# HEALING ARCHITECTURE AS A THERAPEUTIC SOLUTION IN A WOMEN'S HOSPITAL DESIGN IN LAGOS, NIGERIA

SEFIA, ERUEMUVOKE PHILIPPA (21PCA02243) B.Sc, Architecture, Bells University of Technology, Ota

## HEALING ARCHITECTURE AS A THERAPEUTIC SOLUTION IN A WOMEN'S HOSPITAL DESIGN IN LAGOS, NIGERIA

 $\mathbf{BY}$ 

## SEFIA, ERUEMUVOKE PHILIPPA (21PCA02243) B.Sc. Architecture, Covenant University, Ota

A DISSERTATION SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF SCIENCE (M.Sc.) DEGREE IN ARCHITECTURE IN THE DEPARTMENT OF ARCHITECTURE, COLLEGE OF SCIENCE AND TECHNOLOGY, COVENANT UNIVERSITY, OTA, OGUN STATE

**JUNE, 2023** 

#### **ACCEPTANCE**

This is to attest that this dissertation is accepted in partial fulfilment of the requirements for the award of the degree of Master of Science in Architecture in the Department of Architecture, College of Science and Technology, Covenant University, Ota, Nigeria.

Ms Adefunke F. Oyinloye (Secretary, School of Postgraduate Studies)

**Signature and Date** 

Prof. Akan B. Williams (Dean, School of Postgraduate Studies)

**Signature and Date** 

#### **DECLARATION**

I, SEFIA, ERUEMUVOKE PHILIPPA (21PCA02243) declare that this research was carried out by me under the supervision of Dr Daniel O. Babalola of the Department of Architecture, College of Science and Technology, Covenant University, Ota, Ogun State. I attest that the dissertation has not been presented either wholly or partially for the award of any degree elsewhere. All sources of data scholarly information used in this dissertation are duly acknowledged.

SEFIA, ERUEMUVOKE PHILIPPA

**Signature and Date** 

#### **CERTIFICATION**

This is to certify that this dissertation titled "HEALING ARCHITECTURE AS A THERAPEUTIC SOLUTION IN A WOMEN'S HOSPITAL DESIGN IN LAGOS NIGERIA" is an original research work carried out by SEFIA, ERUEMUVOKE (21PCA02243) in the Department of Architecture, College of Science and Technology, Covenant University, Ota, Ogun State, Nigeria under the supervision of Dr. Olatunde D. Babalola. This dissertation has met the required standard for the award of Master of Science (M.Sc) in Architecture.

Dr Olatunde D. Babalola (Supervisor)

**Signature and Date** 

Prof. Adedapo A. Oluwatayo (Head of Department)

**Signature and Date** 

**Dr.** Clement O. Folorunso (External Examiner)

**Signature and Date** 

Prof. Akan B. Williams (Dean, School of Postgraduate Studies)

**Signature and Date** 

## **DEDICATION**

This project is dedicated to God Almighty for the grace and strength given to me to complete this project.

**ACKNOWLEDGMENTS** 

I would like to begin by expressing my profound gratitude to the Almighty God for providing me with the grace and guidance that sustained me throughout the course of this project.

I am indebted to the visionary chancellor of the Covenant University, Dr. David O. Oyedepo, for establishing this esteemed institution. I extend my heartfelt appreciation to the esteemed leadership, including Professor Abiodun H. Adebayo, the Vice Chancellor; Dr. Promise Omidiora, the Registrar; Professor Akan B. Williams, the Dean of the School of Postgraduate Studies; and Dr. Emmanuel O. Amoo, the SubDean of the School of Postgraduate Studies, for their unwavering dedication to completing my degree program. I am also grateful to the entire faculty and staff of Covenant University for their support and dedication.

I offer special recognition to Professor Adedapo A. Oluwatayo, the Head of the Department of Architecture, for her valuable guidance, and to my studio coordinator and supervisor, Dr. D. O. Babalola, for his patience and mentorship from the inception to the conclusion of this study.

I extend my appreciation to Ayinke House LASUTH, Outreach Signature Hospital, and Bridge Clinic for granting me access to essential data, which was integral to the research's success. I would like to extend my gratefulness to Mrs. Adebimpe Archibong of Bridge Clinic and Engr. Ola of Ayinke House for their exceptional support and assistance throughout this study.

I reserve my deepest appreciation for my father, Arc. P. Sefia, whose unwavering support—be it moral, emotional, financial, or otherwise—and fervent prayers have been the cornerstone of my journey. To my mother and siblings, your unwavering emotional support and encouragement during challenging times have been invaluable, and I am eternally grateful.

The completion of this research would not have been possible without the collective support and encouragement of all those mentioned above. Their contributions have left an indelible mark on my academic journey, and I am truly honored to acknowledge them.

## **TABLE OF CONTENTS**

CONTENTS	PAGES	
ACCEPTANCE	iii	
DECLARATION	iv	
CERTIFICATION	V	
DEDICATION	Vi	
ACKNOWLEDGMENTS	vii	
TABLE OF CONTENTS	viii	
LIST OF TABLES	xii	
LIST OF FIGURES	Xi 	
ABSTRACT	xiii	
CHAPTER ONE	1	
INTRODUCTION	1	
1.1 Background to the Study	1	
1.2 Statement of Research Problem	1 2 3 3 3 3 5	
1.3 Research Questions	3	
1.4 Aim of Study	3	
1.5 Objectives of Study	3	
1.6 Justification of Study	3	
1.7 Scope of Study	5	
1.8 Limitations of Study	5	
1.9 Overview of Research Methods	5	
1.10 Definition of Key Terms	5	
CHAPTER TWO	7	
LITERATURE REVIEW	7	
2.1 Healthcare Facilities	7	
2.1.1 Hospital	9	
2.1.2 Foundation of Hospital Design	10	
2.1.3 Hospital Design Standards in Nigeria	12	
2.1.4 Types of Hospital	12	
2.2 Women's Hospital	14	
2.2.1 Services provided by Women's Hospital	15	
2.3 Healing Architecture	16	
2.3.1 Historical Background of Healing Architecture	18	
2.3.2 Salutogenesis in Hospitals	20	
2.3.3 Elements of Healing Architecture	21	
2.4 Therapeutic Design	32	
2.4.1 Development of Therapeutic Design	33	
2.4.2 Advantages of Therapeutic Design	34	
2.4.3 Evidence Based Design	36	
2.4.4 The Benefits of Creating a Positive Therapeutic Design	37	
CHAPTER THREE	39	
METHODOLOGY	39	
3.1 Research Philosophy	39	
3.2 Research Approach	40	
3.3 Pasagrah Dasign	41	

3.4	Study Area	41
3.5	Study Population	42
3.6	Sampling Frame	43
3.7	Sampling Method	44
3.8	Sampling Size	44
3.9	Unit of Data Collection	45
3.10	Data Collection Instrument	46
3.11	Operationalization of variables	47
3.12	Detailed Methodology	55
3.12	2.1 Objective 1	55
3.12	2.2 Objective 2	55
3.12	2.3 Objective 3	55
3.10	0.4 Objective 4:	56
3.13	Research Validity and Reliability	56
3.14	Ethical Considerations	57
СНАРТ	TER FOUR	58
RESUL		58
4.1	Data Presentation	58
4.1.		58
4.1.		63
4.1.		70
4.1.	J C I	76
4.1.	7 11 1	82
4.1.		87
4.1.	•	93
4.1.	e e	93
4.2	Survey Analysis	94
4.2.	· · · · · · · · · · · · · · · · · · ·	94
4.2.		a as seen
by ]	Patients	98
4.2.		a as seen
by ]	Medical Practitioners	100
4.2.		101
4.2.	C	
	ctitioners	102
4.3	Interview Analysis	103
4.3.	•	103
4.3.		105
4.3.		106
4.4	Discussion of Results	107
4.4.	.1 Evaluation of The Selected Women's Hospital	107
4.4.	.2 Extent to Which the Healing Architectural Elements are Implementation	ented in
	omen's Hospital in Lagos Nigeria	107
4.4.		
	covery Process of the Patients in Women's Hospital	107
4.5	Recommendations for Further Study	108
4.6	Site Analysis	109
4.6	•	109
	.2 Site Location	112

4.6.3 Site Analysis	112	
CHAPTER FIVE	115	
DESIGN CRITERIA AND APPROACH	115	
5.1 Project Goals	115	
5.2 Project Design Objectives	115	
5.3 Functional and Space Criteria	115	
5.3.1 Inpatient Service	115	
5.3.2 Outpatient Services	116	
5.3.3 Diagnostics and Treatment	116	
5.3.4 Administration	116	
5.3.5 Support services	117	
5.3.6 Research and Teaching Services	119	
5.4 Operational Requirements	119	
5.4.1 Flexibility and Expandability	119	
5.4.2 Cleanliness and Sanitation	120	
5.4.3 Accessibility	120	
5.4.4 Controlled Circulation	121	
5.4.5 Sustainability	121	
5.4.6 Therapeutic Environment	122	
5.4.7 Security and Safety	122	
5.5 Technological and Environmental Criteria	123	
5.6 Legal and Planning Regulations	123	
CHAPTER SIX	125	
DESIGN PHILOSOPHY, CONCEPTUALISATION AND PROPOSAL	125	
6.1 Design Philosophy	125	
6.2 Design Development Process	125	
6.3 Design Considerations	125	
6.4 Site Zoning	126	
6.5 Bubble Diagram	127	
6.6 Design Proposal	129	
REFERENCES	130	
APPENDICES	148	
Appendix A- QUESTIONNAIRE 1	148	
Appendix B- QUESTIONNAIRE 2	152	
Appendix C- INTERVIEW GUIDE	155 156	
Appendix D- OBSERVATION GUIDE		
Appendix E- APPROVAL LETTERS AND CONTRACTS		
Ayinke House Approval Letter		
Bridge Clinic MOU Contract		
Appendix F- ETHICAL APPROVAL		
Appendix C. DESIGN	164165	

## LIST OF TABLES

<b>TABLES</b>	TITLE OF TABLES	<b>PAGES</b>
Table 0.1- Do	ocumented Women's Hospitals in Lagos, Nigeria	42
	ady Population, Sampling Frame and Sample Size for the Questionnaire	42
Table 0.3- Multi-stage Selection of WHF in Lagos State, Nigeria		44
Table 0.1- Bridge Clinic Observation Analysis		60
Table 0.2- Ay	rinke House Observation Guide	66
Table 0.3- Ou	treach Signature Hospital Observation Analysis	72
Table 0.4- Isa	la Meppel Hospital Observation Analysis	78
Table 0.5- Ka	tz Women's Hospital, Northwell Health Observation Analysis	84
Table 0.6- Joa	an Kirner Women's and Children's Hospital Observation Analysis	90
Table 0.7- He	ealing Elements Implemented in Indigenous Case Studies	93
Table 0.8- He	ealing Elements Implemented in International Case Studies	94
Table 0.9- Ca	tegory of respondents	95
Table 0.10- N	Tame of Facility	95
Table 0.11-A	ge Group of Respondents	96
Table 0.12- E	ducational Qualification of Respondents	96
Table 0.13- N	Status of Respondents	97
Table 0.14- F	requency of Facility Visit	97
Table 0.15- T	ime Spent Per Visit (Hours)	98
Table 0.16- F	requency of Visit Within 2 Years	98
	nplementation Inference	99
Table 0.18- In	nplemented Healing Elements as Seen by Patients	99
Table 0.19-In	rplemented Healing Elements as Seen by Medical Practitioners	100
Table 0.20- E	ffect Inferences	101
Table 0.21- E	ffect of Healing Elements on Patients as Seen by Patients	101
Table 0.22- E	ffect of Healing Elements in Patients as Seen by Medical Practitioners	102
Table 0.23- D	Demographical information of respondents	104
Table 0.24- E	lements of the Surrounding Environment identified by health practition	ers 105
Table 0.25- T	able of Inferences	106
	lealing Elements Effects on Patients	106
	ummary of Site Selection Criteria	112
Table 0.1- Gu	idelines for Mixed-Use Corridors 1 from the Planning Authority	124

## LIST OF FIGURES

FIGURES	TITLE OF FIGURES	PAGES	
Figure 0.1- Bridge Clinic Approach View			
Figure 0.2- Bridge Clinic Ground Floor Layout			
Figure 0.3- Bridge Clinic First Floor Layout			
Figure 0.4- Ayinke House	Approach View	64	
Figure 0.5- Ayinke House	e Ground Floor Plan	65	
Figure 0.6- Ayinke House	e First Floor Plan	65	
Figure 0.7- Ayinke House	e Second Floor Plan	66	
Figure 0.8- Outreach Sina	ture Hospital Approach View	70	
Figure 0.9- Outreach Sign	nature Hospital Ground Floor Plan	71	
Figure 0.10- Outreach Sig	gnature Hospital Typical Floor Plan	71	
Figure 0.11- Isala Meppel	Arial view	76	
Figure 0.12- Isala Meppel	Ground Floor Plan	77	
Figure 0.13- Isala Meppel	First Floor Plan	78	
Figure 0.14- Katz Womer	n's Hospital, Northwell Health Approach View	82	
Figure 0.15- Katz Womer	n's Hospital, Northwell Health Ground Floor Plan	83	
Figure 0.16- Katz Women's Hospital, Northwell Health Typical Floor Plan			
Figure 0.17- Joan Kirner	Women's and Children's Hospital Approach View	87	
Figure 0.18- Joan Kirner	Women's and Children's Hospital Ground Floor Plan	88	
Figure 0.19- Typical Floo	r Layout	89	
Figure 0.20- Typical Floo	r Layout for Higher Levels	89	
Figure 0.21- Gender of Ro	espondents	95	
Figure 0.22- Physical/ Me	ental Challenge of The Respondents	97	
Figure 0.23- Site option 1	Location map	109	
Figure 0.24- Site option 2	Location map	110	
Figure 0.25- Site option 3	Location map	111	
Figure 0.26- Site Location	n for Proposed Site	112	
Figure 0.27- Wind speed	averages for Lekki during the last year	113	
_	rage in Lekki from January to December	113	
Figure 0.29- Sunshine ave	erages for Lekki during the last year	114	
Figure 0.1- Concept Deve	elopment Sketches	125	
Figure 0.2- Site Privacy Z	Coning	126	
Figure 0.3- Site Noise Zoning			
Figure 0.4- Ground floor	Plan	127	
Figure 0.5- First Floor		128	
Figure 0.6- Second Floor		128	
Figure 0.7- Third Floor		129	

**ABSTRACT** 

The research looks at the concept of healing architecture and its possible therapeutic impacts on patients in healthcare settings, specifically in the context of a proposed women's hospital in Lagos, Nigeria. The research takes a pragmatic approach, utilising both qualitative and quantitative approaches such as case studies, interviews, and structured questionnaires, with an emphasis on implementing healing architectural elements to aid quick recovery. The study examines the level of application of healing architectural elements in indigenous and international women's hospitals through extensive observations and examination of chosen case studies. The results acquired from patient and health practitioner perspectives suggest that the presence of these elements in the various buildings is rated above average. Overall, the presence of therapeutic architectural components in the buildings was evaluated above average by patients and practitioners, demonstrating their potential to improve healing experiences. First, the researcher collected data on the impact as perceived by patients using a standardised questionnaire. The findings revealed that the majority of patients feel these elements have a moderate effect, whilst health practitioners believe the elements have a significant impact on the patients' therapeutic experience and recovery process. While, the information gleaned from the interviews demonstrated that a patient's immediate environment and these elements influence his or her recuperation. This research contributes to the growing study of designing healthcare facilities with healing architecture elements, emphasizing the potential benefits of enhancing patient experiences and well-being.

**Keywords:** Healing architecture, Therapeutic design, Hospital, Salutogenesis, Evidence Based Design.