they are from Islamic symbols such as the Kaaba, the minaret with the crescent moon on the top, or its mosques and places of worship such as the Haram in Makkah or in Medina, that have associations with materials or symbols.

Islamic patterns as abstract art is most commonly used in places of worship in Islam, and animals and human figures are prohibited inside a mosque. Islamic patterns have therefore become symbols of mosques and sacredness (Kahera et al. 2009). Most of the participants thus related their preferences to mosques. For example, they described preferences for carpets in hotel rooms that enhance their spirituality to reflect the carpets that are most commonly used in mosques (Figure 5-7), or a preference for marble as a floor material to reflect the white marble used in the Haram (Figure 5-8).

*“I prefer white marble, because it makes me feel the Haram floor”
(Participant #6).*

*“Carpets have been associated with prayer, because in the mosques
we always pray on carpets that are decorated with Islamic patterns”
(Participant #5).*



Figure 5-7: Mosque Carpet (OnnectAnatolia n.d.)



Figure 5-8: The White Marble of the Al-Haram Floor (Muhammad 2018).

Another link to the Islamic religion is the preference for lighting units related to the lanterns used in the Islam holy month (Ramadan), as a symbol of fasting and which have become an icon for the month of Ramadan that people use even when sending greetings for the holy month.

The preference for copper as a material used for Islamic patterns in lighting units in hotel rooms also links to Islamic months, which echoes the use of copper in lighting units in mosques and places of worship (Figure 5-9). They connect to the feeling of the month of Ramadan, which is full of spirituality, through the shape and the material of the lanterns (Figure 5-10).

“The lighting units are best shaped like a lantern like the one on Al-Haram” (Participant #3).

“Better to have lighting in which Islamic patterns give dim lighting, such as the feeling of the Ramadan lantern” (Participant #8).

This suggests that it would be difficult for a person who does not have the same beliefs and knowledge of the Islamic religion, months, and icons to understand the symbols, and difficult for them to experience the same feeling from the room.



Figure 5-9: The Lanterns in Al-Haram(Badr 2015)



Figure 5-10: An Example of a Congratulations Card for the Holy Month (Omhani 2020)

5.3.1.1.1 Culture

Ethnicity and culture play a part in how patterns are perceived. According to previous studies, culture shapes and affects how people perceive interior environments, such as their understanding of space (Al-Zamil 2017). It is argued that “human perception is based on a culturally significant range of expertise that changes over time” (Perren and Mlecek 2015, p.11). Culture shapes an individual’s values, and these values shape the way people perceive interior design, which leads designers to incorporate cultural values into interior-design aesthetics (Al-Zamil 2017). Expressing cultural identity in architecture seems widely practiced nowadays. For example, a new identity of “cultural hybridisation” is emerging in design in this historical context in Dubai. It combines the current culture of the nation with other foreign cultures, thus offering greater global appeal to people of different cultures (Tyrrell and Mu’azu 2008).

The data analysis showed that most of the participants attributed their perceptions of Islamic patterns and their relationship to spirituality to culture and heritage. One participant connected their preference for the colour turquoise, which enhances their spirituality, to the colour of a chaplet. He remembered that there was a small shop in Makkah where they sell chaplets in the same colour as an aspect of culture for pilgrims,

so that most pilgrims who visited Makkah went to buy a chaplet from this shop (Figure 5-11).

“I prefer the turquoise colour; it is attached in my mind to the shops in Medina around Al-Haram that sell chaplets” (Participant #3).



Figure 5-11: Chaplet Shop (Al-Riyadh n.d.)

The research suggested that there is a relationship between turquoise blue and Islamic culture. According to Nejad et al. (2016), People traditionally believed in the holiness of turquoise blue. In their opinion, turquoise improves eyesight and is the colour of growth and eminence; it cures infertility and sterility and, brings dignity and health.

Some participants related their preference for traditional styles to their culture. For example, they chose the traditional style because they felt more spiritual when they were in a space designed in their country's traditional style. Those participants were from Libya, Turkey, Syria, and Palestine, and the Islamic traditional style design is commonly used in those countries (Figure 5-12) . It relies on geometrical patterns and calligraphy, in addition to arches and natural materials of wood and seashell.

“I prefer the second (traditional) style, I feel that it is our environment, it relaxes me the most and feels like home” (Participant #11).



Figure 5-12: Traditional Interior Design (Yosef 2020)

5.3.1.1.2 Language

Language also plays a role in perception. Some participants preferred calligraphy because it is Arabic writing, the language of the Qur'an, and some preferred it even if they were not able to read or understand it. They felt that the mere fact of it being written in the language of the Qur'an enhanced their spirituality.

“Calligraphy gives me the feeling that it is from the Qur'an and it feels more sacred and spiritual” (Participant #14).

5.3.1.2 Categorisation

Perception may simply help people to distinguish the environment by influencing how it is categorised and directing communication (Bitner 1992). For example, seeing logos in hotels helps categorise a hotel as part of its chain company; and seeing symbols can help classify the area in which the hotel is located. Figure 5-13 shows how symbols—in this case, an image of seagulls—are used in a hotel to help categorise it as belonging to a coastal environment.

It was evident from the data analysis that participants agreed that Islamic patterns help to categorise a room or the environment in an Islamic country.

“Nothing in design can symbolise that this place is in a Muslim country like Islamic patterns.” (Participant #4)

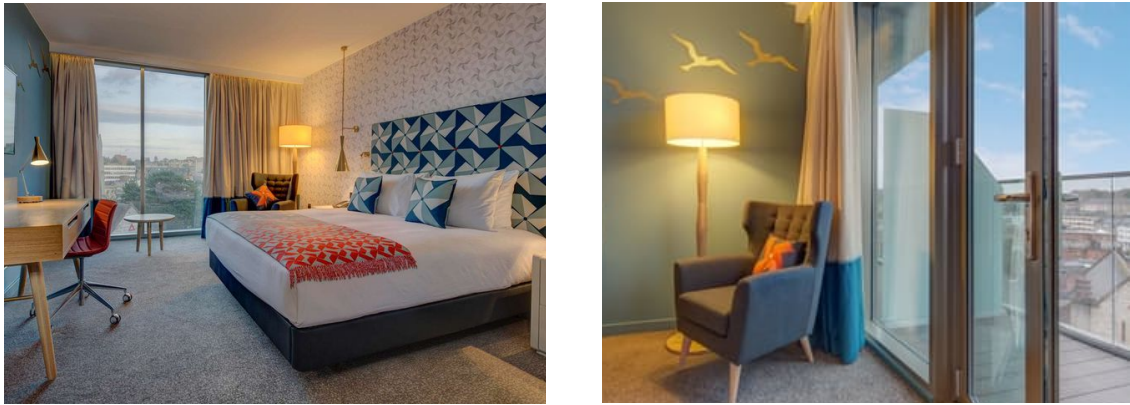


Figure 5-13: Hilton Hotel in Bournemouth (Hilton n.d)

5.3.1.3 Symbolic Meaning

Saussure defines signs as “dyadic” or two-part entities, with a “signifier,” the form or the material aspect of the sign; and the “signified,” the mental concept that the form represents (Cobley and Jansz 2010). This aligns with Bitner’s model where perception elicits a cognitive and mental response that interprets a symbol’s meaning.

Design creates aesthetic impressions and meanings for places, for instance in creating certain cultural themes. Users transform and rework the different symbolic meanings encoded in various brands, retail settings, advertisements, or material goods to manifest personal and social circumstances, identity and lifestyle goals (Alfakhri 2015).

The data analysis showed that participants agreed the perception of Islamic patterns led to the interpretation of multiple meanings rather than only to aesthetic and design-related meanings. It is an indication of the originality and legacy of a place, and also an indication of peace (Salam).

“I see geometric patterns more than just decorations. Their interconnectedness shows me the meaning of the strength and bonding of Muslims with each other”. (Participant #6)

The interview analysis supports the recommendation made by Zainal Abidin (2004), who noted that a hotel room in a holy city should be a space connecting the guest to their reason for being in that place, which is to worship Allah and remember the Creator. Islamic patterns are symbols of Tawhid. In other words, having ornamentation in the room helps the occupants to feel the existence of Allah. From a theological standpoint, Islamic patterns seek to create a sense of divine omnipresence and simplicity by focusing on harmony and balance while avoiding excess or grandeur.

5.3.1.3.1 Direct Communication (Direct Meaning from Symbols)

Most studies agree that interior design involves much more than aesthetic appearance, but involves communication and user experience. These studies deliver a message and consider the physical environment a non-verbal element (Tan 2011). These communications are non-direct, however, while it was direct communications that affected user perceptions in this research. Direct communication involves a clear message from the design to the user, much like an order or a direction. The effect of direct communication has not been addressed in research, but it plays a strong role in the perceptions of users. For example, participants who preferred calligraphy patterns referred to them as direct communications with clear messages, which they indicated was a direct factor enhancing their spirituality.

“When I read the written phrases, I feel that they are addressing me directly, especially those that have expressions containing orders or expressions that are patient or reassuring the soul like the verse:

وَاصْبِرْ لِحُكْمِ رَبِّكَ فَإِنَّكَ بِأَعْيُنِنَا— And be patient, [O Muhammad], for the decision of your Lord, for indeed, you are in Our eyes” (At Tur verse 48, Participant #11).

5.3.2 Emotional

The code “emotional” emerged after the data was analysed, since there were no questions directly about emotions. The participants mostly connect the reasons for their preferences to their emotions, which indicated that the emotion involved in this research was created via perceptions.

Bitner (1992) agreed that emotions are one of the internal responses while perceiving the physical environment that affects behaviour. In terms of emotional response to the environment, Bitner (1992) decided that emotional responses to servicescapes can be captured by two dimensions: pleasure and arousal. In this study, several emotional responses emerged from the data analysis under mood and feeling, such as quiescence, purity, delight, contentment, safety, belonging, and honour; this was all related to Islamic patterns in physical environments.

Some of the participants in this study rejected the use of calligraphy in floor designs because of their feeling of holiness associated with the content of the patterns, while the use of calligraphy on the walls led to feelings of honour and spirituality.

*“Of course, it is impossible for calligraphy patterns to be on the floor because they are sometimes expressions from hadiths or the Qur'an”
(Participant #9).*

Quiescence, purity, delight, contentment, safety, and belonging—were mostly feelings in answer to the last question in the interview: “What is the meaning of spirituality for you?” They express the precise feeling participants experienced when they feel spiritual. For example:

“Spirituality means calm and quiet, dim lights.”

“Pleasure, happiness and interior joy.”

“Tranquillity, calmness and comfort.”

Islamic decoration has any roles, which can be spiritual, educational, social and psychological. Patterns of ornamentation in interior design can be used for aesthetics. The interior of a mosque should portray the quality of something very sacred and serene. Such aesthetical quality gives a welcoming ambience that invites the believers of Islam into its space (Kinabalu 2014).

5.3.3 Physiological

The perceptions also affects users in purely physiological ways. Research shows that when people are physically uncomfortable due to the ambient temperature, their effective response is less positive (Bitner 1992). Bitner (1992) states that the perception of Islamic patterns is affected firstly by an individual's physiological state, and through a physiological response, however, in this research the physiological, the physiological response was not directly part of a question asked of the participants.

5.3.3.1 Vision

It means the ability and the health and wellness of the vision. Some participants attributed the reason they prefer large-scale patterns to their inability to see small-scale motifs.

The participants' perceptions were affected by clarity and simplicity in the patterns. For example, the participants linked the size of patterns to clarity, or the way some patterns affected their field of vision. It is also worth noting that the placement of patterns could also have had an effect on clarity. For instance, one of the participants decided to avoid a certain hotel due to its placement of patterns on the windows, which minimised visibility.

“For example, a hotel (...) in Medina, its location is excellent, but I started to avoid booking it because its widows have an Islamic pattern that blocks the view of the sanctuary. It also collects dust in the window and obscures the view” (Participant #12).

5.3.3.2 Tiredness

Tiredness is the opposite of being in a comfortable state, and the results show that a participant's bodily state affected their ability to notice the details of designs in their room. When asked "what is the most attractive thing when you enter the room," some participants answered that, when they are tired and coming from a long trip, they simply want to lie on the bed and cannot focus on any design details.

5.3.3.3 Comfort

Calmness and a sense of comfort are two physiological responses to interior design. Many participants in this study related their reasons for being calm and comfortable to the use of one kind of Islamic pattern, making it clear that the unity of patterns effects the sense of comfort. Others related comfort to the use of materials, such as the use of carpets, which make it comfortable to sit on the floor. Others connected their colour preferences to the sense of comfort, saying, for example, that the colour blue makes them feel comfortable. This is, in fact, supported by previous research:

"Blue is a holy colour and is sacred in the Islamic culture, because it is the colour of sky where God, pure souls, and angels reside. Due to the mental effects of that make us feel comfortable and relived, a constant with this colour" (Nejad et al. 2016, p.1083).

"The colours are all beige and brown, they make me comfortable, so the colours were not annoying to me, but the crowded patterns were annoying. I mean the floor: it's marble and it has an Islamic geometric pattern, and the reception desk is all decoration, and the vases on the corners have a geometric Islamic pattern on them. This does not give me a sense of spirituality, because it becomes annoying and uncomfortable to the eye, so I prefer the decoration to be a simple thing so that we can focus on it more, and not be distracted" (Participant # 7).

“I feel the blue colour is comfortable, it means the sky and water for me” (Participant #1).

5.3.3.4 Distraction

Another physiological condition that arose in this study was distraction. Some of the participants recommended a floor without patterns because of the distraction they may cause while praying. Kinabalu (2014) explained that the most ornate decoration in a mosque is generally found around the prayer niche, the direction Muslims should face during prayer. This area should be decorated appropriately lest it disturb people’s prayers. Even though distraction is subjective and each person feels different effects, an appropriate design can more or less help in creating a good feeling. As noted by Spahic (2009), there are some guidelines that regulate mosque decoration. One is that decoration must not interfere with people’s concentration in prayers and in other worship activities. Decoration must also not be extravagant so that it becomes wasteful, and so that the decoration will not surpass the primary functions of the mosques in importance.

Zainal Abidin (2004) noted that excessively strong colour in decorations within the main area for prayers could distract users whilst they perform their acts of worship. One of the study participants recommended excluding patterns on the ceiling because they were distracted by them when lying in bed.

“I never prefer having patterns on the floor because they distract me and don’t let me focus. I look at their sequence instead of focusing on prayer” (Participant # 9).

5.4 *Key Findings*

Research Question One: What are the preferences of pilgrims (hotel guests) for the interior design elements of Islamic patterns that enhance the spiritual aesthetic in hotel rooms?

This question was developed in order to address the interior design elements of Islamic patterns from a user's (pilgrim's) perspective, and how they enhance the spiritual aesthetic, with particular attention to user preferences regarding hotel rooms in the holy cities.

The participants in this research were able to make significant suggestions concerning hotel room design. They offered unique ideas which could be useful for hotel room interior designers who wish to enhance spiritual aesthetics in the future. It was easy to understand participants' views and ideas within the interviews, since they were able to see a three-dimensional image of the proposed hotel room features.

Key design elements were identified by participants, and they are the main findings of this research study: colour, lighting, style, and material. Secondary design elements were also important for satisfaction, according to the participants, such as pattern size, pattern form, pattern format and the multi-layering of patterns. Supplementary design elements are significant and will increase a user's satisfaction with their surroundings which includes room view, room layout and space and relationship with nature.

The findings of this study also reveal that satisfaction is linked to spirituality in the environment. Feeling comfortable and spiritual is a consequence of having the right colour, lighting, pattern size, pattern form and room view. Layering patterns can make a considerable difference: the findings suggest that using multiple layers of patterns can enhance the spiritual aesthetics in a room.

i. How is the Islamic pattern design element perceived by pilgrims (users) and how this reflect the spiritual aesthetic of the occupants?

The purpose of this question was to understand how users perceive Islamic patterns as an interior design element, how they are influenced by them, and what Islamic patterns mean to them. This understanding was based on servicescapes, Gashoot's framework and theoretical models from Gestalt psychology, which together explain the perception of Islamic patterns elements and the spiritual aesthetic meaning in hotel rooms (physical environments).

The findings revealed that pilgrims perceive Islamic patterns in hotel design holistically, and rely on its aesthetic appearance to form their overall perceptions. Personality judgments originate not from any single interior design element, but rather from the holistic prototypes of design rooted in higher-order generic design factors comprised of multiple elements. Bitner's framework, as well as Gestalt psychology, supports the holistic perspective, as the general idea of part-whole perceptual differences was one of the pioneering contributions of early Gestalt psychologists.

The findings of this research revealed that the participants perceived and responded to the environment in three dimensions. Their responses are divided into physiological, cognitive, and emotional responses, and this is what affects user behaviours. The participants revealed that their perceptions of interior design features could prompt emotional responses, beliefs, and physical responses; for example, looking at Islamic patterns makes them feel comfortable and leads to a positive frame of mind.

It became clear through the analysis that all previous beliefs, past experiences, and ethnicity—which refers to shared cultural characteristics such as language, practices, and beliefs—will all draw on the perceptual, and in turn, evoke an understanding of symbols, meanings, and categorisation. The data analysis identified beliefs, culture, language, symbols meanings, and categorisation as influencing cognitive responses to Islamic patterns: which are compatible with Bitner's framework.

In this study the respondent's cognitive association with either belief and understanding was dependent on the meaning of symbols. For instance, participants agreed that the perception of Islamic patterns led to the interpretation of multiple meanings rather than only to aesthetic and design-related meanings. The patterns are an indication of the originality and legacy of a place. It is also an indication of peace (Salam). Islamic patterns are symbols of Tawhid. In other words, having ornamentation in a room helps the occupant to feel the existence of Allah. Emotional responses are divided into two dimensions, pleasure and arousal. Pleasure can be achieved by aesthetically pleasing surroundings. Arousal can be created through complexity, such as an uncoordinated interior design.

The participants mostly connected their preferences to their emotions, which indicated that emotion are created via perception in this context. Several emotional responses emerged as moods and feelings, such as quiescence, purity, delight, contentment, safety, belonging, honour; all of which were related to Islamic patterns in physical environments. For instance, some of the participants rejected the use of calligraphy in floor designs because of their feeling of holiness associated with the content of the patterns, while the use of calligraphy on the walls led to feelings of honour and spirituality.

What is perceived also affects users in physiological ways, such as affecting their vision, tiredness, comfort and distraction. Research shows that when people are physically uncomfortable due to the ambient temperature, or colour or patterns size, their effective response is less positive. Some of the participants preferred a floor without patterns because of the distraction they cause while praying. Even though distraction is subjective and has different effects on each person, it can more or less help in creating a good feeling.

5.5 *Research Contributions*

The contribution of this research is divided into two categories: the academic contribution and design contribution. The academic contribution proposes the spiritual aesthetics within Islamic patterns framework (spiritualscape via Islamic patterns). The data has yielded several interesting and valuable elements that effect the perceptions of hotel guests and pilgrims in the interior design of hotel rooms. The design contribution lies in

proposing design guidelines to help designers in enhancing the spiritual aesthetics of a hotel room using Islamic patterns in interior design (Figure 5-14).

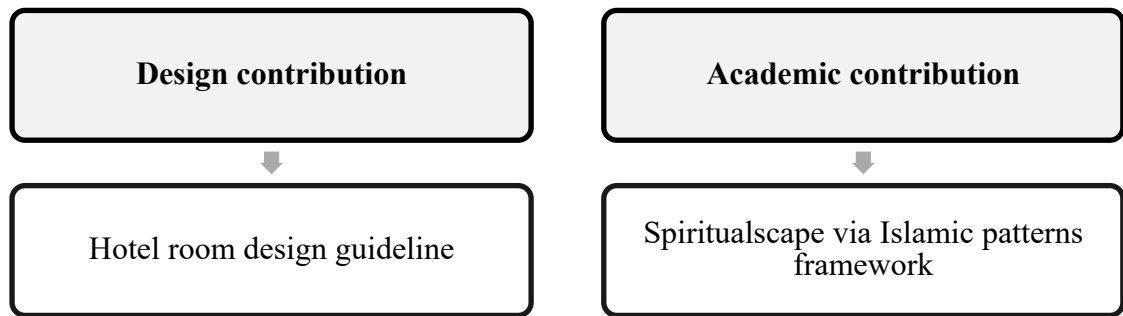


Figure 5-14 :Research Contribution

5.5.1 The Academic Contribution: Spiritualscape via Islamic patterns Framework

5.5.1.1 The Term “Spiritualscape via Islamic patterns”

The term “spiritualscape via Islamic patterns” is inspired by the terms “servicescape” (Bitner 1992), “dinescape” (Ryu and Jang 2008), “brandscape” (Thompson and Arsel 2004), and “healthscape” (Hutton and Richardson 1995).

The term “scapes” has discussed by Appadurai (1996) in reference to the flow of mutual connections in the world and its cultural global flow. He further identified five different dimensions of flows, which are ethnoscapescapes, technoscapescapes, ideoscapescapes, financescapescapes and mediascapescapes. He gave a full in-depth explanation and definition for each scape, in the context of people, their ideas and how they are disseminated from a global perspective. The way in which people’s notions and concepts cross cultures is considered a productive framework from Appadurai’s (1996) point of view. This framework is the answer to people’s urge to constantly modify their social landscapes, such as through migration, ranging from the reason behind migration, to the ease of settling into a new place, and the different challenges people are faced with during and after the end of their journey, and finally how much of an impact they are embedding in addition to the extent of their ideologies being influenced.

There are several aspects to consider when reflecting on these five scapes on the spiritualscapes. Ethnoscapes is a direct reference to people's movements and travel across borders and cultures. There are many types of travellers around the world and many reasons behind people's movements to other nations. According to Appadurai, the purpose of travelling varies. Some people travel simply for leisure, to visit families, and so on. Others travel out of necessity, such as for immigration and as refugees. Regardless of the reason behind people's movements, the effects are substantial as they progress to not only the share cultures and backgrounds, but also to share ideas and beliefs. People's movement across the globe introduces them to new cultures that are mostly different from that in which they were brought up. This in return affects their perception of physical environments. Another factor is the language that an individual speaks. According to the data analysis, both these aspects – culture and language – significantly affect how a person will perceive Islamic patterns when presented to them. Some will experience the spiritual effect intended by the designer, while they might have no effect on others. Several ideas are meant to be interpreted a certain way according to the design and whether it has an explicit or an implicit meaning. Islamic patterns thus serve as a symbol with which to deliver the idea of spirituality. Each pattern or piece of calligraphy is intended to deliver meaning to the observing party.

Technoscapes are considered within the flow of technology and how it is easing interactions and exchanges on a global scale. The internet, for example, has helped to connect people from different countries, different cultures, and different backgrounds. It is considered a very powerful tool in shaping a nation's communication. Mediascapes however, involve the flow of the media, disseminating and sharing information through different platforms. Financescapes refers to the fast-paced movement of money globally. Today, trading and commodities are easy, and goods are exchanged freely due to the evolution of the world's trade. People's daily lives are considerably affected, and finance will continue to have an effect on various aspects of life. the Human experiences change irreversibly with the introduction of technological innovations, whether in modern times or centuries ago.

These three scapes serve interrelated factors when reflected on each other. When it comes to marketing and using Islamic patterns as a method of commercialising and enriching a hotel's image, technology and media's flow have provided an enormous pool of advertising and means of distributing those commercials. Technology was mostly used to facilitate people's booking process, and obtain information about a hotel. Pictures of a hotel online showing an interior design related to the Islamic culture have an appeal, and more people are motivated to come to the hotel. A good interior design satisfies the needs of pilgrims which affects their experience and their decision to make reservations, thus increasing the hotel's profit. The process of reserving rooms is now easy due to the flow of money across borders using different technologies and media. Nonetheless, it is important to highlight that technology has no effect in enhancing an individual's spirituality and serves only as a means of expediting the course of booking and transferring payment.

Appadurai's five dimensions are clearly constantly shifting in form and structure. As noted, all these scapes are subject to change and to evolve, from the facilitation of travel, to the simple notion of sharing an idea via smartphones. It is important to emphasise that improvements and changes occur based on the function of the scape itself. Featuring the different types of them such as brandscape, dinescape, healthscape and many more.

5.5.1.2 The Contribution of the "Spiritualscape" Framework

The "spiritualscape via Islamic patterns" framework is the first to focus theory on spirituality from a user's point of view, and the first to identify the signature design elements of Islamic patterns as well as the critical role that design plays in spiritual aesthetics. It is also the first framework to combine the servicescape model and Gestalt psychology to produce a comprehensive understanding of the spiritual aesthetics of Islamic patterns in interior design. The framework contributes insights into the relationship between the design elements of hotel interiors and a customer's spirituality, while explaining how this spirituality can eventually benefit a user's emotions and cognition. This can, moreover, be generalised to environments other than hotels.

The proposed model (Figure 5-15) explains the relationship between Islamic patterns in the interior design of hotel rooms and spirituality, by identifying the most significant elements of Islamic patterns in interior design and clarifying their effects through the lens of the servicescapes model by Bitner, the framework developed by Gashoot, and Gestalt psychology.

First, “spiritualscape via Islamic patterns” explains how consumers perceive Islamic patterns in hotel interior design in order to enhance the spiritual aesthetic. Their perception is formed by the characteristics of aesthetic design. With time and according to their cognitive beliefs and psychological status, pilgrims will notice the aesthetic details of the elements that created their first overall perception. The elements found to be the most significant and influential fell into three categories: key elements (colour, lighting, style, and material), secondary elements (pattern size, pattern form, pattern format and multi-layer of pattern), and supplementary design elements (room view, room layout and space and relationship with nature). This classification was a combination of the Bitner and Gashoot frameworks, as shown in the proposed frameworks, however, this research also contributed elements such as pattern size, pattern form, pattern format and the multi-layering of patterns; this is supported by Gestalt psychology.

Spiritual aesthetics is created through a combination of cognitive and emotional responses. The cognitive response helps categorisation and creates symbolic meaning and direct communication via Islamic patterns. Spiritual meaning is created by triggering positive emotions (honour, belonging, and satisfaction) that will, in turn, influence behaviours (time spent, mouth of word recommendations).

Islamic patterns in hotel interior design symbolise different meanings for different customers. This suggests that a spiritualscape is a symbolic servicescape. It sends meanings that customers interpret in judging the spiritual aesthetics in a hotel room via Islamic patterns as symbols. This, in turn, communicates to users that they can rely on the design cues as a designer, and hoteliers can employ these elements to distinguish their identity. Eventually, all these factors will affect the emotions and behaviours of customers.

Several theories were used to propose the model. Bitner (1992) assumed three factors as dimensions of servicescapes: ambient conditions, space/function, and signs/symbols/artefacts. This was useful guidance when starting to search for the dimensions of spirituelscape. Gashoot's (2012) framework includes different elements also related to this research, and which are useful in determining the physical dimensions. This study redistributed the elements from the servicescape model according to the effectiveness of their impact on Islamic patterns, and removed some elements unrelated to Islamic patterns. This study assumed three factors as spirituelscape dimensions: key elements, secondary elements, and supplementary elements.

Gestalt principles played an important role in the secondary elements, in finding the elements that influence perception and are not covered in the servicescapes model but which emerged during the data analysis, such as pattern size, pattern form, pattern format and multi-layers of patterns (which means the effect of pattern formulae on the perception of Islamic patterns). Gestalt principles regulate our perceptions; these principles have worked together to ratify the field of vision and other areas related to perception (Mather 2016).

The objective factors by themselves are insufficient, as perception is equal for all. Perception relies not only on objective factors, people's emotions and cognitive and psychological responses or states also affect perception, according to the theory of mind, the empirical theory of perception, and phenomenology, as discussed in Chapter 2 (theoretical framework). These factors support the findings of this study, which is that emotions (feelings, moods), cognitive (beliefs: culture, language, religion), categorisation and symbolic meaning, and psychological factors (comfort and tiredness, the ability to see) have strong effects on perception.

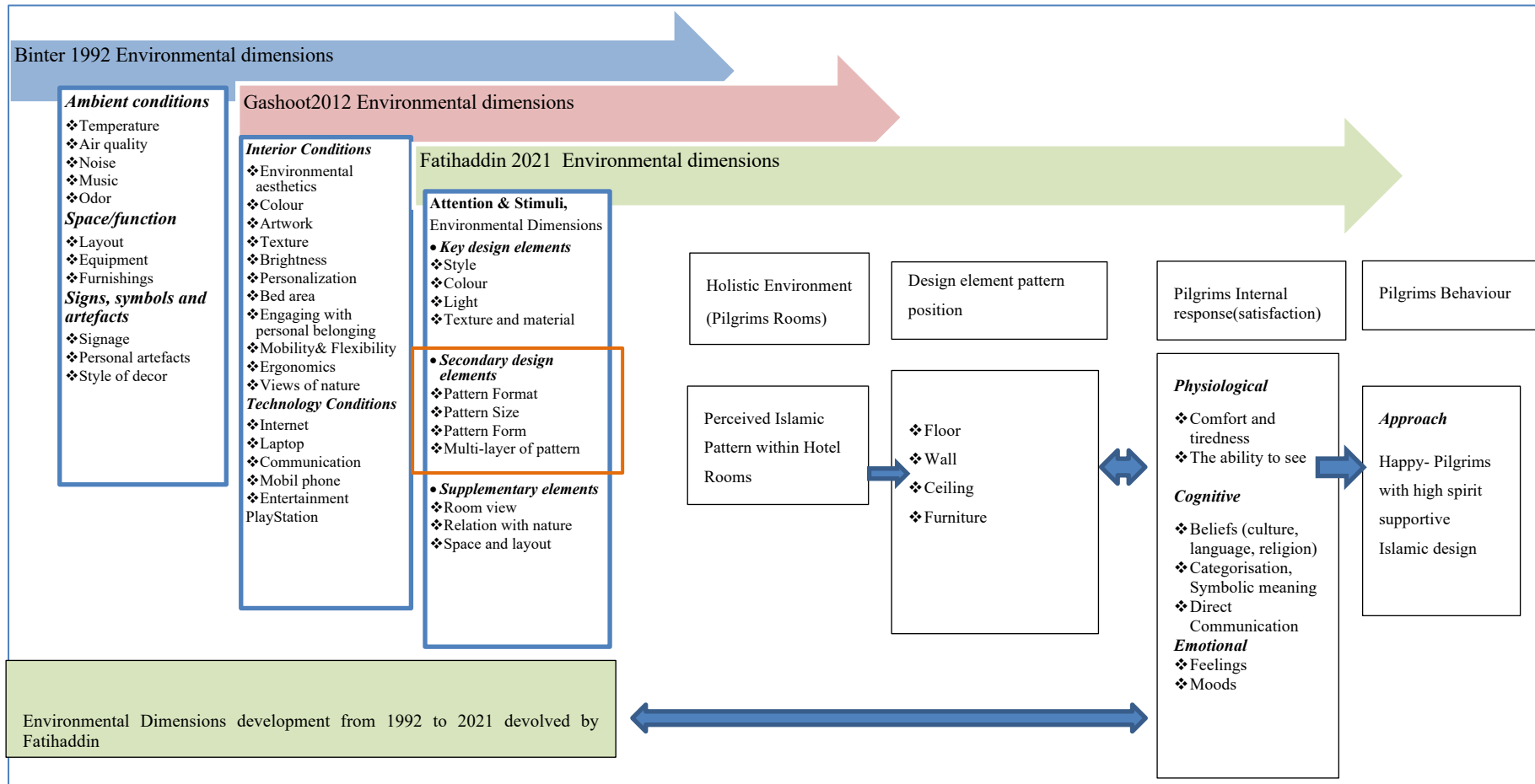


Figure 5-15: Proposed Model “Spiritualscape” (Researcher)

5.5.2 The Design Contributions: The Spiritual Design Guideline

An examination of participant preferences, analysing participant perceptions, and reviewing the recommendations of the Tourism Ministry to study the basic requirements for hotel rooms in the Kingdom of Saudi Arabia, enabled recommendations that can guide designers to design hotel rooms in a way that takes into account the spiritual aesthetic meaning via Islamic patterns. It was initially expected that the design guidelines would be classified into three main sections that follow the proposed classified of spirituelscape framework: key elements (style, colour, material and lighting), secondary elements (pattern size, pattern form, pattern format and multi-layer of pattern), and supplementary design elements (room view, room layout and space and relation with nature), however, it became clear when describing the main elements such as floors, ceilings and walls, that it would be easier and more clear to list preferences for the elements in sequential order instead of separating them.

5.5.3 Style

- The preferred style of Islamic pattern for enhancing the spirituality in a hotel room is the modern style. Modern design employs a sense of simplicity in the element.

5.5.3.1 Colour scheme

- The hotel room colour and Islamic pattern schemes are based on a deep understanding of the purpose of uplifting spiritual aesthetics, and a spectrum from brown to beige and white was preferred as a basic colour.
- Cool colours, such as light blue and green, which relate to nature, were preferred in various shades or combinations. Warm colours should be avoided.

5.5.3.2 Material

Natural materials are preferred in all elements of a room in a way that connects the occupants to spirituality.

Floors

- The preferred materials for enhancing spiritual aesthetics are carpets and marble. If the floor material is marble, it is recommended to cover the area beside the bed with carpets.
- Islamic pattern form: a geometric pattern is recommended for use on the floor.
- Islamic pattern size: medium-sized patterns are preferred, and small-scale patterns should be avoided as they cause distractions. One pattern unit can be used on a large scale if the room is wide and the space not covered by furniture.

Ceilings

- A plain white ceiling is preferred, portraying a simple design.
- Islamic pattern form: plain ceilings are preferred, without patterns, or, if patterns are used, they should be geometric, white or a light colour, and simple, in a colour very close to the colour of the ceiling.
- Islamic pattern size: medium to small.
- If the ceiling has patterns, it is preferable to have it mirror the floor patterns. The ceiling is considered the least interesting place for patterns that effect the spirituality of the room.

Walls

- The preferred materials that enhance spiritual aesthetics are wallpaper or paint.

- Islamic pattern form: a geometric pattern is preferred on the walls and as background for the bed. When providing aesthetic paintings for the walls, calligraphic patterns are preferred. It is also preferable to merge the calligraphy and geometric pattern in the paintings, giving a sense of multi-dimensionality.
- Islamic pattern size: geometric patterns in medium to large sizes are recommended for the wall or headboard. Calligraphic patterns on paintings should be on a large enough scale to be legible from a distance and should have clear lines.

Furniture

- Layout: it is preferable that the furniture is flexible and moveable, so that more space can be added to a room in case the number of beds needs to increase during the Hajj season.
- Furniture material to enhance spiritual aesthetics: preferably velvet (velour) or cotton fabric.
- Islamic pattern form for furniture: it is not preferable to have patterns on the furniture units, but some geometric patterns can be placed on simple accessories for the furniture, of a size consistent with the piece of furniture (for example, the sofa cushions, or bed accessories such as a runner).

5.5.3.3 Lighting

- A significant amount of natural daylight should be provided.
- Islamic pattern form in lighting units: if the room does not have a pattern on the wall, ceiling, or floor, it is preferable to have a geometric pattern on the light unit to create a reflection of the patterns on the wall and floor on a small scale.
- Windows are a fundamental element in providing natural light and for a view from the room.

- Islamic pattern form in windows: it is not preferable to have a pattern on a glass window because it would hide the view, unless there is no view from the room.
- A curtain is preferred to obscure external light with high-quality fabric, preferably a thick cloth that blocks the light, to enhance the spirituality in the room.
- Islamic pattern form and size in curtains: a few geometric patterns can be added to the edges of the curtain fabric or in a simple way, on a medium to small scale.

5.5.4 Evaluating the Spiritual Aesthetic Design Guideline from Interior designers

In order to validate the practicality and efficacy of the guidelines, they were sent to four interior designers who volunteered to design a hotel room with a minimum total area of 24 square metres, including a bathroom with a minimum area of 5 square metres, according to Tourism Ministry regulations. The volunteer designers agreed to follow the draft design guidelines to enhance the spiritual aesthetics for the hotel room by using Islamic patterns without receiving any explanation of the guidelines.

The evaluation of the guidelines involved two stages. The first stage was applying the design guidelines to hotel rooms designed in 3D by volunteer designers, then interviewing the designers to evaluate the guidelines. The second stage was presenting the 3D designs to pilgrims and interviewing them to evaluate whether the room designs included spiritual aesthetics.

First the volunteer designers applied the design guidelines to 3D hotel room design. The proposed 3D designs by the volunteer designers are shown in Appendix L.

The designers who volunteered to design hotel rooms using the Islamic pattern guidelines were then interviewed. The purpose of the interviews was to assess the clarity and usefulness of the guidelines. The interviews were conducted via phone

calls, which each took from 10 to 15 minutes. The time for the interview was arranged with each designer after they submitted their 3D perspective design for the hotel room according to the design guidelines.

The designers agreed that the strategy was clear, and easy to understand and implement. They also agreed that they benefitted from the strategy because it guided them and increased their skills in enhancing spirituality in design.

The researcher was apprehensive that the guidelines might limit the creativity of designers in the process of designing hotel rooms, but fortunately there was a consensus that it did not limit their creativity, but directed them and facilitated the design process. The various design outcomes support this, all of which involve spirituality.

*“No, it never set my creativity; on the contrary, I thought that it directed me to a certain area, and I was creative in it”
(Designer#2).*

Two of the participants described their use of some pictures as references. One of the designers used pictures for spaces that used Islamic patterns, and another used some pictures of hotels in general. The other designed without the help of any pictures.

5.5.5 Evaluate the Spiritual Aesthetics in 3D Proposed Design from Pilgrims

The 3D perspectives of hotel room designs were presented to pilgrims to ensure that the spiritual aesthetics were discernible in the hotel rooms. The interviews were conducted face to face, taking around 7 to 10 minutes each. The four designs were presented to seven participants, who were asked if they would like to stay in each of the rooms, which design elements most attracted their attention in the rooms, and if they had any negative comments on the design.

The interview outcomes are summarised in Table 10. The seven participants were not asked to choose the best room but were asked, rather, about their opinion about staying in each room if it was in a hotel in Makkah. Each design was presented individually, and questions were asked about it separately. All but two participants said they would prefer to stay in one of the proposed rooms. One rejected the first design due to its low lighting and the number of wall accessories; the other rejected the third design due to its colours, which were quite dark.

The first design was preferred by all participants except one due to the low lighting and the large number of wall accessories, however, most liked the design and agreed that this room enhanced spirituality due to the marble in the floor, the feeling of luxury, the customised patterned rug, the headboard patterns, the gold patterned partition, the big sitting area, and the patterned tea table. At the same time, some noted that the chair with the table and mirror was not useful, that the wall clock was big, that the gold stones on the walls were crowded, that the chandelier was low and the room needed more light.

The second design was preferred by all participants, who agreed that this room enhanced spirituality due to its light colour, the patterns on the carpet, the artwork, natural daylight, and the design unity and symmetry behind the bed. The negative comments said that the accessories looked unsafe, and that the AC unit distorted the design.

The third design was preferred by all participants except one, who found the colour quite dark. Most agreed that this room enhanced spirituality due to the headboard with patterns, the simplicity of design, the overall appearance giving the impression of cleanliness, the ceiling design, and the suitable floor colour and material. One participant said they would not stay in the room because the colours were dark. There was criticism that the shelves take up space, and a desk may be needed instead.

The last design was preferred by all participants, who agreed that this room enhanced spirituality due to the combination of patterns and light on the wall, the shapely

headboard design, the harmonious floor patterns and colour, the beautiful floor lighting unit with patterns, the majestic arch on the wall with the hidden light, and the reflection of the patterns on the mirror. The criticisms, on the other hand, were that the bedside table did not suit the hotel room, the chairs were not comfortable, mixing materials on the floor is unnecessary (such as the carpet around the bed), and the mirror was high relative to the chair (when sitting).

To conclude, it was evident from the interviews that the pilgrims would choose to stay in the proposed design hotel rooms, which in turn influences the spiritual aesthetics. The results of the interviews were then taken into consideration as regards recommendations and amendments to the proposed guidelines.

5.6 *Summary*

This chapter presented the findings and discussion section of this study. These key findings answered the research questions and formed the foundation for building the “Spiritualscape via Islamic patterns” framework. The data has revealed several interesting and valuable elements that affect the perceptions of hotel guests and pilgrims in the interior design of hotel rooms. It also proposes design guidelines to help designers to enhance the spiritual aesthetics in a hotel room using Islamic patterns.



The findings revealed that pilgrims perceive Islamic patterns in hotel design holistically, while relying on its aesthetic appearance to form their overall perceptions. Personal judgements do not originate from any single interior design element, but rather from the holistic prototypes of design rooted in higher-order generic design factors comprised of multiple elements.

The guidelines were sent to interior designers who volunteered to design a hotel room in order to validate their practicality and efficacy. The 3D perspectives of hotel room

designs were presented to pilgrims to ensure the spiritual aesthetics were discernible in the hotel room (Table 5-4). It was evident from the interviews that the pilgrims would choose to stay in the newly proposed hotel rooms, showing how design affects the meaning of spiritual aesthetics. The results of the interviews have been taken into consideration and will serve as recommendations and amendments to the proposed guidelines.

	Proposed Design	Preference to Stay	Design Features	Design Flaws
Design 1		<p>Yes Only one No</p>	<ul style="list-style-type: none"> • The marble floors • Luxury • The customised rug • The headboard patterns • The gold patterned partition 	<ul style="list-style-type: none"> • The chair with the table and mirror is not useful
Design 1			<ul style="list-style-type: none"> • Big sitting area • The patterned tea table 	<ul style="list-style-type: none"> • The wall clocks • The gold stones on the walls • The lighting in the ceiling • Need more light

	Proposed Design	Preference to Stay	Design Features	Design Flaws
Design 2		Yes	<ul style="list-style-type: none"> • The light colour • Patterns on the carpet • The artwork • Natural light • The design unity and symmetry behind the bed. 	<ul style="list-style-type: none"> • The accessories seem quite dangerous • The AC unit
Design 3		Yes Only one No	<ul style="list-style-type: none"> • The headboard with patterns. • The simplicity in design • The overall appearance gives the impression of cleanliness 	<ul style="list-style-type: none"> • The colour is quite dark

	Proposed Design	Preference to Stay	Design Features	Design Flaws
Design 3			<ul style="list-style-type: none"> • Ceiling design is nice • The floor colour and material are suitable 	<ul style="list-style-type: none"> • Shelves take up space • Needs a desk
Design 4		Yes	<ul style="list-style-type: none"> • The combination of patterns and light • The headboard design 	<ul style="list-style-type: none"> • The bedside table does not suit the hotel room



	Proposed Design	Preference to Stay	Design Features	Design Flaws
Design 4			<ul style="list-style-type: none"> • The floor patterns and colour • Floor lighting unit 	<ul style="list-style-type: none"> • The chairs are not comfortable • Mixing wo materials on the floor • Carpet around the bed is necessary
Design 4			<ul style="list-style-type: none"> • The arch on wall with the hidden light • The reflection of the patterns on the mirror 	The mirror is high while sitting on the chair.

Table 5-4: Evaluation of Proposed Designs (Researcher)

Chapter 6 **Conclusion and Recommendations**

6.1 *Introduction*

This chapter concludes the current research by highlighting its contributions and its relationship to the research aim and questions. It also outlines the research limitations, and makes recommendations for future research.

6.2 *Research Conclusions*

Islamic patterns are a symbol in interior design that cannot be separated from worship and spiritual spaces, since they share the history of Islamic architecture. Islamic patterns in interior spaces have both negative and positive effects. Decoration and patterns are not prohibited in Islam; however, they should be properly designed to avoid having a negative effect such as that of wastefulness, arrogance, and so on. There should be a guide to decoration via Islamic patterns in interior design to help designers create a positive impact, and aesthetics of spirituality.

Although the importance of interior design in hotel rooms is intuitively recognised, there is a lack of broader and more thorough research providing guidelines to improve hotel guest perceptions of spiritual aesthetics, which has a profound influence on guest satisfaction.

This research aims to identify the preferences of pilgrims for Islamic patterns applied to hotel rooms, and to understand their perceptions by proposing design guidelines and visual perspectives that will assist designers in enhancing the spiritual aesthetics of hotel rooms. This was accomplished by answering two main questions:

- 1: What are the preferences of pilgrims (hotel guests) regarding interior design elements with Islamic patterns that enhance the spiritual aesthetic in hotel rooms?
- 2: How do pilgrims (hotel guests) perceive the Islamic patterns as design elements that enhance the spiritual aesthetic in hotel rooms?

The first question was developed in order to address Islamic patterns as interior design elements, such as colour, material, and so on, from a user's (pilgrim's) perspective as regards enhancing the spiritual aesthetic, with particular attention paid to the preferences of users for hotel rooms in the holy cities. This was achieved via semi-structured interviews, and the question was answered by finding the most significant and influential elements, and using analysis to categorise them into three design elements: key design elements (colour, lighting, style, and material), secondary design elements (scale and form), and supplementary design elements (view, technology, multi-layered design, and natural).

The purpose of the second question was to understand how users perceive Islamic patterns as an interior design element, how they are influenced by them, and what Islamic patterns mean to them. This understanding was based on several theories and models: servicescapes, Gashoot's framework and Gestalt psychology, which help to understand the perception of elements of Islamic patterns and their spiritual aesthetic meaning in hotel rooms (physical environments).

The findings of this research reveal that the participants perceived and responded to the environment in three dimensions. Their responses were divided into physiological, cognitive, and emotional responses and this is what influences user behaviours. The participants revealed that their perceptions of interior design features could result in emotional responses, beliefs, and physical responses; for example, looking at Islamic patterns will make them feel comfortable and lead to a positive frame of mind.

The findings revealed that pilgrims perceive Islamic patterns in hotel design holistically, but rely on aesthetic appearance to form their overall perceptions. Personal judgments originate not from any single interior design element, but rather from the holistic prototypes of design rooted in higher-order generic design factors comprised of multiple elements. Gestalt psychology supports this holistic perspective, as the general idea of part-whole perceptual differences was one of the pioneering contributions of early Gestalt psychologists. The findings clarified the different roles of Islamic patterns in hotel room design and their effect on spirituality. The research

was also undertaken through the lenses of the servicescapes model and Gashoot framework, which were all incorporated into one proposed framework, the “spiritualscape via Islamic patterns”. The “spiritualscape via Islamic patterns” framework is the first to focus on spirituality from a user’s point of view, and the first to identify the signature design elements of Islamic patterns as well as the critical role of design in spiritual aesthetics.

Ultimately, the aim of this research has been achieved by proposing design guidelines and visual perspectives that will assist designers to enhance spiritual aesthetics. All of the outcomes will benefit designers in general and hoteliers, since using Islamic patterns in design can enhance the spiritual aesthetics of the environment. Influencing customers positively and satisfying them will also lead to positive emotions and behaviours that will benefit the hotel in other ways as well (economically, for example).

6.3 *Research Recommendations*

6.3.1 Designers

- The Interior design of hotel rooms should reflect and connect values and meanings related to customs, social values, culture and Islamic civilisation.
- National interior designers should assume responsibility for designing local tourist facilities since they understand the community and local culture.
- Local design offices should work with international offices specialising in hotel design so that hotels benefit from local and international expertise, and to encourage the dissemination of the local design culture abroad.

6.3.2 Administrators

- Studies and research specialising in the field of culture design and Islamic identity should be supported.

- The relevant authorities should stipulate the application of designs that reflect Islamic culture and national identity in the hotels around Al-Haram in Makkah and Madinah.

6.4 *Limitations*

No matter how aspects of research are addressed, there are still limitations. They may be due the research methodology, time allowances, or geographical boundaries. In this research, a qualitative methodology was used that relied on interviews to collect data. There was an attempt to avoid the negative aspects of this methodology, such as potential bias, as much as possible, and thus the interviews were conducted in several stages and several categories, however, using a quantitative methodology would not have addressed all aspects of the research. The first research question was about preferences that could have been answered by questionnaire, but the second research question about user perceptions of design elements needed in-depth interviews and couldn't be answered using any quantitative method. A combination of qualitative and quantitative methods is one of the offered options, however.

It became clear through the research that there are interior design elements that can affect aesthetic spirituality, and this is not limited to elements of Islamic patterns, but includes ambient conditions such as temperature, sound, and smell. The focus of this research was on the elements that can be combined with the application of Islamic patterns, however, such as colour and materials, and so elements unrelated to Islamic patterns were omitted.

Another limitation was the application of 3D design. The researcher's original idea was to present the models via virtual reality technology, but a lack of time meant that a 3D design using 3D Max software was used instead.

An additional limitation is that this research focused on only one space in the hotel, the guest room, and the reception area, restaurants, and other facilities were not studied.

6.5 *Transferability of Research Findings to Other Cultures*

This study is considered the first of its kind in the field of hotels. One of the strengths of the study is that the data was collected through interviews with pilgrims from different nationalities who speak Arabic, although we did not address foreign nationalities who speak another language. While the results address pilgrims of different nationalities in hotels around Al-Haram to enhance spiritual meaning, this does not mean that the results can be applied automatically to international hotels without any modifications commensurate with an external environment other than the Kingdom of Saudi Arabia. It is recommended that international designers take the results and the proposed model into consideration, and rearrange them based on the environment in which they are to be applied, in order to enhance the spiritual meaning in hotels using the symbols of that culture and environment.

6.6 *Future research*

The findings in relation to spirituality in hotel room spaces will encourage further research exploring other hotel facilities, which may enhance user satisfaction in the hotel environment. Studying hotel facilities could provide interior designers with more insightful recommendations and design guidelines for future design based on client needs.

Since this research study is the first ever conducted on preferred interior design and features of Islamic patterns in hotel rooms, there is significant need for the study to be repeated on a bigger scale, and for other functional spaces, for instance, the hotel lobby.

This study could be expanded from a single, localised research study into a global study. A global study would benefit hotel customers. Conducting research in several countries would require interior designers who are capable of designing environments. This will in fact be valuable for customers and may bring success to the tourism environment, as spirituality becomes a focal point for daily life.

Some issues emerged in the interviews from the suggestions of pilgrims, leading to the recommendation to focus on studying the effects of interior design on crowding in hotels in the holy cities.

The strength of the influence of ambient conditions on spirituality was revealed to be an element of design, in addition to Islamic patterns. This could lead to studying the effect of sound, temperature, and smell on spirituality in hotel rooms.

A final recommendation is the introduction of an advanced methodology in research studies, including the use of virtual reality to produce more realistic models.

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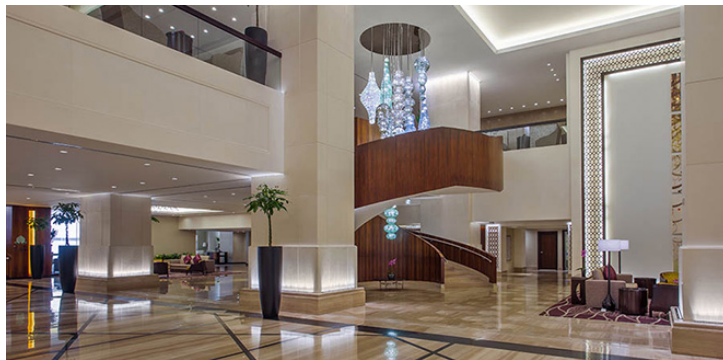
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Appendices

Appendix A: Jabal Omar projects



Jabal Omar projects



Jabal Omar Hyatt Regency



Jabal Omar Conrad



Jabal Omar Marriott



Jabal Omar Hilton Suites



Jabal Omar Hilton

Appendix B: Ethics Approval

About Your Checklist	
Reference Id	13015
Status	Approved
Date Approved	12/10/2017 17:44:53
Date Submitted	11/07/2017 14:20:21

Researcher Details	
Name	Doaa Fatihaddin
Faculty	Faculty of Science & Technology
Status	Postgraduate Research (MRes, MPhil, PhD, DProf, EngD, EdD)
Course	Postgraduate Research - FST
Is This External Funding?	No

Project Details	
Title	A Spiritual Aesthetic within Islamic Patterns in the Interior Design of Hotel Rooms
End Date of Project	19/09/2019
Proposed Start Date of Data Collection	01/09/2017
Original Supervisor	Bob Eves
Approver	Research Ethics Panel
Summary - no more than 500 words (including detail on background methodology, sample, outcomes, etc.)	
<p>Background: Numerous modern hotels have been built in the holy cities of Saudi Arabia to accommodate the large number of Pilgrims who come to connect with their spirituality and to worship while staying near the Grand Mosque in Mecca and the Prophet's Mosque in Medina. Typically, designers plan hotel chains based on a predetermined design that lacks an awareness of the traditional designs of a local area and does not express the Islamic identity in Islamic patterns. They also ignore the preferences of the Pilgrims who seek a spiritual atmosphere because there is a lack of communication or the time is too short to conduct the design process. Outcome: Consequently, this research aims to embody the Designer and Pilgrims' needs by proposing a design strategy and visual perspectives that will help the designers enhance the spiritual aesthetic with Islamic patterns in hotel rooms. Analysing the shape grammar of Islamic patterns to identify their effect will aid in selecting the most appropriate pattern to use in design; and will contextualise the spiritual aesthetic from the Pilgrims' perspective, thus determining the standard criteria necessary to evaluate the Islamic pattern design. It will also demonstrate the theoretical framework that explains the perception of meaning (the spiritual aesthetic) in terms of semiotic and symbolic interaction theories. Finally, developing a design strategy that enhances the spiritual aesthetic within Islamic patterns. The results of this research will contribute to a new knowledge which will make a difference in terms of enhancing designer skills that will lead to pilgrims' satisfaction within the environment (Hotel Room). Methodology and sample: The methodology will be a qualitative philosophy and ethnographic strategy to collect data through semi-structured interviews. The interview will be in Hilton suits Makkah and Bournemouth University after the gatekeeper confirmation. The participants will be invited by an invitation. The participant those wishing to participate will contact the researcher through the email in the invitation to set the time for the interview. The interview will be voice recorded, transcribed and it will be deleted after completion of the study. The interview has certain questions to contextualise the spiritual aesthetic and the Islamic patterns from participants' perspectives it will not be any sensitive or private questions, nothing from participants' past experiences as it is all about their opinion of interior design element; and, there is not any right or wrong answer. In some questions the researcher will present some pictures for Islamic pattern to clarify the meaning of the question. After the interviews the researcher will analyse the data to apply the result in a 3D design for around 20 minutes. Then, present a 3D picture to validate the</p>	

Appendix C: Participant Information Sheet

The title of the research project

A Spiritual Aesthetic within Islamic Patterns in the Interior Design of Hotel Rooms

Invitation

You are being invited to take part in a research project conducted by Doaa Fatihaddin, a postgraduate researcher in Interior Design, Faculty of Science & Technology, Bournemouth University, UK. This study is part of a PhD thesis. Before you participate it is important for you to understand why the research is being done and what it will involve. Please take the time to read the following information carefully and discuss it with others if you wish. Ask me if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

The purpose of the project

This research aims to find out the needs of pilgrims regarding interior design, so as to propose a design strategy for designers. The purpose of this study is to assist the designers in enhancing the spiritual atmosphere of rooms through the interior design style by using Islamic patterns in the interior design.

The reason you have been chosen

You have been chosen because your opinion is greatly appreciated and it is important to conduct the study to provide a better view of the needs of pilgrims and experiences in hotel rooms in Makkah. You meet the inclusion criteria for participants, which are that they have stayed in a hotel for more than three nights and are over 18 years old.

Do I have to take part?

It is not compulsory to participate in this interview, and you can decide whether or not to take part. If you do decide to take part, you will be given this information sheet and will be asked to sign a consent form. You can withdraw at any time, up to the point where the data is processed and becomes anonymous, when your identity cannot be determined. You do not have to give a reason for taking part or not, and can withdraw at any time.

What would taking part involve?

You will be involved in semi-structured interviews for the data collection, which will be held now, between you and the researcher, and last an hour. In this interview I will ask certain questions to contextualise the spiritual aesthetic and the Islamic patterns from your perspective. There will not be any sensitive or private questions, and nothing about your past experiences; it is about your opinion of interior design elements, and there is no right or wrong answer. In some questions the researcher will present some pictures of Islamic patterns to clarify the meaning of the question. After the interviews the researcher will analyse the data to apply the results to a 3D design. They will then present a 3D picture for you to validate the result using a virtual reality camera. You can ask me to explain things at any time, and you can add any additional information that is useful for the study from your point of view. You will not be identified, as all data will be anonymised.

What are the advantages and possible disadvantages or risks of taking part?

Whilst there are no immediate benefits for those people participating in the project the results will help to conduct a study that will identify the needs of both designers and pilgrims. There is no risk in taking part in this study.

How will my information be kept?

All the information we collect about you during the course of the research will be kept strictly in accordance with the Data Protection Act 1998. It will not be possible to identify you in any reports or publications without your specific consent. Any personal data relating to this study will be held for five years from the date of publication of the research or presentation of the results. The information collected from you may be used in an anonymous form to support other research projects in the future, and access to it in this form will not be restricted. It will not be possible for you to be identified from this data.

What type of information will be sought from me and why is the collection of this information relevant for achieving the research project's objectives?

You will be involved in semi-structured interviews for the data collection, and the interview will be held now for an hour between you and the researcher, either in a meeting room in Hilton Suits Makkah or at Bournemouth University. After the interviews the researcher will analyse the data to apply the results in a 3D design for around 20 minutes. They will then present a 3D picture to validate the results by using a virtual reality camera. This will not take more than ten minutes, as noted

above, and the interview itself will take around an hour. This interview will be voice recorded and it will be deleted after completion of the study. In this interview I will ask certain questions to contextualise the spiritual aesthetic and the Islamic patterns from your perspective. There will not be any sensitive or private questions, and no questions about your past experience, it is about your opinion of elements of interior design and there are no right or wrong answers. In some questions the researcher will present pictures of Islamic patterns to clarify the meaning of the question. You can ask me to explain things at any time and you can add any additional information that is useful for the study from your point of view.

Will I be recorded, and how will the recorded media be used?

The audio recordings of your interviews for this research will be used only for analysis, and the recording(s) will be transcribed for illustration in conference presentations and lectures. No other use will be made of them without your written permission, and no one outside the project will be allowed access to the original recordings. You will not be identified, as all data will be anonymised.

Contact for further information

If you have any questions or require more information about this study, please contact me using the following contact details:

Doaa Fatihaddin – PhD researcher
Product Design

Faculty of Science and Technology

Bournemouth University

Tel: 01202 968140

dfathaddin@bournemouth.ac.uk

Dr Bob Eves, Senior Lecturer in

Faculty of Science & Technology

Bournemouth University

Tel: 01202 968140

beves@bournemouth.ac.uk

If you have any concerns regarding this study, please contact Professor Tiantian Zhang, Deputy Dean for Research & Professional Practice, and Faculty of Science & Technology, by email researchgovernance@bournemouth.ac.uk.

Thank you for reading this information sheet and for considering taking part in this research.

Appendix D: Participant Agreement Form

Full title of project:

A Spiritual Aesthetic within Islamic Patterns in the Interior Design of Hotel Rooms

Name, position and contact details of researcher:

Doaa Fatihaddin, PhD researcher, Faculty of Science & Technology, Bournemouth University, UK

Poole House P519, Talbot Campus, Fern Barrow, Poole, BH12 5BB.

dfathaddin@bournemouth.ac.uk

Name, position and contact details of supervisor:

Dr Bob Eves, Senior Lecturer in Product Design, Faculty of Science & Technology, Bournemouth University, UK

Poole House P125, Talbot Campus, Fern Barrow, Poole, BH12 5BB.

beves@bournemouth.ac.uk

Here

I have read and understood the participant information sheet for the above research project.	
I confirm that I have had the opportunity to ask questions.	
I understand that my participation is voluntary.	
I understand that I am free to withdraw up to the point where the data is processed and becomes anonymous, so my identity cannot be determined.	
During the interview, I am free to withdraw without giving reason and without there being any negative consequences.	
Should I not wish to answer any particular question(s), I am free to decline.	
I give permission for members of the research team to have access to my anonymised responses. I understand that my name will not be linked with the research materials, and I will not be identified or identifiable in the outputs that result from the research.	
I understand taking part in the research will include being recorded (audio) but that these recordings will be deleted once transcribed.	
I agree to take part in the above research project.	

Name of Participant

Date

Signature

Name of Researcher

Date

Signature

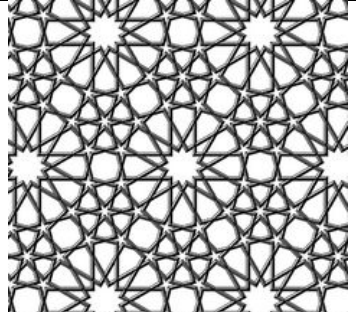

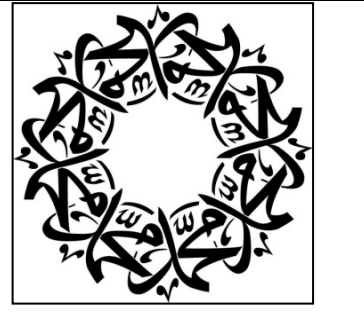
This form should be signed and dated by all parties after the participant receives a copy of the participant information sheet and any other written information provided to the participants. A copy of the signed and dated participant agreement form should be kept with the project's main documents which must be kept in a secure location.

Appendix E: Interview Form

Interview Form

This part will discuss pattern style

- 1- There are three kinds of Islamic pattern, can you explain how each kind is related to spiritual aesthetics?

Geometric Pattern	Floral Pattern	Calligraphy Pattern
		

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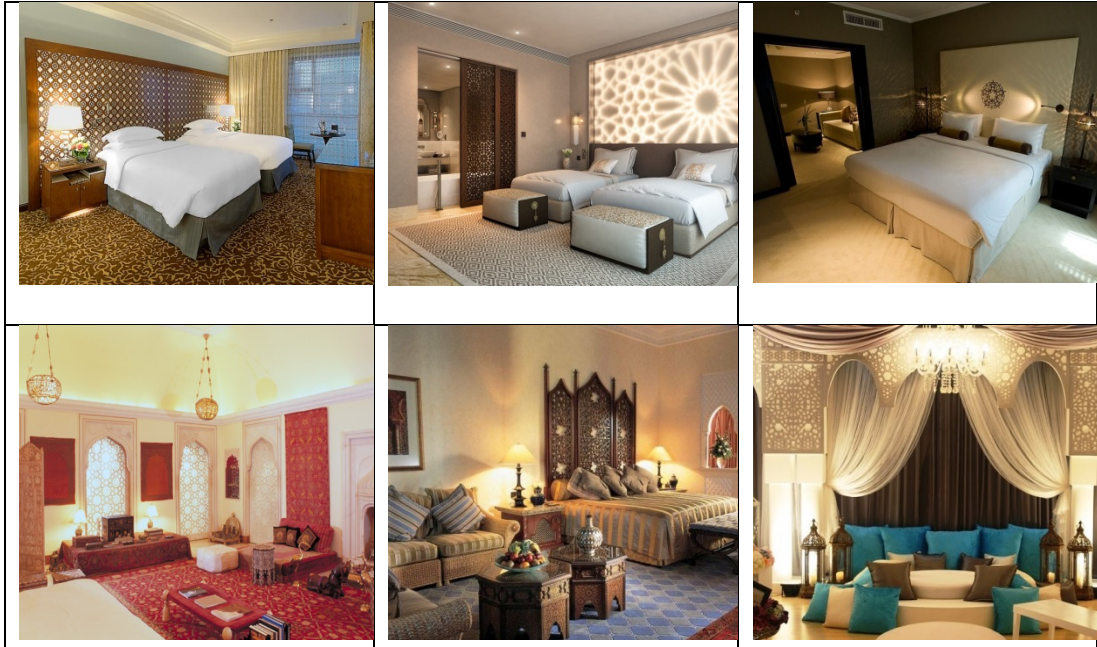
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2- Which style do you usually prefer, Islamic patterns in a traditional style or a contemporary style, and why? Why you did not choose the other style?



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3- Where do you mostly notice the pattern in a hotel room? Why do you think this area attracts your attention?

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.....
.....

This part it will be divided into floor, ceiling, and walls

Example: where do you prefer the pattern in the floor and why?

What size do you prefer and why?

Where What		Floor	Why	Ceiling	Why	Walls	Why	Art work	Why	Furniture and curtains	Why
		4-	Pattern location								
5-	Size of pattern										
6-	Pattern material										
7-	Pattern colour										
8-	Pattern look										

.....

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This part will discuss lighting

9 - What do you think about the pattern in the blinds? How do you think the blinds affect you?

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10- What size of pattern do you prefer in blinds and why?

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11- Do you prefer the natural or artificial lighting? Why do you prefer the chosen type of lighting?

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12- What kind of artificial light do you prefer? Why do you prefer this kind of lighting?

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.....

13- Do you prefer the light unit to be plain or decorated by patterns? How does this affect you?

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.....

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.....

This part will discuss characteristics of spiritual aesthetics

14- Can you describe what you think spiritual aesthetics are?

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Do you have any further suggestions/comments that you would like to add?

Thank you for you cooperation.

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.....
.....

Name of Participant

Date

Appendix F: Interview Invitation



INVITATION

A Spiritual Aesthetic within Islamic Patterns in the Interior Design of Hotel Rooms

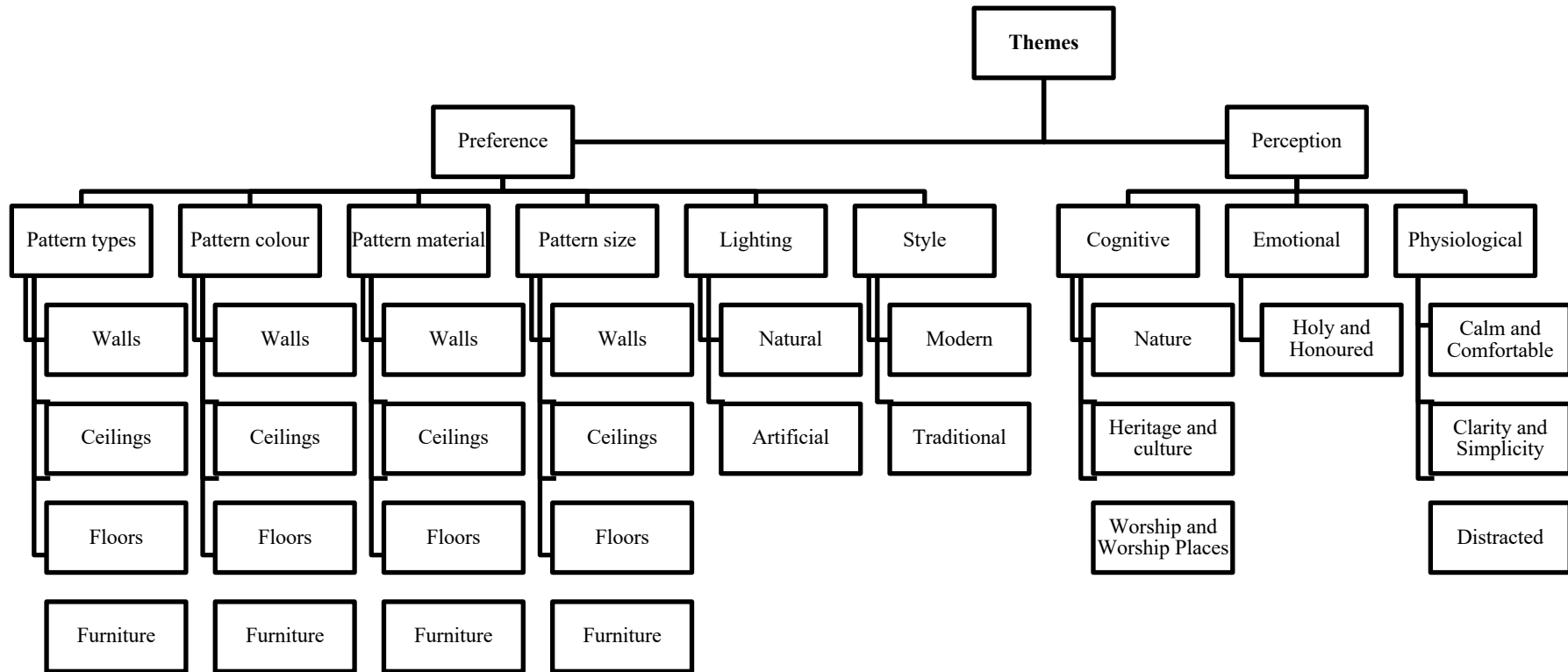
We are looking for participations to interview sessions about hotel room's interior design, for a PhD research in the Department of Design & Engineering at Bournemouth University , UK. It will take around an hour and it will be voice recorded. Each participant is required to describe their favourite design element and give reasons.

If you are 18 years old or above and you spent more than three nights at hotels in Makkah, please contact, Doaa Fatihaddin:
dfathhaddin@bournemouth.ac.uk
tel: 07477949290

Your support is greatly appreciated.



Appendix G: The First Themes and Codes in the Pilot Study



Appendix H: Example of Pilot Hotels Perspective



Appendix I: Interview Transcript and Analysis

The Art of Islamic Patterns

Interview No. 5

❖ Part One: Photo Display

Researcher: In this first part, we are going to discuss types of Islamic patterns by presenting three different styles of Islamic patterns (geometric motifs, floral motifs - calligraphy patterns and Arabic fonts) to identify the effect of each one on the spirituality aesthetic from your perspective, and explain the reason behind this choice.

Participant: I would prefer the calligraphic motifs more due to the possibility of using Quranic verses, prayers, and poetry quotes, as if they can speak to the viewer. The rest of the patterns are just aesthetic forms, with no meaning or message to communicate, unlike calligraphic designs.

I think you should use the three types of motifs all together, using the calligraphic motifs in rooms - not everywhere in the room - just in an aesthetical way and not all over the wall. The floral motifs can be used in restaurants and washrooms, while the geometric motifs can be used in the entrances and big halls. I mean, the use of each style depends on the location.

Researcher: There are many patterns and styles in interior design; we will present two different types. Please identify which type you prefer and explain why.

Participant: I like the second style. The first one is beautiful, but the second is more comfortable, more like the Moroccan style. All are lovely, but I feel more relaxed with the second one, it gives a sense of the past and is related to us, not taken from another culture.

However, I would comment about the two styles; hotels combine both styles, some rooms with the first style, and some with the second one. Or even between floors. At that moment, I do feel it connects me to the place,

not to the Western World, and as such indicates that the person who made the design is a Muslim.

❖ **Part Two: The Specifications and Location of Islamic Motifs in Hotels Rooms.**

Researcher: What would – most likely – attract your attention in the hotel rooms?

Participant: The seating area – the couch - attracts me the most, more than the bed, because I will spend a long time staying in the hotel and want to sit, not to lie down.

Researcher: Now, I will repeat the same questions for the different elements in a hotel room: floor, ceiling, walls, furniture, and accessories. Do you prefer any motifs on the floor? And why?

Participant: Yes, I do; I do not like to see the flooring as just one colour.

Researcher: What kind of pattern do you prefer for the flooring? And why?

Participant: I like the geometric pattern better; it is more comfortable; I like the six-fold or eight-fold motif designs.

Researcher: What is the size of your favourite motifs? For example, is it one big decorative unit or small repeated ones? And why?

Participant: Small repetitive units are my preference; they make a place look more extended, with a size of 30x30cm because it's more comfortable to the eyes, not too small like 10x10cm, which becomes annoying.

Researcher: What type of flooring material would enhance your feeling of spirituality? And why?

Participant: Something between carpet, wood, or even marble, which I prefer for its elegance and ease to clean, with rugs under the bed and the seating area.

Researcher: What are your favourite colours for flooring, that would give the sensation of spirituality? And why?

Participant: I prefer dark colours over light ones; shades of brown and beige give the sense of earth, soil, natural trees, and wooden tones, as well as having the advantage of not catching dirt quickly.

Researcher: I am going to repeat the same questions about the ceiling. Do you prefer any decoration on ceilings? And why?

Participant: Ceilings, I would rather they be plain.

Researcher: What is your preferred material for ceilings? And why?

Participant: Materials either dyed gypsum-board or wood, with mirrors on the walls.

Researcher: What are your favourite colours to use for a ceiling, and that may give a spiritual impression? And why?

Participant: I prefer light colours; white would be lovely to bring the feeling of freshness and spaciousness while lying down on your back looking toward the ceiling, and it makes a place feel bigger.

Researcher: Let us move to another element which is the walls. Do you prefer any patterns on the walls? And why?

Participant: Walls can be decorated with a slight pattern, but not as the main thing. For example, if the walls are in turquoise, the pattern should be in a light turquoise or gold colour but should not be stronger than the wall's colour. This pattern may reflect that the wall has dimensions and not steady.

Researcher: What is your preferred size for motifs that would express spirituality?

Participant: It is not necessary for them to be all over the wall; they can be from top to bottom or contrariwise, in a smaller size than the flooring; it is fine to be in one style of pattern or many, to give a mixture of impressions. I cannot explain it.

Researcher: Would you rather hang drawings on walls instead of having the motifs directly on the walls?

Participant: Yes, when walls are plain, especially with calligraphy patterns, verses of poetry, praise, spiritual phrases, and advice.

Researcher: Now regarding the furniture, Do you like any patterns on furniture? And why?

Participant: I prefer patterned furniture if the walls are plain, and vice-versa.

Researcher: What are your most preferred colours for furniture that would prompt feelings of spirituality? And why?

Participant: Colours, I like beige, brown, turquoise, gold, silver, white and greenish shades. The turquoise colour reflects the colours of the sky, sea, waves, sea waves in particular. Perhaps the turquoise is connected – for me- to "Al-Madina Al-Munawara", I used to see it at the merchants selling rosaries at the front of the "Prophet's Mosque", while white and beige colours are more related to "Makkah".

❖ **Part Three: Lighting and the Connection with Islamic Patterns and Spirituality.**

Researcher: What type of lighting do you prefer? Natural light or artificial light? And why?

Participant: The more natural, the better.

Researcher: What is your opinion about using motifs on glass windows? How would that affect spirituality?

Participant: I do not wish to have patterns over windows; I would rather it be plain, in order to see what is behind.

Researcher: What sort of artificial lighting do you prefer in a room to gain a spiritual feeling?

Participant: I would prefer controllable lighting, more than one lighting unit, or more than one control unit. I would choose reflective glass, which separates light into several colours from any angle you look at, to give different colours, or perhaps the old lanterns give the feeling of

Ramadan and the Ottoman Turks. In Medina, copper motifs are used to cover lanterns.

Researcher: Would you prefer any patterns for the lighting unit, reflecting Islamic patterns or styles? And why?

Participant: That would be nice, but as an additional thing and not essential. If that is the case, I prefer it to be geometric, not calligraphic or floral patterns.

Researcher: From your perspective, how far does using technology to display Islamic patterns in a place affect spirituality? And how?

Participant: Technology does have importance in our daily life, but I do not think it has a role in spirituality; I would rather avoid it in the Holy Places and try to be comfortably attached to the Islamic pattern away from technology. I do not see the effect of technology in enhancing spirituality. On the contrary, technology may distract me from being surrounded by the ambience of serenity and tranquillity in holy places.

❖ **Part Four: The Meaning of Spirituality**

Researcher: When mentioning the word spirituality, or when getting the feel of spirituality, what terms would you use to describe this feeling?

Participant: Tranquillity, serenity, inner joy and pleasure. As if watching the sea; overwhelming emotions when watching "Al-Kaaba" being blessed by "God" for being here in such a place.

Researcher: Do you have any suggestions you would like to add regarding spirituality through Islamic patterns?

Participant: Keep patterns simple and do not exaggerate them - the simpler, the prettier. People come from different cultures, so maintain simplicity in lighting and washrooms, away from complexity so it will not harm them rather than be helpful. Just make it modest, free of complication.

Thank you.

المقابلة الخامسة

بسم الله نبداً:

الجزء الأول من المقابلة: عرض الصور.

الباحث: في الجزء الاول، ستتم مناقشة أنواع الزخارف الاسلامية عن طريق عرض ثلاثة أنواع من الزخارف الاسلامية (الزخارف الهندسية - الزخارف العضوية أو الورود - الزخارف الخطية أو الكتابات العربية) والتعرف على تأثير كل نوع منها على الروحانية الجمالية من وجهة نظركم مع إيضاح السبب لذلك الاختيار.

المشارك: أفضل الزخارف الخطية أكثر، لأنه ممكن بالإمكان استخدام آيات قرآنية، صلوات، وبيات من الشعر وكأنها تتكلم مع الشخص الذي يراها. أما باقي الأنواع من الزخارف تعتبر شكل جمالي فقط لا يتكلم معاه في رسالة وفي معني كما في الزخارف الخطية. وأنا اعتقد من وجهة نظري أنه يجب أن تستخدمى الثلاثة أنواع من الزخارف مع بعض. بحيث الخطية في الغرفة ولا تستخدمها في كل مكان من الغرفة، فقط تجميلية وليس في الجدار كامل. أما النباتية تستخدم في المطاعم وفي الحمامات. لكن الهندسية تستخدم في المداخل والصالات الضخمة يعني لكل نوع استخدام يعتمد على المكان.

الباحث: السؤال الثاني، هناك العديد من الأنماط والأساليب في التصميم الداخلي، سيتم عرض أسلوبين مختلفين، وبرجاء تحديد أي الأساليب هي المفضلة لديكم ولماذا؟

المشارك: الطراز الثاني. الأول جميل لكن الثاني أريح، كأنه شغل مغربي. كلها جميلة، لكن أنا ارتاح لرقم (٢) حيث أنه يعطيني إحساس بالماضي وهذا الشي مرتبط بنا ولم يتم أخذينه من ثقافة أخرى.

لكن أريد أن أعلق على الأسلوبين، حيث أن الفنادق تكون دمج بين الاثنين غرف بالأسلوب الأول وغرف بالأسلوب الثاني أو حتى دور كذا ودور هكذا، وقتها أحس أنها تربطني بالمكان وأنه هذا الشي ما يربطني بالغرب، ويدل إن الذي قام بالتصميم مسلم.

الجزء الثاني من المقابلة: مناقشة أماكن ومواصفات الزخارف الاسلامية في غرف الفنادق.

الباحث: في الغالب ما هو أكثر ما يجذب انتباهكم في غرف الفنادق؟! لماذا؟

المشارك: مكان الجلوس (الكنبات) هو الذي يشدني أكثر من السرير، لأنه أنا أجلس في الفندق وأمضي وقت طويل أريد أن أجلس ولا أريد أن أتمدد.

الباحث: الآن سوف يتم تكرار نفس الأسئلة على عناصر مختلفة في غرفة الفندق. مثلا الأرض، السقف، الحائط، الأثاث، الإكسسوار. هل تفضل أي زخارف على الأرضية؟ لماذا؟

المشارك: نعم. حيث أنني لا أريد أن أرى الأرضية بلون واحد.

الباحث: ماهي خامة الزخارف التي تفضلها على الأرضية؟ ولماذا؟

المشارك: أفضل الزخارف الهندسية.. تعطيني راحة أكثر وأحب الزخارف ثمانية أو سداسية الشكل

الباحث: ما حجم الزخرفة المفضلة لديكم؟ على سبيل المثال وحدة زخرفية واحدة كبيرة أم زخارف صغيرة مكرره؟ لماذا؟

المشارك: أفضلها صغيرة الحجم ومتكررة، تعطيني إحساس أن المكان أوسع وتكون بحجم ٣٠*٣٠ لأنها أريح لعيني، وليست صغيرة لدرجة حجم (١٠*١٠) فتصبح مزعجة.

الباحث: ما هي خامة الأرضية التي تشعرك بالروحانية أكثر؟ ولماذا؟

خامة الأرضية بين الموكيت والخشب أو حتى رخام والذي أفضله لأنه يعطي فخامة وسهل التنظيف، مع وجود قطع سجاد تحت السرير ومكان الجلوس.

الباحث: ماهي أكثر الألوان المفضلة للزخارف في حين استخدامها على الأرضية والتي تعطي إحساس بالروحانية؟ ولماذا؟

المشارك: الأرضية.. أولا أفضل الألوان الغامقة ولا أفضل الفاتحة، الألوان بني وبيج يعطيني إحساس بالأرض (التراب) أو لون ساق (خشب) الشجر الطبيعي وفيه ميزه أنه لا يتسخ بسرعة.

الباحث: نفس الأسئلة سأكررها على عنصر السقف، هل تفضل أي زخارف على الأسقف؟ ولماذا؟

المشارك: الأسقف.. أفضلها سادة ولا أحبها مزخرفة.

الباحث: ماهي خامة الزخارف التي تفضلها على الأسقف؟ ولماذا؟

المشارك: تكون الخامة جبس مصبوغ أو تكون الخامة خشب والمرائيات تكون في الجدران.

الباحث: ماهي أكثر الألوان المفضلة في الأسقف والتي تعطي إحساس بالروحانية؟ ولماذا؟

أفضل الألوان الفاتحة الأبيض يكون أطف، يعطي إحساس بالنظافة والوسع، حيث أنه عندما الشخص مستلقي على ظهره وينظر فوق باتجاه السقف يحس أن المكان أوسع.

الباحث: ننتقل الآن إلى عنصر آخر في الغرفة وهي الحوائط.. هل تفضل أي زخارف على الحوائط؟ ولماذا؟

المشارك: الحوائط ممكن مزخرفة خاصة لمن تكون الزخرفة خفيفة وليست هي الأساس ، مثلا في حال كان الحائط فيروزى تأتي الزخرفة بلون فيروزى خفيف أو ذهبي ، لكن ما يكون لون الزخرفة أقوى من لون الحائط. و هذه الزخرفة يعطيني أن الحائط له أبعاد وليس شيء ثابت.

الباحث: ما حجم الزخرفة المفضلة لديكم و التي تعطي إحساس بالروحانية ؟

المشارك: حجمها.. ليس بالضرورة أن يكون الحائط بأكمله مزخرف، ممكن من تحت لأعلى او العكس وحجمها أصغر من الارضيات، عادي تكون زخرفة واحدة أو زخارف عديدة تعطي انطباعات مختلفة .. ما اقدر اشرحه.

الباحث: هل تفضل اللوحات الفنية في الحائط بدل ما تكون الزخرفة على الحائط مباشرة؟

المشارك: نعم أفضل، عندما يكون الحائط ساده وخاصة لمن تكون كتابات وخاصة في ابيات من الشعر ومديح وكلمات روحانية ونصائح.

الباحث: فيما يتعلق بالأثاث ، هل تفضل أي زخارف على الأثاث؟ ولماذا؟

المشارك: أفضل الزخارف على الأثاث فيما لو كان الحائط سادة والعكس.

الباحث: ماهي أكثر الألوان المفضلة في الاثاث والتي تعطي إحساس بالروحانية ؟ ولماذا؟

المشارك: الألوان ..انا أحب الألوان البيج والبنى والفيروزى والذهبي والفضي والأبيض والمائل للأخضر. اللون الفيروزى يعطي انطباع السماء، البحر ، الامواج وخاصة البحر بالأمواج. ولعل اللون الفيروزى مرتبط بالمدينة المنورة عندي، كنت أراها عند التجار أمام الحرم النبوي الذين يبيعون المسابيح. أما مكة مرتبطة عندي بالأبيض والبيج.

الجزء الثالث من المقابلة: مناقشة الإضاءة وعلاقتها بالزخارف الإسلامية والروحانية.

الباحث: أي نوع من الإضاءة تفضل؟ الطبيعية أم الصناعية؟ ولماذا؟

المشارك: كل ما كانت الإضاءة طبيعية أفضل.

الباحث: ما هو رأيكم حول استخدام الزخارف في زجاج النوافذ؟ كيف يؤثر ذلك على روحانياتكم؟

المشارك: لا أفضل زخارف في النوافذ، أفضلها سادة حتى أتمكن من رؤية الذي خلف النوافذ.

الباحث: كيف تفضل الإضاءة الصناعية في الغرفة لتعطيك شعور روحاني؟

المشارك: أفضل الإنارة التي باستطاعتي التحكم بها، أو أكثر من وحدة إضاءة و أكثر من وحدة تحكم.

وأفضل الزجاج الكاسر للأضواء التي تحلل اللون الى عدة ألوان من أي زاوية تنظري فيه، بحيث يعطيك لون مختلف. أو ممكن الفوانيس القديمة تعطي إحساس برمضان والأتراك العثمانيين في المدينة المنورة كانت الفوانيس مغلقة بالنحاس وزخرفات النحاس.

الباحث: هل تفضل أي زخارف على وحدة الإضاءة بحيث تكون عاكسة لبعض الزخارف الإسلامية؟ لماذا؟

المشارك: شيء لطيف أن تكون هناك زخارف لكن زيادة ولا تعتبر أساسية، وفي حال كانت موجودة أفضلها تكون زخارف هندسة ولا تكون كتابة ولا نباتات.

الباحث: من وجهة نظرك ، ما مدى تأثير استخدام التكنولوجيا في عرض الزخارف الإسلامية في الغرفة على الروحانية؟ وكيف؟

المشارك: التكنولوجيا لها أهميتها في حياتنا اليومية ، ولكن من وجهة نظري أنها لا تلعب دورا في الروحانية وأنا أفضل الابتعاد عنها في الأماكن المقدسة و محاولة الارتباط بالطراز الإسلامي دون التكنولوجيا للشعور بالراحة. لذلك لا أرى تأثير للتكنولوجيا في زيادة الروحانية بل بالعكس قد تشغلني عن الارتباط بأجواء الصفاء و الهدوء في الأماكن المقدسة.

الجزء الرابع من المقابلة: مناقشة معنى الروحانية.

الباحث: عند ذكر كلمة الروحانية أو عند شعورك بالروحانية ماهي الكلمات التي تصف هذا الشعور؟

المشارك: السكينة، الطمأنينة، السعادة والفرح الداخلي، كأنه الواحد يشاهد البحر. عند مشاهدة الكعبة سعادة واحساس انه نعمة من ربي انه انا هنا في هذا المكان.

الباحث: هل لديكم أي اقتراحات ترغبون في اضافتها حول موضوع الروحانية من خلال الزخارف الإسلامية؟

المشارك: لتكن الزخارف بسيطة لا تبالغوا فيها، كل ما كان بسيط يكون أجمل، الناس يأتون من ثقافات مختلفة. حافظوا على البساطة في الحمامات والإنارة ولا تكون معقدة حتى لا تضربهم بدل أن تفيدهم، اجعلوها بسيطة بلا تعقيد.

شكرا لكم ..

Appendix J: Interview Coding

Code System	Code System	Code System
Islamic patterns	honoring	Direct communication
Spirituality	distraction	wide vision
demographic	The surrounding environment	lighting
date of vist	Distance	reflection
nationality	transportation	natural
Age	crowd	artificial
Past	connect the outside inside	brightness
memories	building style	color
behavior	High buildings around the Haram	furniture color
Arabic Langue	technology	wall color
past experience	screen	ceiling color
culture	furniture	floor color
History	bed	pattern color in floor
Religion	accessories	patterns type
alazan	curtain	floral patterns
Alharam	plain	geometry
Islamic icon	material	calligraphy
Kabaa	window material	patterns position
Quraan	wall material	lighting pattern
contrary to islam	velvet	floor pattern
Worship	Floor material	wall patterns
mosques	marble	ceiling patterns
Emotion	Carpets	difference
forgiveness	leather	repetition
pureness	senses	patterns size
delightful	contact	floor ptttern size
contentment	cramped	wall patterns size
comfortable	open space	Style type
clarity	imagine	bathroom
simplicity	belonging	wodoaa
freedom	Direct communication	wasteful
safety	wide vision	nature
quiescence	lighting	sleeping
focus	reflection	
calmness	natural	NOT CODED
attract	artificial	CODED
Isolation	brightness	WHOLE TEXT

Appendix K: Interview Coding Process

The screenshot displays the MAXQDA 2020 Reader interface. The top menu bar includes 'Home', 'Variables', 'Analysis', and 'Reports'. The toolbar contains icons for 'New Project', 'Open Project', 'Document System', 'Code System', 'Document Browser', 'Retrieved Segments', 'Logbook', 'Teamwork', 'Merge Projects', 'Save Project As', 'Save Anonymized Project As', 'Project from Activated Documents', 'External Files', and 'Archive Data'. The main workspace is divided into three panes:

- Left Pane (Code System):** A hierarchical tree structure showing the 'Code System' with 346 codes. The 'demographic' category is expanded, showing sub-categories like 'Age' (3 codes), 'Past' (0 codes), and 'Past' (0 codes).
- Center Pane (Document Browser):** Displays a document titled '11th Kareem (113 Paragraphs)'. The text is in Arabic and includes several paragraphs discussing architectural styles and Islamic history. The text is annotated with colored coding tags (e.g., blue, green, red, orange) corresponding to the code system.
- Right Pane:** Shows a list of paragraph numbers (11-29) corresponding to the text in the center pane.

The bottom status bar indicates the current query: 'Simple Coding Query (OR combination of codes)'.

Appendix L: 3D Design Perspectives



L-1: Proposed Design from the First Volunteer Designer.



L-2: Proposed Design from the First Volunteer Designer.



L-3: Proposed Design from the Second Volunteer Designer.



L-4: Proposed Design from the Second Volunteer Designer.



L-5: Proposed Design from the Third Volunteer Designer



L-6: Proposed Design from the Third Volunteer Designer



L-7: Proposed Design from the Fourth Volunteer Designer.



L-8: Proposed Design from the Fourth Volunteer Designer



L-9: Proposed Design from the Fourth Volunteer Designer



L-10: Proposed Design from the Fourth Volunteer Designer



L-11: Proposed Design from the Fourth Volunteer Designer