



BIOPHILIC HOTEL DESIGN ADAPTATION APPROACHES FOR ENHANCING GUESTS' EXPERIENCES & WELL-BEING

By

Raghda Hatem Mahmoud Moawad

A Thesis Submitted to the
Faculty of Engineering at Cairo University
in Partial Fulfillment of the
Requirements for the Degree of
MASTER OF SCIENCE
in
Architectural Engineering

FACULTY OF ENGINEERING, CAIRO UNIVERSITY
GIZA, EGYPT
2020

**BIOPHILIC HOTEL DESIGN ADAPTATION
APPROACHES FOR ENHANCING GUESTS'
EXPERIENCES & WELL-BEING**

By

Raghda Hatem Mahmoud Moawad

A Thesis Submitted to the
Faculty of Engineering at Cairo University
in Partial Fulfillment of the
Requirements for the Degree of
MASTER OF SCIENCE
in
Architectural Engineering

Under the Supervision of

Hisham Sherif Gabr

Dalia Ahmed Aboubakr

.....

.....

Professor of Architecture
Department of Architectural Engineering
Faculty of Engineering, Cairo University

Assistant Professor
Department of Architectural Engineering
Faculty of Engineering, Cairo University

FACULTY OF ENGINEERING, CAIRO UNIVERSITY
GIZA, EGYPT
2020

BIOPHILIC HOTEL DESIGN ADAPTATION APPROACHES FOR ENHANCING GUESTS' EXPERIENCES & WELL-BEING

By
Raghda Hatem Mahmoud Moawad

A Thesis Submitted to the
Faculty of Engineering at Cairo University
in Partial Fulfillment of the
Requirements for the Degree of
MASTER OF SCIENCE
in
Architectural Engineering

Approved by the
Examining Committee

Prof. Dr. Hisham Sherif Gabr

(Thesis Main Advisor)

Associate Prof. Dr. Ahmed Mostafa AbdelGhaffar (Internal Examiner)

Prof. Dr. Basil Ahmed Ibrahim Kamel

(External Examiner)

Professor of Architecture at the School of Sciences & Engineering - The American
University in Cairo

FACULTY OF ENGINEERING, CAIRO UNIVERSITY
GIZA, EGYPT
2020

Engineer's Name: Raghda Hatem Mahmoud
Date of Birth: 05/06/1994
Nationality: Egyptian
E-mail: raghdahatem@yahoo.com
Phone: +201283366670
Address: 33 Adnan El-Madani Street, Mohandessin
Registration Date: 01/03/2018
Awarding Date:/....../2020
Degree: Master of Science
Department: Architectural Engineering



Supervisors:

Prof. Dr. Hisham Sherif Gabr
Dr. Dalia Ahmed Aboubakr

Examiners:

Prof. Basil Ahmed Ibrahim Kamel (External examiner)
Professor of Architecture at the School of Sciences &
Engineering – The American University in Cairo
Associate Prof. Ahmed Mostafa AbdelGhaffar (Internal
examiner)
Prof. Hisham Sherif Gabr (Thesis Main Advisor)

Title of Thesis:

Biophilic Hotel Design Adaptation Approaches for Enhancing Guests' Experiences & Well-being

Key Words:

Sensory design; hotel guest satisfaction; psychological well-being; adaptation strategies; biophilic design elements

Summary:

The lodging industry can remarkably affect tourists' stays & shape guests' experiences. Visually appealing hotels that do not consider other humans' senses in their design strategies do not leave lasting impressions on their guests. On the other hand, returning back to nature and integrating biophilic design elements in hotels' interiors can act as a catalyst that triggers all human senses leading to an astonishing impression, memorable experience & enhanced satisfaction and psychological wellbeing.

Disclaimer

I hereby declare that this thesis is my own original work and that no part of it has been submitted for a degree qualification at any other university or institute.

I further declare that I have appropriately acknowledged all sources used and have cited them in the references section.

Name: Raghda Hatem Mahmoud Moawad

Date: / /2020

Signature:

Dedication

Dedicated to the person that has supported me in every single aspect in life, my lifetime source of positivity & blessings; my dear mother, Nawal Ali. I wouldn't have reached any success without your guidance & inspiration.

Dedicated to my grandmother that would've been proud of me...May her soul rest in peace.

Acknowledgments

Sincere gratitude is expressed for my advisors, Prof. Hisham Gabr & Dr. Dalia Aboubakr, for their continuous support, guidance, encouragement, & fruitful feedback. I genuinely enjoyed writing this research and I feel lucky for having you as my advisors.

I'm grateful to my mother for always enlightening my soul and guiding me. I would also like to thank my uncle, Dr. Mostafa Ali, for always lifting my spirit up & continuously brightening my way.

Special thanks to my dear friends that have helped me and especially to the economist, Ms. Ola ElToukhi, for her economic assistance and support in the regression data analysis section.

Table of Contents

DISCLAIMER.....	I
DEDICATION.....	II
ACKNOWLEDGMENTS	III
TABLE OF CONTENTS.....	IV
LIST OF TABLES	VII
LIST OF FIGURES	VIII
ABSTRACT	X
CHAPTER 1 : INTRODUCTION	1
1.1. INTRODUCTION	1
1.2. BACKGROUND AND OVERVIEW.....	2
1.2.1. Tourism & its Impact on Travellers	2
1.2.2. Architecture that Shapes Experiences	2
1.2.3. Human Senses & Data Gathering Techniques.....	3
1.2.4. Multisensory Hotel Guests’ Experiences	3
1.2.5. Designing for Human Wellness.....	4
1.2.6. The Urgent Call for Reconsidering Our Current Built Environment	5
1.2.7. Adapting Buildings to Enhance Users’ Experiences	6
1.3. RESEARCH PROBLEM	7
1.4. RESEARCH OBJECTIVES	7
1.5. HYPOTHESIS	8
1.6. CONCEPTUAL MODEL OF THE STUDY.....	8
1.7. RESEARCH DESIGN AND METHODOLOGY.....	9
1.8. ORGANIZATION OF THE STUDY	10
CHAPTER 2 : LITERATURE REVIEW	12
2.1. INTRODUCTION	12
2.2. THE FIVE SENSES & EXPERIENCE-BASED DESIGN.....	12
2.2.1. Humans’ Experiences in Space	14
2.2.1.1. Five Senses & Perception	15
2.2.1.2. Architecture and the Mere Focus on Vision Sense	15
2.2.1.3. Examples of Multi-Sensory Experiences in Architecture	17
2.2.1.4. Guest Experience in Hotels.....	18
2.2.2. Wellness of Humans in Buildings	20
2.2.2.1. Guest Wellness in Hotels.....	22
2.2.3. Human Satisfaction in Buildings.....	23
2.2.3.1. Guest Satisfaction in Hotels.....	23
2.2.4. Economic Impacts of Guests’ Satisfaction & Loyalty.....	24
2.2.5. Methodology for Measuring Hotel Guests’ Satisfaction, Loyalty & Psychological Wellbeing.....	25
2.2.5.1. Guests’ satisfaction & Loyalty.....	25

2.2.5.2. Psychological Wellbeing	27
2.3. THE PARADIGM SHIFT IN ARCHITECTURE & SUSTAINABILITY APPROACHES	29
2.3.1. Factors Causing the Paradigm Shift in Architecture	30
2.3.1.1. Climate Change & the Top Building Typologies Leading to it	30
2.3.1.2. Climate Change Impacts on the Indoor Environmental Quality & Human Health	30
2.3.1.3. Adaptation Strategies Worldwide	31
2.3.1.4. Adaptation Strategies in Hotels	31
2.4. ENVIRONMENTAL PSYCHOLOGY & BIOPHILIC DESIGN TRENDS IN HOTELS	32
2.4.1. Background on Biophilic Design Trends in Architecture	33
2.4.2. Biophilic Designs in the Hospitality Industry	34
2.4.2.1. Examples of Integrating Biophilic Design Elements in Hotels	36
2.4.2.1.1. <i>Hudson Hotel- New York, USA</i>	36
2.4.2.1.2. <i>Hilton Heliopolis- Cairo, Egypt</i>	38
2.4.2.1.3. <i>Sheraton – Shenzhen, Nanshan, China</i>	39
2.4.2.1.4. <i>Hotel Jakarta, Amsterdam</i>	40
2.4.2.1.5. <i>Manon Les Suites Guldsmiden Hotel, Copenhagen – Denmark</i>	41
2.4.2.1.6. <i>Leman Locke Design Hotel, East London</i>	42
2.4.3. How Can Biophilic Designs Positively Influence Guests Experiences in Hotels.....	46
2.5. SUMMARY	48
CHAPTER 3 : METHODOLOGY	49
3.1. INTRODUCTION	49
3.2. RESEARCH STRATEGY	49
3.3. ANALYZING ONLINE CUSTOMERS’ REVIEWS	50
3.4. CONDUCTING ONLINE SURVEYS	51
3.4.1. Phase 1 - Online Survey Design	52
3.4.2. Phase 2 - Online Surveys	54
3.4.2.1. Case Studies Selection Criteria	54
3.4.2.1.1. <i>Case 1: Hotel Jakarta & XO Hotels Park West – Amsterdam</i>	54
3.4.2.1.2. <i>Case 2: Hilton Heliopolis & Tolip Family Park Hotel – Cairo</i>	55
3.4.2.2. Phase 2 - Online Surveys’ Design	57
3.5. FRAMEWORK FOR DATA ANALYSIS	60
3.6. SUMMARY	60
CHAPTER 4 : RESULTS & DISCUSSION	61
4.1. TRIPADVISOR GUEST REVIEW ANALYSIS	61
4.1.1. Hotels Rich in Biophilic Elements - Review Analysis	61
4.1.1.1. <i>The Sheraton Shenzhen, Nanshan</i>	61
4.1.1.2. <i>Hotel Jakarta, Amsterdam</i>	63
4.1.1.3. <i>Manon Les Suites Guldsmiden Hotel, Copenhagen – Denmark</i>	64
4.1.2. Hotels Poor in Biophilic Elements - Review Analysis	66
4.1.2.1. <i>Wyndham Grand Shenzhen</i>	66
4.1.2.2. <i>XO Hotels Park West, Amsterdam</i>	68
4.1.2.3. <i>Ibsens Hotel, Copenhagen</i>	69
4.1.3. Summary	71
4.2. ONLINE SURVEYS ANALYSIS	72
4.2.1. Phase 1 - Survey Analysis	72
4.2.1.1. Respondents’ Preferences	74
4.2.1.2. Influential Factors on Respondents’ Experiences	75
4.2.1.2.1. <i>Investigating the Impacts of Natural Atmospheres through an ASMR Video</i>	76
4.2.1.2.2. <i>Analyzing Respondents’ Reviews on Natural Elements at Westin Hotel’s Guest Room</i>	77
4.2.1.3. Tracking Respondents’ Satisfaction Level	79

4.2.2. Phase 2 - Survey Analysis	79
4.2.2.1. Case 1: Hotel Jakarta & XO Hotels Park West	80
4.2.2.1.1. <i>Guests' Satisfaction Analysis</i>	81
4.2.2.1.2. <i>Guests' Psychological Wellbeing Analysis</i>	86
4.2.2.2. Case 2: Hilton Heliopolis & Tolip Family Park Hotel	89
4.2.2.2.1. <i>Guests' Satisfaction Analysis</i>	90
4.2.2.2.2. <i>Guests' Psychological Wellbeing Analysis</i>	95
4.2.3. Summary	98
CHAPTER 5 : CONCLUSION & RECOMMENDATIONS.....	101
5.1. RESEARCH OBJECTIVES: HYPOTHESIS TESTING & SUMMARY OF FINDINGS	101
5.1.1. Research Objective 1 & Hypothesis Testing	101
5.1.1.1. Summary of Findings	102
5.1.2. Research Objective 2	103
5.1.2.1. Adaptation Strategies for Existing Hotels.....	103
5.1.2.1.1. <i>Optimizing the Entry of Natural Light</i>	104
5.1.2.1.2. <i>Rethinking the Outdoor Landscape</i>	105
5.1.2.1.3. <i>Adding Indoor Natural Plants</i>	105
5.1.2.1.4. <i>The Proper Selection of the Hotel's Color Palette</i>	106
5.1.2.1.5. <i>Adding Indoor Water Features or Other Simulated Substitutes</i>	106
5.1.2.1.6. <i>Optimizing Natural Ventilation</i>	106
5.1.2.1.7. <i>Introducing Organic Patterns & Details</i>	106
5.2. CONTRIBUTION OF THE STUDY	107
5.3. LIMITATIONS	107
5.4. SUGGESTIONS FOR FUTURE RESEARCH.....	108
5.5. CONCLUSION	108
REFERENCES	109
APPENDIX A	119
A.1 JAKARTA HOTEL GUESTS REVIEWS FROM TRIPADVISOR.....	119
APPENDIX B.....	122
B.1 SURVEY 1	122
B.2 HOTEL JAKARTA'S SURVEY	133
B.3 HILTON HELIOPOLIS SURVEY	144
B.4 XO PARK WEST HOTEL'S SURVEY	154
B.5 TOLIP HOTEL SURVEY.....	162
APPENDIX C	170

List of Tables

Table 2.1: The three approaches for measuring guests' loyalty in hotels.	27
Table 2.2: The various methodologies used by peer researchers for measuring guests' satisfaction, experience & psychological wellbeing	28
Table 2.3: Categories & Definitions of Biophilic Design Patterns.	35
Table 2.4: The Biophilic elements in Hudson Hotel	37
Table 2.5: The Biophilic elements in Hilton Heliopolis Hotel.....	38
Table 2.6: The Biophilic elements in Sheraton Shenzhen Hotel.....	39
Table 2.8: The Biophilic elements in Manon Les Suites Guldsmeden Hotel	42
Table 2.9: The biophilic elements in Nik Southern's romance suite	43
Table 2.10: The biophilic elements in Oliver Heath's suite	44
Table 2.11: The biophilic elements in Michael Perry's tranquil suite	45
Table 2.12: The benefits of biophilic designs.	47
Table 3.1: Criteria of selecting biophilic hotel: hotel Jakarta & non-biophilic hotel: XO Hotel Park West.....	55
Table 3.2: Criteria of selecting biophilic hotel: Hilton Heliopolis & non-biophilic hotel: Tolip Family Park Hotel.....	56
Table 4.1: Summary of popular keywords and reviews of the 6 previously discussed hotels on TripAdvisor.....	71
Table 4.2: Survey -1, Respondents' General Information.....	73
Table 4.3: Case – 1, Comparison between groups	80
Table 4.4: Case – 1, Variables' Descriptive Statistics.....	82
Table 4.5: Case – 1, Pearson Correlations of Variables	84
Table 4.6: Case – 1, Variables' Coefficients in Linear Regression Model	85
Table 4.7: Case – 1, Pearson Correlation - Psychological Wellbeing.....	87
Table 4.8: Case – 1, Regression Model Findings on Psychological Wellbeing.....	88
Table 4.9: Case – 2, Comparison between groups	90
Table 4.10: Case – 2, Variables' Descriptive Statistics.....	91
Table 4.11: Case – 2, Pearson Correlations of Variables	93
Table 4.12: Case – 2, Variables' Coefficients in Linear Regression Model	94
Table 4.13: Case – 2, Pearson Correlation - Psychological Wellbeing.....	96
Table 4.14: Case – 2, Regression Model Findings on Psychological Wellbeing.....	97
Table 4.15: Overall Pearson Correlations of Variables – Part 1	98
Table 4.16: Overall Pearson Correlations of Variables – Part 2	98
Table 4.17: Overall Regression Analysis of Variables	99
Table C.1: survey 1 questions & mean values	170
Table C.2: Case – 1, Degree of satisfaction	171
Table C.3: Case – 1, Psychological Wellbeing Analysis	172
Table C.4: Case – 2, Degree of satisfaction	173
Table C.5: Case – 2, Psychological Wellbeing Analysis	174

List of Figures

Figure 1.1: The conceptual model of the study	8
Figure 1.2: Research structure	10
Figure 2.1: Human body & mind processes that are affected by sensory design.....	14
Figure 2.2: The ranges of senses	16
Figure 2.3: left: the Sensorium Exhibition interior, middle: re-shaped floor textures, right: the planted glass pods	18
Figure 2.4: left: Luxor Hotel & Casino, right: the guest room.....	20
Figure 2.5: The interrelation between market profitability and guest satisfaction.....	25
Figure 2.6: left: Biophilic elements in the Hudson hotel lobby, right: Hudson hotel guest room	37
Figure 2.7: Left: Hilton Heliopolis Cairo Hotel, right: Hotel guest room,.....	38
Figure 2.8: left, middle, & right: the integration of biophilic elements in Sheraton hotel, Shenzhen.....	39
Figure 2.9: The hotel's indoor garden	40
Figures 2.10: left & right: the hotel's botanical-like interior	41
Figure 2.11: left: the romance suite bedroom, right: the romance Suite	43
Figure 2.12: left: the Productivity suite, right: the workplace.....	44
Figure 2.13: left: the tranquil suite, right: the suite's bathroom	45
Figure 2.14: Summary of literature findings	48
Figure 3.1: Customer's on-line reviews data analysis methodology.....	50
Figure 3.2: Online surveys plan.....	52
Figure 3.3: Left: 1 Hotel Central Park guest room, right: Pure House boutique hotel guest room	53
Figure 3.4: Multiple choice options that affect guests' experiences	54
Figure 3.5: Left: Tolip hotel lobby, right: Tolip hotel exterior	56
Figure 3.6: Left: Tolip hotel guest room, right: hotel entrance sculptures.....	57
Figure 3.7: Left: Hotel Jakarta guest room, right: Skybar.....	58
Figure 3.8: Left: hotel Tolip lobby, right: Hotel Tolip guest room	58
Figure 3.9: Left: Hilton Heliopolis lobby, right: XO hotel reception	59
Figure 4.1: Left: guests' reviews on TripAdvisor, right: Sheraton Shenzhen exterior .	62
Figure 4.2: Sheraton Shenzhen guest reviews popular mentions	62
Figure 4.3: Sheraton Shenzhen guest reviews sample.....	62
Figure 4.4: Left: guests' reviews, right: Hotel Jakarta exterior.....	63
Figure 4.5: Hotel Jakarta guest reviews popular mentions.....	63
Figure 4.6: Hotel Jakarta guest reviews sample	64
Figure 4.7: Left: guests' reviews, right: Guldsmeden hotel exterior.....	64
Figure 4.8: Guldsmeden Hotel guest reviews popular mentions.....	64
Figure 4.9: Guest reviews sample	65
Figure 4.11: Guest reviews sample	66
Figure 4.12: Left: guests' reviews, right: Wyndham Grand hotel exterior	66
Figure 4.13: left & right: Bar lounge interior	67
Figure 4.14: Wyndham Grand guest reviews popular mentions	67
Figure 4.15: Left: guests' reviews, right: XO Hotel Exterior.....	68
Figure 4.16: Left: reception Desk, right: XO hotel guest room	68
Figure 4.17: XO Hotels guest reviews popular mentions.....	69
Figure 4.18: XO hotel guest reviews sample.....	69

Figure 4.19: Left: guests' reviews, right: Ibsens hotel exterior	70
Figure 4.20: Guest reviews popular mentions	70
Figure 4.21: Guest reviews sample	70
Figure 4.22: Left: Ibsens hotel reception area, right: hotel Lobby	71
Figure 4.23: Survey 1 –Mean values of certain design elements	74
Figure 4.24: Left: mean value of adding plants on users' psychological wellbeing, right: 1 Hotel Brooklyn bridge guest room	75
Figure 4.25: Elements that influence guests' experience & mood at hotels	76
Figure 4.26: The degree of satisfaction towards the natural ASMR video for 163 respondents	76
Figure 4.27: Psychological Wellbeing mean values in response to the natural ASMR	77
Figure 4.28: Left: Westin Hotel guest room, right: word count analysis	77
Figure 4.29: Qualitative analysis of comments on Westin Hotel guest room	78
Figure 4.30: PARKROYAL hotel guest room	79
Figure 4.31: Case 1, Mean satisfaction values regarding biophilic interventions	86
Figure 4.32: Comparison between psychological wellbeing at Jakarta & XO hotels	87
Figure 4.33: Case 2, Mean satisfaction values regarding biophilic interventions	95
Figure 4.34: Comparison between psychological wellbeing at Hilton & Tolip hotels ..	95
Figure 5.1: Left: Natural light optimization using mirrors, right: metal reflective sculpture at Shenzhen Hotel	104
Figure 5.2: Left: Hilton Sukhumvit Bangkok, right: Dusit Thani LakeView Cairo	105

Abstract

Tourism & the hospitality industry are known for the remarkable role they play in the world's global economy. Tourism is known as one of the industries that continue to grow rapidly in many countries and has been the subject of research in various disciplines. Several researchers have been concerned with the impact of the lodging industry on the economy or the environment. However, investigating the impacts on hotel guests' experiences has not seen a sufficient amount of attention. The standardization in the lodging industry to enhance mass production for the economic benefit has created boring hotel experiences. Humans experience spaces through their five main senses: hearing, sight, taste, touch, and smell. Despite the role of several philosophers, researchers, architects, & environmental psychologists in highlighting the importance of addressing those five senses in any architectural design, architects continue creating aesthetically appealing monuments that do not trigger the five senses holistically. Users' satisfaction and creating life-enhancing experiences have not been put into consideration which only led to creating lifeless architecture.

The focus of this study was directed towards investigating the relation between biophilic design strategies in the hospitality industry and their impacts on hotel guests' satisfaction, & psychological wellness through creating sensory experiences. It aimed at offering an adaptation strategy for enhanced guest experience in existing hotels. This research was based on a relevant literature review where the relationship between biophilic hotel designs & guests' satisfaction, and wellness is offered. The empirical section included analyzing guests' reviews on TripAdvisor regarding three hotels that are rich in biophilic design elements and three other hotels that are poor in biophilic design elements. Moreover, the empirical section of this study also included a holistic, general survey that was distributed online to investigate hotel guests' preferences regarding hotels' designs & the integration of biophilic design elements. Four online surveys were also distributed to test the relation between the presence of biophilic design elements and hotel guests' psychological wellness and satisfaction regarding four chosen case studies.

The findings highlight that integrating biophilic design elements in hotels can positively impact guests' experiences, satisfaction, & psychological well-being. For instance, the presence of natural light, proper selection of the lobby's furniture color palette, outdoor landscape design, lobby's design, presence of natural ventilation, organic furniture, & room design & view have all indicated high significant impacts on guests' satisfaction & psychological well-being following a Pearson correlation & OLS regression analysis. The main conclusion of this research is that returning to nature and human psychology theories can act as a turning point in several businesses, especially in the hospitality industry. Hoteliers' attention should be geared towards the offered adaptation strategies for integrating biophilic designs in existing traditional hotels to create a life-enhancing guest experience.

Keywords: Hospitality industry, hotel guests, five senses, guest satisfaction, psychological well-being, adaptation strategies, sensory design, biophilic elements, life-enhancing

Chapter 1 : Introduction

1.1. Introduction

Humans' perception of space occurs through all human senses that work coherently to shape their experiences in the built environment and create remarkable memories. Architecture has a crucial role in shaping humans experiences. This can occur through creating buildings that offer multisensory environments which trigger all the human senses simultaneously. Buildings that are rich in biophilic design elements are believed to create holistic multisensory atmospheres for their users. In the hospitality industry, focusing on enriching hotel guests' experiences is the catalyst that can lead to the hotel's success or failure. Hotel guests' experiences can also be attributed to their overall satisfaction with the ambience and the stay's impact on their psychological well-being. Adapting existing hotels that were not designed for the purpose of ultimate guests' satisfaction and wellbeing acts as a major challenge.

Recently researchers have started focusing on the neuroscience of architecture. Among these researchers are: "(Choo, Nasar, Nikrahei, & Walther, 2017; Coburn, Vartanian, & Chatterjee, 2017; Marchette, Vass, Ryan, & Epstein, 2015; Robinson & Pallasmaa, 2015; Vartanian et al., 2013)" (Coburn et al., 2020). Other researchers have discussed guests' satisfaction towards sustainable initiatives taken in hotels such as (Choi & Chu, 2001, Chen, 2015, Carev, 2008, in addition to Merli & Perziosi, 2019). Some researchers focused their attention on sensory environments such as Malnar & Vodvarka, 2003, Pallasmaa, 2005, Lehman, 2011 & Leone, 2008 while others were concerned about the importance of integrating biophilic elements in buildings and hotels such as Zari, 2009, Browning & Francis, n.d, Kellert, Herwagen & Mador, 2008, Kellert & Finnegan, 2008, Kellert & Calabrese, 2015. Yet, studying how the usage of biophilic design elements in hotels can create sensory environments that can increase guests' satisfaction and is also considered among the sustainable initiatives that can be taken in the building industry has not been widely investigated by researchers. Furthermore, research in the hospitality industry field lacks recommendations and guidelines for adapting existing hotels by using multisensory biophilic design elements to create holistic guests' experiences & ensure their satisfaction.

The spark of interest in investigating more about the impact of hotels on its guests' psychological wellbeing and satisfaction and how the hotel's ambience shapes the guests' experiences is the motor that directed the focus of this study. This research presents a theoretical overview of the relations between the built environment and human overall experience, satisfaction, and psychological wellbeing in the lodging industry. It also provides several empirical investigations in the form of online surveys in order to test how the psychology, mood, and experience of users of a certain space are affected by biophilic design elements. In addition to offering a guideline for adapting existing hotels to create remarkable guests' experiences.