



UNIVERSITY OF NAIROBI

College of Architecture and Engineering

School of Arts and Design

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BDS 413: PROJECT PAPER

(Interior Design Specialization)

**EMOTIONAL DESIGN AND AFRO-FUTURISM IN REDESIGNING KARIOBANGI  
OUTREACH CHILDREN'S HOME**

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Project paper submitted in partial fulfillment of the requirement for the Bachelor of Art and Design Degree Submitted to the school of Art and Design, University of Nairobi.

**Submitted on the 14<sup>th</sup> of April 2020**

### **DECLARATION**

I declare that this project is my original work and affirm to the best of my knowledge has not been presented in the past for the fulfillment of any degree or certificate course in any other learning institution.



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## **DEDICATION**

To all stakeholders of Kariobangi Outreach Children's home, especially the cheerful children and parents.

## **ACKNOWLEDGEMENT**

I thank the Almighty God for the grace and strength He has given me while working on this project paper and throughout my program at the University of Nairobi for four years.

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Finally, to the manager of Kariobangi Outreach children's home, thank you for your warm reception and willingness to let me conduct my project.

## **ABSTRACT**

The mission of every children's home is to provide a safe environment for orphaned children to grow, learn and become responsible adults that are able to give back to their community. There have been vast discussions on improving the state of children's homes, transforming the facilities from an institution like establishment to a homelier and safe environment for the children. Considering the trauma that the children have been through, their psychological health is as important. This project sought to go a step further to create a therapeutic environment at Kariobangi Outreach children's home with the use of emotional design principles to cater to the children's psychological needs.

Kariobangi outreach children's home is situated in Kariobangi. It takes care of orphaned children from Kariobangi and offers them primary school education within its compound. In particular, this project focuses on the areas of interior architecture, exhibition and display, landscaping, and furniture concepts in order to tackle the psychological struggles encountered by the children and proposed relevant changes.

Once on the site, the researcher observed how the children and staff interacted with the environment around them. She was able to take photos and have informal discussions with the children, the parents taking care of the children and staff members like cooks and security guards. From the observations made by the researcher, Kariobangi Outreach children's home has catered for the basic needs of the children such as shelter, food and education but does not have the infrastructure to accommodate the psychological needs of the children.

In doing a review of what other researchers have done in relation to emotional design and therapeutic environments, the researcher went on to look for information from sources in the library such as books and thesis. The researcher also acquired a lot of information from online journals and articles. From the finding and observation, the researcher proposed the implementation of emotional design through color and shape psychology as well as a healing garden. She concluded that interior architecture, landscaping, furniture, exhibition and display at Kariobangi outreach children's home would benefit the children more when they are designed to assist in providing therapy as well as their primary functions.

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## **LIST OF ACRONYMS**

**UNICEF** - United Nations International Children's Emergency Fund

**NGO** - Non Governmental Organization

**CBO** - Community Based Organizations

**FBO** - Fixed-based Operator

**HIV/AIDS** - Human Immunodeficiency Virus, Acquired Immunodeficiency Syndrome

**CNN** - Cable News Network

**KAIST** – Korea Advanced Institute of Science and Technology

**IDEO** - Innovation Design Engineering Organization

## OPERATIONAL DEFINITION OF TERMS

**Emotional design** – Emotional design is a design concept that strives to create products that elicit appropriate emotions, in order to create a positive experience for the user.

**Psychology** - Psychology is the science of behavior and mind. Psychology includes the study of conscious and unconscious phenomena, as well as feeling and thought.

**Color psychology** - Color psychology is the study of hues as a determinant of human behavior. Color influences perceptions that are not obvious, such as the taste of food.

**Shape psychology** - The science studying the influence of shapes on people is known as the psychology of shapes. The study claims that each shape has its own meaning and influences our mind and reactions differently.

**Afrofuturism** - A movement in literature, music and art. Featuring futuristic or science fiction themes which incorporate elements of black history and culture.

**Healing garden** - A therapeutic garden is an outdoor garden space that has been specifically designed to meet the physical, psychological, social and spiritual needs of the people using the garden as well as their caregivers, family members and friends.

## **CHAPTER ONE**

### **1.0 INTRODUCTION TO THE STUDY**

Below is the introduction of the research paper.

#### **1.1 Introduction**

Inspired by the study of psychology, design scholars and researchers started to find out how emotion could affect design or vice versa. Based on the inspiration from the peripheral theory by William James, Desmet explored how different products could elicit different emotions (Desmet, 2002). This revealed the knowledge that the relationship between design objects and emotion would support designers to evaluate and influence the emotional impact of their designs. On the other hand, Spillers aimed at understanding how the product usability influenced the user experience, attitudes, expectations and motivations (Spillers, 2004). He concluded that emotion played a valuable role in the sense of making an impact on how the users interpret, explore and appraise the implications of design.

UNICEF and global partners define an orphan as a child under the age of 18 years who has lost one or both parents to any cause of death. By this definition, there were nearly 140 million orphans globally in 2015, including 61 million in Asia, 52 million in Africa, 10 million in Latin America and the Caribbean, and 7.3 million in Eastern Europe and Central Asia. This large figure represents not only children who have lost both parents, but also those who have lost a father but have a surviving mother or have lost their mother but have a surviving father. Of the nearly 140 million children classified as orphans, 15.1 million have lost both parents. Evidence clearly shows that the vast majority of orphans are living with a surviving parent, grandparent, or other family member. 95 per cent of all orphans are over the age of five. The estimated number of total orphans increased from 1990-2001 where it peaked at 155.4 million. Since 2001, the estimated number of total orphans has declined consistently but very slowly – at a rate of only 0.7% per year during this period

It is estimated that there were 2.6 million Orphans and Vulnerable Children in Kenya in 2012, of whom 1.8 million were orphans and 750,000 were vulnerable. Among orphans, 15% were double orphans. Over one-third of all the Orphans and Vulnerable Children were aged between 10 and 14

years. Households with one or more Orphan and or Vulnerable Child, which is 12% of all households, were usually in the lowest 2 wealth quintiles. 22% of Orphaned or/and Vulnerable Child's households had experienced moderate or severe hunger. Receipt of Orphaned and/or Vulnerable Child support services was low for medical at 3.7%, psychological was 4.1%, social at 1.3%, and material support at 6.2%; educational support was slightly more common at 11.5%. Orphan hood among children aged 15 years and below increased from 1993 to 2003 ( $P < 0.01$ ) but declined from 2003 to 2012 ( $P < 0.01$ ).

## **1.2 Background of the study**

Children that have experienced grief and trauma from the death of a parent are known to have significant unmet psychosocial needs. Living with an ill and dying parent and, then, with the life changes that accompany parent death are often manifested as emotional difficulties, behavior problems, and poor health and educational outcomes. Although service providers, including NGOs, CBOs, and FBOs, offer psychosocial support services, there is a need for evidence-based intervention on the contribution of interior and landscape design, particularly around grief, applicable to these children in sub-Saharan Africa.

Orphans spend a lot of time in the children's home where they find themselves placed in because this is their new home. For most of the children's homes, they seek to provide the children with the basic needs which are food, shelter, security and education as most of them can only afford these things. Considering what these children have been through, it is safe to say that therapy is, in fact a very crucial basic need that has been overlooked in most homes. There are so many ways to provide therapy but one of the most effective is using the environment around us. Physical environments directly impact our psychological health. It's easy to see why: we spend a *lot* of time thinking about what's around us. The environment within the children's home can be used to provide healing and therapy to the children.

The Children's center was started in the year 1997 and is located in Gitathuru area of Kariobangi North. It's a semi slum and mainly inhabited by low income earners. The Home's main objective is to care and support Orphans & Vulnerable Children who were largely affected by HIV/AIDS scourge. The children's home is managed by Outreach Community Center and caters for children aged 7 years to 18 years. They currently care for 30 children, 16 boys and 14 girls.

### **1.3 Statement of the problem**

The interior architecture of Kariobangi Outreach children's home has not adequately catered for the Psychological needs of the orphaned children in the home.

### **1.4 Objectives of the study**

To investigate how emotional design and Kenyan artifacts can fulfill the psychological needs of the children at Kariobangi Outreach children's home.

#### **Specific objectives**

1. To investigate the relevance of emotional design in the redesigning of a children's home.
2. To establish how emotional design has been used to create a therapeutic environment for orphaned children.
3. To establish the current interior architectural state of Kariobangi Outreach children's home.
4. To redesign Kariobangi Outreach children's home to create a therapeutic environment using emotional design.

### **1.5 Research questions**

1. What is the relevance of Emotional design in the redesigning of a children's home?
2. How has emotional design been used to create a therapeutic environment for orphaned children?
3. What is the current interior architectural state of Kariobangi Outreach children's home?
4. How can Kariobangi Outreach children's home be redesigned to create a therapeutic environment using emotional design?

### **1.6 Significance of the Study**

To be an excellent designer, it isn't sufficient to simply see how your clients are responding, rather get to know why they have responded in the way that they have. In the book Emotional Design, Don Norman investigates three unique levels of emotional design that catch how individuals sincerely respond to visual encounters: visceral, behavioral, and reflective. These encounters catch how we genuinely associate with objects.

It is important that designers comprehend that these passionate responses are not accidental. They can be developed and made with a human first plan approach that genuinely conveys endurance and susceptible worth.

Emotional design can change useful items into significant and enduring encounters. This commonly shows through 4 features according to Baker (2019):

Emotion-Memory Link — Occasions that are emotionally charged last longer in our memories compared to the product's functional value. We recall things that make us feel a specific way.

Aesthetic-Usability Effect — Aesthetic encounters engages convenience and increment the client's readiness to learn and adjust.

Persuasive Emotion (Gut Feeling) — emotions empower clients to settle on gut and quick choices. We use discernment to comprehend and decipher our reality, yet our feelings catalyze decision making.

Ownership Effect — clients place more of an incentive in encounters where they feel a sense of customized possession, as though the experience or item is an augmentation of them.

## **1.7 Limitation of the Study**

1. Access to the children's home is a challenge because it is located in the interior region of kariobangi and can only be accessed on foot.
2. Financial constraints and time factor is also limit in carrying out a comprehensive study.
3. There is very limited study on the use of emotional design to provide therapy in a children's home.

## **1.8 The scope of the Study**

Below is the geographical, conceptual and contextual analysis of the scope of study.

### **1.8.1 Geographical**

Kariobangi outreach Children's home is located in Gitathuru area of Kariobangi North. Kariobangi is situated in Nairobi, Kenya; its geographical coordinates are 1° 15' 0" South, 36° 53' 0" East. It is straddled by the Outering Road (on the Eastern part) and the Nairobi – Thika railway line on the

Western and southerly parts. Outering Road joins Kenya's main airport - the Jomo Kenyatta International Airport to the Thika Highway - via the GSU round-about on the North.

### **1.8.2 Conceptual**

This study will focus on the significance of incorporating emotional design in creating the therapeutic and healing environment for orphans. Some of the aspects that will be implemented are color and shape psychology as well as a healing garden. Areas of prominence will include landscaping, interior architecture, furniture, exhibition and display

### **1.8.3 Contextual**

Kariobangi is a low-income residential estate in northeastern Nairobi, Kenya. It consists of both apartments and slum-type dwellings. It is split into two parts, Kariobangi North and Kariobangi South. The northern part was constructed first, with first buildings built in 1961.

## **1.9 Conclusion**

Emotions play a big part in the way we interact with world around us. The physiological effect of our environments can go beyond just how it makes us feel at the moment. It can influence how we interact with similar environments and products in the future. In this case, this research is attempting to use emotional design to fulfill the psychological needs of children in a children's home.

In this chapter, the researcher has provided background information on emotional design as well as psychology. The problem statement, objectives of study, research questions, limitations and scope of study have been included in the above chapter.

## **CHAPTER TWO**

### **2.0 LITERATURE REVIEW**

This chapter contains literature relevant to the study.

#### **2.1 Introduction**

In this chapter the researcher will be documenting literature on emotional design, how it has been used in the past to achieve the same objective with this research which is to provide therapy to children living in children's homes through the interior architecture, exhibition and display, furniture and landscaping design.

The literature includes background information on emotional design as a design philosophy and the various levels within it. Information on color psychology, shape psychology and healing garden will be included in this chapter to capture some of the emotional design techniques that the researcher intends to use in the case study to fulfill the set objective. The researcher will also include case studies of institutions that have used these techniques and what they have been able to achieve with them.

#### **2.2 Review of Theoretical Literature**

Below is literature on Emotional design and Afrofuturism and its relation to therapy.

##### **2.2.1 Emotional design**

Emotional design strives to create products that elicit appropriate emotions, in order to create a positive experience for the user. To do so, designers consider the connections that can form between users and the objects they use, and the emotions that can arise from them. The emotions a product elicits can strongly influence users' perceptions of it.

In *Emotional Design, why we love or hate everyday things* by Don Norman, a prominent academic in the field of cognitive science, design, and usability engineering, distinguishes between three aspects, or levels, of the emotional system, which are as follows: the visceral, behavioral and reflective levels. Each of these levels or dimensions, while heavily connected and interwoven in the emotional system, influences design in its own specific way. The three corresponding levels of design are outlined below:



Figure 2.1: The Reflective Level of Emotional Design [infographics]. (Source: Komninou, 2017)

**Visceral Design** – Concerns itself with appearances. This level of design refers to the perceptible qualities of the object and how they make the user/observer feel. Much of the time spent on product development is now dedicated to visceral design, as most products within a particular group (e.g., torches/flashlights, kettles, toasters, and lamps) tend to offer the same or a similar set of functions, so the superficial aspects help distinguish a product from its competitors. Visceral design aims to get inside the user's/customer's/observer's head and tug at his/her emotions either to improve the user experience (e.g., improving the general visual appeal)

**Behavioral Design** – this has to do with the pleasure and effectiveness of use. Behavioral design is probably more often referred to as usability, but the two terms essentially refer to the practical and functional aspects of a product or anything usable we are capable of using in our environment. Behavioral design is interested in, for example, how users carry out their activities, how quickly and accurately they can achieve their aims and objectives, how many errors the users make when carrying out certain tasks, and how well the product accommodates both skilled and inexperienced users. Behavioral design is perhaps the easiest to test, as performance levels can be measured once the physical or usable parts of an object are changed or manipulated in some way.

The behavioral level essentially refers to the emotions we feel as a result of either accomplishing or failing to complete our goals. When products/objects enable us to complete our goals with the minimum of difficulty and with little call for conscious effort, the emotions are likely to be positive ones. In contrast, when products restrict us, force us to translate or adjust our goals according to their limitations, or simply make us pay close attention when we are using them, we are more inclined to experience some negative emotion.

Reflective Design – It considers the rationalization and intellectualization of a product. Can I tell a story about it? Does it appeal to my self-image, to my pride? This is the highest level of emotional design; representing the conscious thought layer, where we consciously approach a design; weighing up its pros and cons, judging it according to our more nuanced and rational side, and extracting information to determine what it means to us as an individual. Reflective thinking allows us to rationalize environmental information to influence the behavioral level.

Both enjoyment and self-expressiveness are influenced by the visceral level but also very much by the reflective level. The reflective level mediates the effects of the behavioral level – users may well put up with difficulties and shortcomings in the usability of the product or object because they believe they will gain other, non-functional benefits from it.

This research will be focusing mainly on the visceral level of emotional design because it concerns itself with appearances. This level of design targets the perceptible qualities of the object and how they make the user or observer feel. This is the emotional design level that is of most relevance to the study.

## 2.2.2 Color psychology



Figure 2.2: How colors impact moods, feelings and behaviors [Infographics]. (Source: Kendra, 2019)

Color psychology is the study of hues as a determinant of human behavior. Color influences perceptions that are not obvious, such as the taste of food. Colors can also enhance the effectiveness of placebos. For example, red or orange pills are generally used as stimulants.

Your feelings about color are often deeply personal and rooted in your own experience or culture. For example, while the color white is used in many Western countries to represent purity and innocence, it is seen as a symbol of mourning in many Eastern countries.

While perceptions of color are somewhat subjective, there are some color effects that have universal meaning. Colors in the red area of the color spectrum are known as warm colors and include red, orange, and yellow. These warm colors evoke emotions ranging from feelings of warmth and comfort to feelings of anger and hostility. Colors on the blue side of the spectrum are known as cool colors and include blue, purple, and green. These colors are often described as calm, but can also call to mind feelings of sadness or indifference.

The development of modern psychology also expanded the study of color, which has been used in design and marketing, architectural design, and interior design successfully for decades. Even Swiss psychologist, Carl Jung, defined the four temperaments in terms of colors: sunshine yellow, earth green, cool blue, and fiery red (Ferreira, 2019)



Figure 2.3: How to choose a brand color palette that fits your brand story to a T [digital image]. (Source: Poulomi, 2018)

## Red

Red evokes feelings of energy, war, danger, strength, power, and determination, but also passion, desire, and love. The various shades of red are light red, which represents joy, sexuality, passion sensitivity, and love. Pink, which signifies romance, love, and friendship. Reddish-brown is associated with harvest and fall, and dark red is associated with vigor, willpower, rage, anger, leadership, courage, longing, malice, and wrath.

## **Pink**

Pink represents compassion, nurturing, and love, and depending on the hue, it can make a room playful, feminine, and warm.

## **Orange**

Orange is associated with joy, sunshine, and the tropics. It represents enthusiasm, fascination, happiness, creativity, determination, attraction, success, encouragement, and stimulation. It is the only color to take its name from an object; the orange. It is a somewhat polarizing color, and people either love or hate it. In ancient cultures, orange was thought to increase energy levels and heal the lungs. But, dark orange can also mean deceit and distrust. Red-orange corresponds to desire, sexual passion, pleasure, domination, aggression, and thirst for action. Gold, a distant variation of orange, evokes the feeling of prestige; the meaning of gold is illumination wisdom and wealth

## **Yellow**

Yellow is the color of sunshine and associated with joy, happiness, intellect, and energy. It is an excellent choice for kitchens, dining rooms, and bathrooms. In hallways, yellow can feel welcoming. Light yellow is associated with intellect, freshness, and joy, and is a great outdoor house paint. Bright yellow evokes optimistic feelings.

## **Green**

Green is the color of nature. Considered the most restful color for the eye, green can transcend a sense of calmness and security when used in interior design. Green symbolizes growth, harmony, freshness, and fertility, and generally makes people feel emotionally safe. Green is well suited for every room in the house and can have a calming effect when used as the main color for decorating. Pairing light green with grey can create a modern feel, and using different shades in one room can add contrast. But, the various shades of green can evoke completely different feelings. Dark green is associated with ambition, greed, and jealousy, while aqua is associated with emotional healing and protection. Yellow-green can indicate sickness, cowardice, discord, and jealousy, while olive green is the traditional color of peace.

## **Blue**

Blue is associated with trust, loyalty, wisdom, confidence, intelligence, faith, truth, and heaven. Blue slows down the metabolism and has a calming effect, so it is considered to be beneficial to the mind and body when used in the home or office. It is said that blue will help bring down blood pressure and slow the heart rate. Light or pastel blue can create tranquility and is associated with health, healing, understanding, and softness, but can come across as ‘chilly’ on the walls in a room that receives very little natural light. Dark blue represents knowledge, power, integrity, and seriousness. Deep midnight blue can create a feeling of luxury when used in a bedroom. Sapphire blues can be great as accent colors.

## **Purple**

Purple, in its darkest values, is dramatic, rich, and sophisticated. It can give a design scheme depth and is associated with luxury and creativity. Lighter values of purple, such as lavender, can add a restful quality to a bedroom. Plus, about 75 percent of pre-adolescent children choose purple over any other color. Interior designers use purple to add drama, create a hip feel by combining purple, pastels, and modern art; add a bold statement with neon purple, or give a room a mysterious feel with dark purple as an accent.

### **2.2.2.1 Color Psychology as Therapy**

Several ancient cultures, including the Egyptians and Chinese, practiced chromo therapy, or the use of colors to heal. Chromo therapy is sometimes referred to as light therapy or color ology and is still used today as a holistic or alternative treatment.

In this treatment:

- Red was used to stimulate the body and mind and to increase circulation.
- Yellow was thought to stimulate the nerves and purify the body.
- Orange was used to heal the lungs and to increase energy levels.
- Blue was believed to soothe illnesses and treat pain.
- Indigo shades were thought to alleviate skin problems.

### **2.2.3 Psychological effect of shapes**

Shape is the structure (the organization, arrangement of parts) of a localized field constructed “around” an object. This field consists for example, of geometric entities — such as curvatures, singularities.

Shape is also the external form, contours, or outline of someone or something.

This study claims that each shape has its own meaning that influences our mind and reactions differently. There are many psychological tests which are used to define the personality or mental condition via shapes. For example, a favorite figure can tell about person’s character traits, a quickly chosen shape can show what’s on the mind.

Psychologists and artists have claimed that the simplicity-complexity of an image is determined not only by lines or curves, but also by its overall structure and support (Arnheim, 1974). It is important to note that roundness and complexity of shapes are fundamental to understanding emotions.

Roundness – Studies (Aronof, 2006, Reber, Schwarz & Winkielman, 2004) indicate that geometric properties of visual displays convey emotions like anger and happiness. Bar et al confirms the hypothesis that curved contours lead to positive feelings and that sharp transitions in contours trigger a negative bias.

Complexity of shapes - As shown in art created over the years, human beings visually are more drawn to simplicity. Any stimulus pattern is almost always perceived in the most simplistic structural form. Though the perception of simplicity is partially subjective to individual experiences, it can also be highly affected by two objective factors, parsimony and orderliness. Parsimony refers to the minimalistic structures that are used in a given representation, whereas orderliness refers to the simplest way of organizing these structures (Arnheim, 1974).

## Squares and rectangles



Figure 2.4: Bauhaus: An everlasting design legacy [painting]. (Source: Emmett,2019)

These shapes are perceived to be the most commonly used. The walls, furniture, books, monitors, cell phones, cameras as well as other everyday things have the square and rectangular shape. Straight lines and right angles of these two shapes give a sense of reliability and security. People strongly associate squares and rectangles with buildings the reason why they bring the feeling of trust and authority. Some of the common meanings associated with these shapes are: discipline, strength, courage, security, reliability.

## Triangles

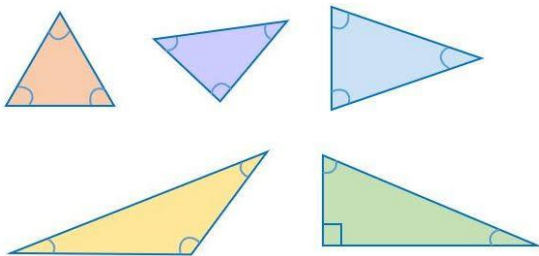


Figure 2.5: Geometric shapes: characteristics of triangles [image]. (source: Javier, 2018)

Triangle is an energetic and dynamic shape which is always associated with motion and direction. The lines are placed that way so our eyes automatically move to the top of a triangle or in the direction it is placed. Triangles can have different meanings. An upright triangle brings the feelings of stability and balance but the reversed one looks risky and ready to fall giving people a sense of tense. Common meanings associated with triangles are: excitement, risk, danger, balance and stability.

## Circles, ovals and ellipses

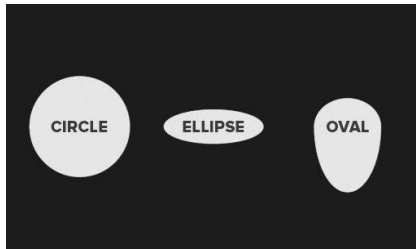


Figure 2.6: Circles vs ellipses vs ovals [GIF]. (Source: Marc, 2018)

The meaning of this shape is the eternity since they have no beginning or end. The circle has a long association with the sun and earth as well as other cosmic objects while ellipse is similar to the whole universe. That's why round shapes may give the feeling of magic and mystery. In addition, unlike the previous shapes, circles don't have angles so it makes them softer and milder. Common meanings associated to this shape are: eternity, femininity, the universe, magic and mystery.

## Spiral

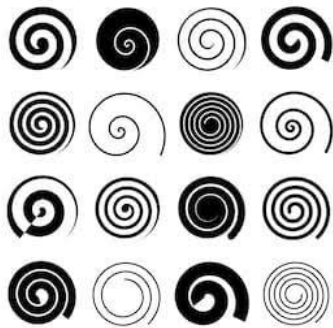


Figure 2.7: Set of simple spiral elements, isolated vector graphic [vector graphic]. (Source: Lilam, 2017)

These spaces can be often seen in nature for example in shells and flowers thus are often associated with the circle of life and growth. In some cultures, spirals may represent the knowledge or information. In modern society, they are seen as a sign of creativity and a fresh mind. Common meanings associated with spirals are: growth, creativity, calmness and intelligence.

## Organic shapes

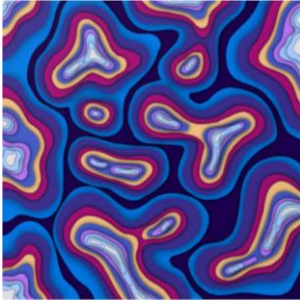


Figure 2.8: Organic shapes [digital art]. (Source: Rafael, 2015)

All the things created by nature have their own unique shape. Leaves, flowers, trees, animals and many other representatives of flora and fauna become the source of inspiration for artists and designers. Natural shapes have clear meanings of the plants and animals which they symbolize. They often bring the feeling of refreshment and unity with the natural environment. In addition, animals and plants can also have their own characteristics and symbols. For example, a rose is a flower of love and passion while a lion is a symbol of pride and bravery. Common meanings associated with organic shapes: originality, organic, balance and refreshment.

## Abstract shapes meaning

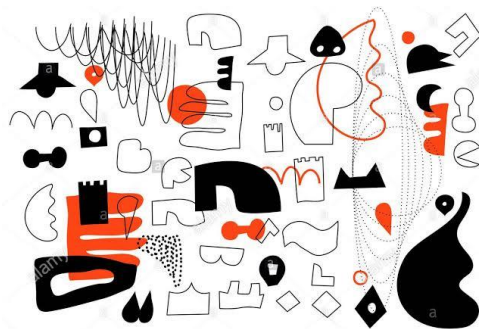


Figure 2.9: Unique trendy artistic collection of abstract shape [illustration]. (Source, 2018)

They are usually visual symbols of abstract ideas or simplified versions of natural shapes. Some abstract shapes can be too difficult to recognize because they are stylized and only small details give a hint to what it is. One abstract shape often has both small details give a hint to what it is. One abstract shape has both direct and figurative meanings. It is often used in graphic design, especially for logos and icons. Abstract shapes are an effective way to transfer a message quickly without text. Common meanings associated with abstract shapes are: uniqueness, the duality of meaning, confusion.

### 2.2.4 Wicker furniture

Wicker furniture has an extremely long history that spans about 5,000 years to the present day. The word wicker is of Scandinavian descent and originates from the word *wika* which means “to bend” and *vikker* which means willow. Wicker has been around for thousands of years and is in fact one of the oldest furniture making techniques recorded by history. Just to clear things up, wicker is a type of weave and rattan is the material. The two terms are often mistakenly used interchangeably. Originally used as a basket weaving technique, wicker evolved to be used to make many different items.

The history of Wicker goes all the way back to the times of Ancient Egypt. Originally woven out of natural rattan fibers, wicker has also been made out of cane reeds, plastic and synthetic resin. Wicker’s popularity came from Egypt and Ancient Sumerian Civilizations to Rome, various European countries, and finally arriving in America on the Mayflower in the form of a baby carriage. Archaeologists have even found Egyptian wicker to be made out of rattan and swamp grasses native to the area.

The art and craft of wicker is still taught to keep this traditional art form alive. Although modern technology makes the production process more efficient, all wicker furniture is still handmade, keeping quality and craftsmanship a staple of this ancient art form. Modern wicker furniture is seen to be sleek, artful, and improved from the past historical materials and techniques used. Below are details the different types and techniques used to make wicker furniture.

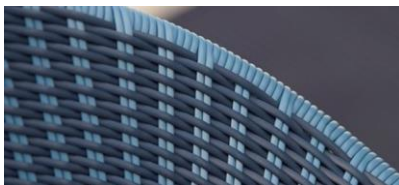


Figure 2.10: Woven furniture - Types and techniques [image]. (Source, 2018)

**Woven** - A broad term used to describe furniture constructed from weaving natural or synthetic materials to form a fabric-like structure.

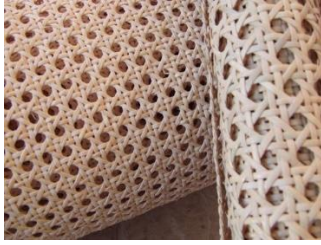


Figure 2.11: Woven furniture - Types and techniques [image]. (Source: Paula, 2018)

Cane - Cane comes from the rattan plant; it's made by peeling off the skin of the rattan vine. It's a natural raw material whose stems have special properties - mostly strength & flexibility - which make it perfect for chair seats and backs.



Figure 2.12: Woven furniture - Types and techniques [image]. (Source: Paula, 2018)

Lloyd Loom – it is a machine woven material consisting of tightly twisted Kraft paper, reinforced by paper wrapped vertical strands containing a steel wire core. The weave is woven in a continuous piece on the loom and is then cut and nailed onto a frame.

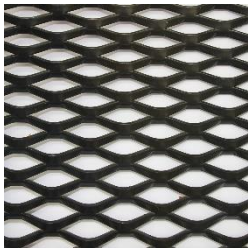


Figure 2.13: Woven furniture - Types and techniques [image]. (Source: Paula, 2018)

Mesh - is a term for material that has an interlacing structure using wire or thread (similar to a web or net). Plastic mesh backs are popular on task chairs because they're comfortable, breathable and lightweight. Metal mesh makes for a lighter outdoor furniture and allows wind to water to rain through.



*Figure 2.14: Woven furniture - Types and techniques [image]. (Source: Paula, 2018)*

Webbing - is historically used as a base for seating. It consists of strong flat strips of material, typically elastic or leather, woven into each other to form a flexible and resilient form.

The researcher chose to use wicker furniture as inspiration for her furniture designs because of the flexibility of the materials used in the wicker technique. The different patterns and techniques exhibited within wicker furniture allows the researcher to freely implement shape psychology within her furniture designs and have the desired impact.

### **2.2.5 Healing garden**

Healing landscapes have long been an important aspect of human life. When people first began erecting dwellings, healing places could be found within nature through sacred groves, special rocks and caves. In the Western world, monastic communities supported infirmaries that were based in the use of herbs and prayer and almost always included a cloistered garden. Modern advances in technology focused on healing have largely diminished the importance of nature in the healing process and this has been one unfortunate result of the “cure over care” phenomena found within many aspects of the healthcare field.

Based on research by the Kaplans and Ulrich, it could be argued that any garden is healing. However, to be defined as such, a healing garden should give a sense of restoration from stress and have other positive influences on patients, orphans and vulnerable children. These healing landscapes can be located in or outdoors, but to qualify as healing “gardens” they should have real nature such as plants and/or water features (Cooper-Marcus and Barnes, 1999).

### 2.2.6 Afrofuturism

The term ‘Afrofuturism’ was coined in 1990s by, cultural critic, Mark Dery in his edited collection *Flame Wars: The Discourse of Cyber culture*. Dery uses the term Afrofuturism to define “speculative fiction that treats African-American themes and addresses African-American concerns in the context of 20th century techno culture — and more generally, African-American signification that appropriates images of technology and a prosthetically enhanced future.” Lisa Yaszek interprets Dery’s definition in two-parts: “as the first part of Dery’s definition suggests, Afrofuturism is closely related to science fiction as an aesthetic genre...However, as Dery argues in the second half of his definition, Afrofuturism is not only a subgenre of science fiction.

Instead, it is a larger aesthetic mode that encompasses a diverse range of artists working in different genres and media who are united by their shared interest in projecting black futures derived from Afro diasporic experiences.” Other definitions of Afrofuturism come from Ytasha Womack, in which she defines Afrofuturism as “an intersection of imagination, technology, the future, and liberation.”.

Lastly, Adriano Elia describes Afrofuturism as “a transdisciplinary cultural movement based upon the unusual connection between the marginality of allegedly “primitive” people of the African diaspora and “modern” technology and science fiction.” In his article, “The Languages of Afrofuturism,” Elia considers the different languages of Afrofuturism through the art of Basquiat, music of Sun Ra, and literature of W. E. B. Du Bois, Ralph Ellison, and Octavia Butler. Though there are many definitions of Afrofuturism, they all have themes of reclamation, black liberation, and re envisioning of the past and predictions of the future through a black cultural lens in common.

Though Afrofuturism music did not begin to bud until the 1950s, the literature can be found as far back as the nineteenth century. Lisa Yaszek cites Martin Delany, Charles Chesnutt, and Edward Johnson (Yaszek, 2006) as early Afrofuturism story tellers. These artists told stories of changing science and societal conditions pertaining to African-American history and future. Writers like W.E.B DuBois and Ralph Ellison are also considered early Afrofuturism contributors. Other writers who are thought to have contributed a significant amount of Afrofuturism literature are Octavia Butler and, Harlem-born sci-fi writer, Samuel Delany. Butler is credited with making a special connection to women readers through her use a heroine in her Afrofuturism novels.

## **2.3 Profile of World renowned designer advocating Researcher's Design Philosophy**

Below is a world renowned researcher and writer advocating for emotional design.

### **2.3.1 Donald Arthur Norman**

Donald Arthur Norman (born December 25, 1935) is an American researcher, professor, and author. Norman is the director of The Design Lab at University of California, San Diego. He is best known for his books on design, especially *The Design of Everyday Things*. He is widely regarded for his expertise in the fields of design, usability engineering, and cognitive science. He is a co-founder and consultant with the Nielsen Norman Group.

He is also an IDEO fellow and a member of the Board of Trustees of IIT Institute of Design in Chicago. He also holds the title of Professor Emeritus of Cognitive Science at the University of California, San Diego. Norman is an active Distinguished Visiting Professor at the Korea Advanced Institute of Science and Technology (KAIST), where he spends two months a year teaching.

Much of Norman's work involves the advocacy of user-centered design. His books all have the underlying purpose of furthering the field of design, from doors to computers. Norman has taken a controversial stance in saying that the design research community has had little impact in the innovation of products, and that while academics can help in refining existing products, it is technologists that accomplish the breakthroughs. To this end, Norman named his website with the initialism *JND* to signify his endeavors to make a difference.

## **2.4 Design exemplar**

Below is an example of a healing garden design.

### 2.4.1 Therapeutic Gardens at Lutz Center



Figure 2.15: Therapeutic Garden at Lutz Center [image]. (Source: Peter, 2012)

Peter (2012), Grounded in evidence based and universal design concepts, the proposed therapeutic gardens at Lutz Center afford numerous opportunities for residents, their families, visitors, and staff to come together as a community and link to the surrounding natural environment. The gardens also provide a unique venue for implementing therapy services, such as physical, occupational, speech, and horticultural therapies.

The goal of the courtyard gardens is to create environments where residents and staff feel that they are truly living and working in park and homelike settings rather than institutional environments. The intergenerational elements planned for the gardens support family visits and encourage meaningful interactions between multiple generations.

Taking into account site and existing building conditions, the courtyard design concept of a sensory garden in the woods contrasts with interior environments and connects to the natural setting that surrounds the center. The sensory garden in the woods will evoke the sights, sounds, smells, and textures one finds in a forest. It will also offer opportunities in a natural outdoor setting to nurture the underlying and more foundational sensory systems: proprioception, kinesthesia, vestibular and provide realistic settings for physical, occupational and speech therapy programs.

While the concept of a sensory garden in the woods provides a unifying theme, it also allows specific design elements that integrate and support the indoor activities associated with each entrance: the residential area, therapy area, dining area and facility lobby. Each of these entries has an individual seasonal theme as a subtle identification for wayfinding indoors and out.

Gently curved paths wind through the entire Sensory Garden encouraging walking as well as providing an outdoor alternative to get from one part of the facility to another. While a continuous flat walk is provided to main destinations, alternate paths with ramps, stairs and a variety of surfaces provide opportunities for therapy, areas for additional exercise and areas to “get away”. The main path will be 8’ wide with curbs or other edging, allowing two wheeled mobility devices, wheelchairs or a wheelchair and a stroller to move in tandem. The side paths will be 6’ wide, offering a sense of intimacy.

Coming off the residential activities lounge, a “back yard” is defined by a vine covered trellis bordered by a curving berm planted with, among other things, herbs, for residents, family members, and visitors to touch and smell. This will be an ideal spot for barbeques, parties, chair yoga, card games and small concerts.

A working/therapy garden adjacent to the therapy clinic offers a unique opportunity to receive physical, occupational, and speech therapy outside. This garden increases the usable therapy space and includes many elements found in an indoor therapy clinic such as flexible and adjustable height table and chairs, a ramp, stairs with railings, pathways of different surfaces, curbs and curb cuts, parallel bars, varying height planters, hanging plants on pulleys, a vertical garden, and plantings that nurture the senses.

#### **2.4.2 Victor Ekpuk**



*Figure 2.16: Artist Victor Ekpuk's mesmerizing mural pays homage to African writing systems [photograph]. (Source: Milly, 2019)*

According to Chan (2019), Among more than 100 participating artists at the "Get Up, Stand Up Now - Generations of Black Creative Pioneers," exhibition in London is Nigerian-American Painter Victor Ekpuk. His room-sized installation, "Shrine to Wisdom," invites visitors to sit and learn, while immersed in one of his signature murals, which is based on an ancient writing system.

People come into the room and feel like they are in a sacred space where they should learn something. They were always eager to know what the symbols mean. The idea was to have an interactive space where people would walk in and be engulfed, (and) feel like they are in the womb of this knowledge. You are engulfed in entirety in writing.

In an interview with CNN, Victor Ekpuk labeled his work afro futuristic saying: Yes, it is definitely afro-futuristic. In a sense, Nsibidi themselves are afro-futuristic signs and technology. You see it in "Black Panther" - (in) the symbols they used in the palace and on the clothes the actors were wearing. Even bracelets had beads with inscriptions of Nsibidi and other African graphic systems. And each of those beads were power systems that could be used as a weapon, or as a seed to create more.

## **2.5 Design process**

The researchers design process is simple and straight forward. The researcher will identify a researchable problem and develop opportunities that can be capitalized on. The researcher will then define the problem, the target users, the users' needs, the planned goal to accomplish and the impact it will have on the user. At this stage the researcher will conduct research on the identified problem and review theoretical literature.

Following the literature review, I will conduct a site analysis to determine the strength and weakness, opportunities and threats of my case study. After the data has been collected, it will be presented for review. Based on the findings from the literature review and the site analysis, the researcher will create concepts of how the literature can be used to solve the presented problem. There will be brainstorming, sketching, drawing and developing the visual flow of the design. Finally, the researcher will create a model of the solution to the problem presented.

## **2.6 Analytical review**

We as designers need to create products with value, trust and most importantly, create an emotional connection between the consumer and the product. The attachment that the client has with the design is what determined the success of the design and its impact on society. This research intends to take design a step further and attempt to use emotional design to create products and design

environments that are capable of providing therapy and healing to children who have been through the traumatic experience of losing a parent and their home. This research will shed light on the positive impact design can have in the lives of orphans and the community around them.

## **2.7 Conclusion**

Emotional design involves the creation of products that elicit appropriate emotions to create the intended experience. It considers the connections that can be made between users and products and the emotions that can arise. There are three levels of emotional design that are considered in this chapter, visceral, behavioral and reflective emotional design with focus on visceral emotional design.

Different aspects of emotional design have been discussed in this chapter. They involve color psychology which is the study of hues as a determinant of human behavior. This study also talks about the Psychology of shapes, which is the study that claims that each shape has its own meaning and influences our mind and reactions differently. A healing garden has also been discussed as a way of designing for therapy. Design has been used to create a healing and therapeutic environment to fulfill the physiological needs of those exposed to trauma and grief.

## **CHAPTER 3**

### **3.0 RESEARCH DESIGN AND METHODOLOGY**

Below are the research methodologies used to conduct this research.

#### **3.1 Introduction**

This chapter covers the research methods intended to be used to acquire information necessary to propose solutions to the problem presented in this study.

#### **3.2 Research Methodology**

A research design is an action plan that provides a clear view of what is to be achieved. The design involves defining the basic components of the investigation, for example by establishing the validity of research questions (Jennifer, 2002). This project used a qualitative case study design. A case study is an in-depth study of a particular research problem rather than a sweeping statistical survey or comprehensive comparative inquiry. It is often used to narrow down a very broad field of research into one or a few easily researchable examples.

The case study research design is also useful for testing whether a specific theory and model actually applies to phenomena in the real world. It is a useful design when not much is known about an issue or phenomenon. This will involve the understanding of the issue through detailed analysis of the conditions and relationships. A variety of methodologies can be applied to investigate the research problem. The design can add onto what is already known through previous research. The design can provide detailed descriptions of specific cases (Jeane, 1999 and Robert, 2003).

#### **3.3 Population**

A sample is a subset of a population selected to participate in the study, it is a fraction of the whole, selected to participate in the research project (Brink 1996, p. 133; Polit & Hungler 1999, p. 227).

Polit and Hungler (1999, p. 37) refer to the population as an aggregate or totality of all the objects, subjects or members that conform to a set of specifications.

The sample population within the site consists of: the parents taking care of the children, the 30 children, 16 boys and 14 girls and 2 cooks.

*Table 3.1: Population sample. (source: Author, 2019)*

<b>Category</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Father	1	2.9%
Mother	1	2.9%
Girls	14	41.2%
Boys	16	47.1%
Cooks	2	5.9%
<b>Total</b>	<b>34</b>	<b>100%</b>

### **3.4 Sampling method**

Convenience Sampling: This is a sampling technique that qualitative researchers use to recruit participants who are easily accessible and convenient to the researcher. This may include utilizing geographic location and resources that make participant recruitment convenient.

In this study the researcher will be using the children, cooks and parents that live in the children's home to conduct this research.

### **3.5 Data collection procedures**

Data collection is a systemic way of gathering information that is relevant to the research purpose or questions (Burns and Grove, 1997, p. 383). It produces descriptive data in the participant's own written or spoken words. It is concerned with non-statistical methods (De Vos, 2002, p. 79)

Data collection methods can be divided into two categories, that is secondary methods of data collection and primary methods of data collection. Secondary data is a type of data that has already

been published. Such data can be found in books, publications and magazines. Primary data, on the other hand, can be either qualitative or quantitative.

Quantitative methods examine numerical data. This data type can be represented using graphs and tables. It involves the collection, analysis, and interpretation of data that is not easily reduced to numbers. It is exploratory in nature as it tries to explore not predict the outcome; It seeks to answer the questions what and how. My focus in this study is Qualitative methods of data collection and analysis.

(Bryman and Bell, 2007) stated that qualitative research is a research strategy that indicates the relationship between theory and research and usually emphasizes on how theories were generated. As a research strategy qualitative research is inductivist, constructionist, and interpretivist, but qualitative researchers always don't subscribe to all three of these methods.

This research was qualitative therefore; the following data qualitative collection methods were used:

- Interviews

This involved the asking of questions by the researcher to the individual in order to get their opinions and ideas on the issue. Interviews are useful to explore experiences, views, opinions, or beliefs on specific matters. Accounts can be explored and compared to others, to develop an understanding of the underlying structures of beliefs (Green & Thorogood, 2010). There are different grades of structuring the interview: structured, semi-structured or open/in-depth. The researcher developed a topic list before the start of the interview, which was used in a flexible manner. As the interview is a product of interaction between the researcher and the interviewee, the setting and skills of the researcher was of importance.

- Observation

Observational methods are used to understand phenomena by studying people's accounts and actions in an everyday context. There are different types of observations, with various degrees of research participation, like non-participating observation for example by using video recordings, and participant observation or ethnography (Hammersley & Atkinson, 2007, p. 3). The researcher

will be taking notes from viewing the status of the interior of the children's home. Measurements were also taken as part of data collection and site analysis.

- Photographs

This involved capturing images with a camera of the features of the selected site for the research. Photography provides the best visual representation of the site and therefore the researcher used this instrument to point out the problem statement explicitly as it was at the site. The photos taken facilitated the researcher to argue the main areas of concern and therefore enhanced the analysis of the site as at that moment.

### **Secondary and tertiary sources**

Data for this research was sourced from publications for purposes of literature review. These publications include books, articles, journals, reports, academic writings and internet sources. Based on the problem statement, the information was assessed on the basis of its application in a children's home.

### **3.6 Data Analysis Tools**

At the heart of qualitative data analysis is the task of discovering themes. By themes we mean abstract, often fuzzy, constructs which investigators identify before, during and after data collection (Coffey, Holbrook & Atkinson, 1996). The researcher analyzed the data collected based on the information acquired from the field in the form of photographs, interviews and observation. After the researcher had read through the transcribed materials, dominant points were identified. This involved examining, comparing and categorizing data.

- Content analysis: Content analysis is a research tool used to determine the presence of certain words, themes, or concepts within some given qualitative data. Sources of data could be from interviews, open-ended questions, field research notes, conversations, or literally any occurrence of communicative language (for example, books, essays, discussions, newspaper headlines, speeches, media, historical documents)
- Site analysis: site analysis is the process of evaluating particular locations physical, mental and social characteristics with the ambition of developing a design solution that will both address and enhance its internal and external context.

- Narrative analysis: refers to a cluster of analytic methods for interpreting texts or visual data that have a storied form.
- Visual analysis: Visual content analysis is the process of deriving meaningful descriptors for image and video data.

### 3.7 Data presentation methods

Photographs were used to describe the actual situation of the site and their relevance to the research. The primary data collected by the use of photographs will be presented photographically and complimented by descriptions underneath each and every photo to give a clear, comprehensive and detailed pictorial nature and state of the site and their relevance to the research. The measurements taken were used in making of construction drawings to show the proposed new look of the redesigned site. A written report was also presented with all the data collected, literature review, findings and solutions in the form of a project paper.

### 3.8 Logical frame work

Table 3.2: Logical frame work. (Source: Author, 2019)

<b>Objective 1: <i>To investigate the relevance of emotional design in the redesigning of a children's home.</i></b>				
<b>Data Needs</b>	<b>Data Source</b>	<b>Data Collection Tools</b>	<b>Analysis Method</b>	<b>Expected Output</b>
<b>To determine the relevance of emotional design</b>	Literature	Review of literature	Content Analysis	Knowledge of the Relevance emotional design
<b>Objective 2: <i>To establish how emotional design has been used to create a therapeutic environment for orphaned children.</i></b>				
<b>Data Needs</b>	<b>Data Source</b>	<b>Data Collection Tools</b>	<b>Analysis Method</b>	<b>Expected Output</b>
<b>To investigate how Therapeutic environments have been designed</b>	Literature	Review of literature	Content Analysis Visual Analysis	Case studies of therapeutic environments
<b>Objective 3: <i>To establish the current interior architectural state of Kariobangi Outreach children's home.</i></b>				

Data Needs	Data Source	Data Collection Tools	Analysis Method	Expected Output
<b>To determine the existing conditions the site</b>	Site	Note taking & measurements Interviews Photographs observation	Site Analysis Narrative Analysis Visual analysis	Knowledge of the existing conditions of the site
<b>Objective 4: <i>To propose emotional design solutions for the interior design, exhibition &amp; display, furniture and landscape of Kariobangi Outreach children's home to create a therapeutic environment</i></b>				
Data Needs	Data Source	Data Collection Tools	Analysis Method	Expected Output
<b>Strategies for implementing emotional design to site</b>	Literature Data from site	Prototyping Review of literature & data from site	Design process	Propose design solutions for interior architecture, Furniture, exhibition & display and landscaping for Kariobangi emotional design.

### 3.9 Conclusion

The research methodology chosen by the designer ensured that data was collected in the most accurate and efficient way. The researcher acquired as much data as possible for analysis.

In this chapter the researcher has discussed about the target population sample, sampling methods used during the research, data collection and analysis tools as well as how the data was presented.

## **CHAPTER 4**

### **4.0 SITE ANALYSIS AND INTERPRETATION OF FINDINGS**

Site analysis is a preliminary phase of architectural and urban design processes dedicated to the study of the climatic, geographical, historical, and infrastructural context of a specific site.

#### **4.1 INTRODUCTION**

This chapter will focus on interpreting data that was obtained from the primary research. Findings will be based on observations, interviews and photographs taken by the researcher. The data will be analyzed using narrations as well as pie charts for the quantitative analysis. The pie charts will show the percentages of some of the obtained data.

#### **4.2 Qualitative Analysis**

Qualitative analysis uses subjective judgment based on non-quantifiable information, such as management expertise, industry cycles, strength of research and development and labor relations.

##### **4.2.1 Site Analysis**

Below is the study of the climatic, geographical and infrastructural context of Kariobangi Outreach children's home.

##### **4.2.1.1 Geographical Analysis**

Kariobangi outreach Children's home is located in Gitathuru area of Kariobangi North. Kariobangi is situated in Nairobi, Kenya; its geographical coordinates are 1° 15' 0" South, 36° 53' 0" East. It is straddled by the Outering Road (on the Eastern part) and the Nairobi – Thika railway line on the Western and southerly parts. Outering Road joins Kenya's main airport - the Jomo Kenyatta International Airport to the Thika Highway - via the GSU round-about on the North.

#### 4.2.1.2 Climate

### Annual Weather Averages Near Kariobangi South

Averages are for Nairobi / Wilson, which is 9 kilometers from Kariobangi South.

Based on weather reports collected during 1985–2015.

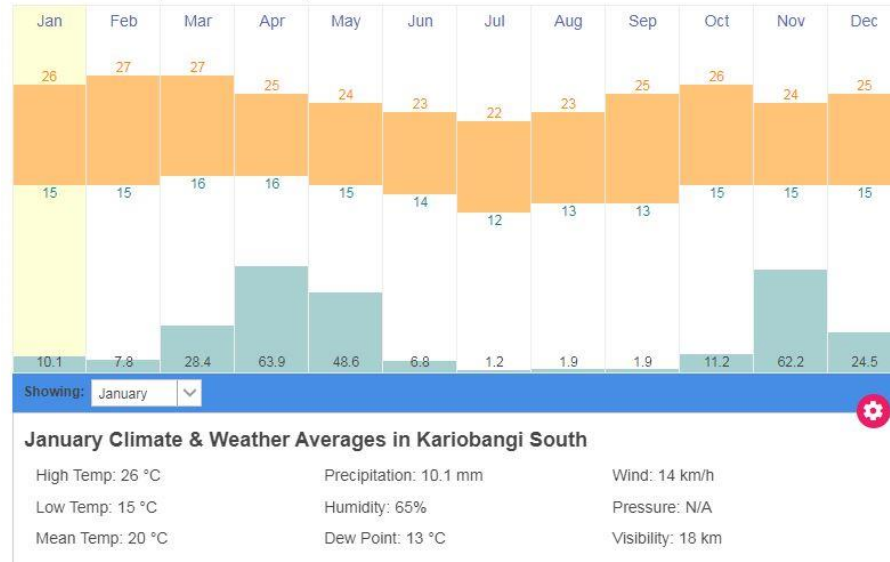


Figure 4.1: Annual weather averages near Kariobangi South [table image]. (Source: Buckle, 2015)

## Sun path

The image below shows the movement of the sun and sunlight-phase of Kariobangi on 21<sup>st</sup> march 2020. The thin yellow-colored curve shows the trajectory of the sun; the yellow deposit shows the variation of the path of the sun throughout the year. The closer a point is in the center, the higher the sun above the horizon. The colors in the below time-slider shows the sunlight during the day.

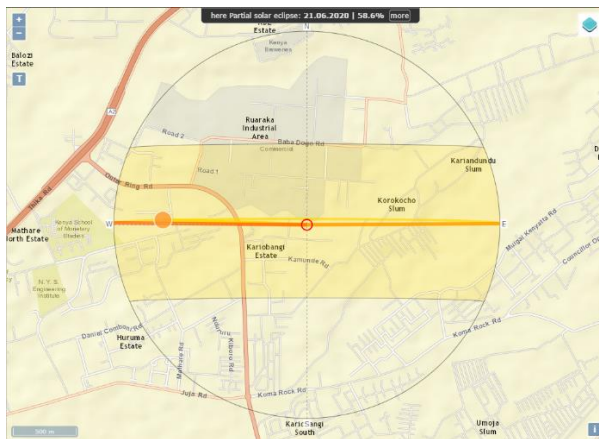


Figure 4.2: sun path computation of kariobangi, Nairobi area [ map image]. (Source: Hoffmann, 2020)

Dawn:	<b>06:15:38</b>
Sunrise:	<b>06:36:03</b>
Culmination:	<b>12:39:31</b>
Sunset:	<b>18:42:58</b>
Dusk:	<b>19:03:24</b>
Daylight duration:	<b>12h6m55s</b>
Distance [km]:	<b>149.042.707</b>
Altitude:	<b>41.61°</b>

#### **4.2.1.3 Infrastructural Analysis**

Kariobangi Outreach children's home has three separate building structures. An office building with a reception and two office rooms, a girl's dorm room and a boy's dorm room. The dining area is located in the girl's dormitory building.

##### **Interior design - The girl's dorm building**

Within the girl's dorm room, there is a dining room right at the entrance, followed by two rooms that are accessible from the dining area. To your right, there is a corridor that leads to two washrooms, two bathrooms, a washing station and three bedrooms. To the left of the dining room there is another corridor that leads to a living room, two bedrooms, one toilet and one bathroom.

The living room, two bedrooms, bathroom and toilet on the left of the dining room are used by the parent that takes care of the children at the home. The parent lives with his wife and two children. They do not have a kitchen because they eat from the kitchen that prepares food for the children's home. The living room has a dining table within it.



Figure 4.3: Girls dormitory [photograph]. (source: author, 2019)

Due to an unfortunate fire incident, the dorm was burned down. The ceiling and roof was destroyed, most of the painting and plaster on the walls was also burned. The windows broke and the doors burned. The floor was damaged as well. Most of the furniture in the rooms burned and were confiscated.

In reference to my research on color psychology, it is important to note that the rooms in which the girls from the home slept in were painted pink and the parent's rooms green.



Figure 4.4: Girls dormitory [photograph]. (source: author, 2019)



Figure 4.5: Girls dormitory bathrooms [photograph]. (source: author, 2019)



Figure 4.6: Girls dormitory [photograph]. (source: author, 2019)

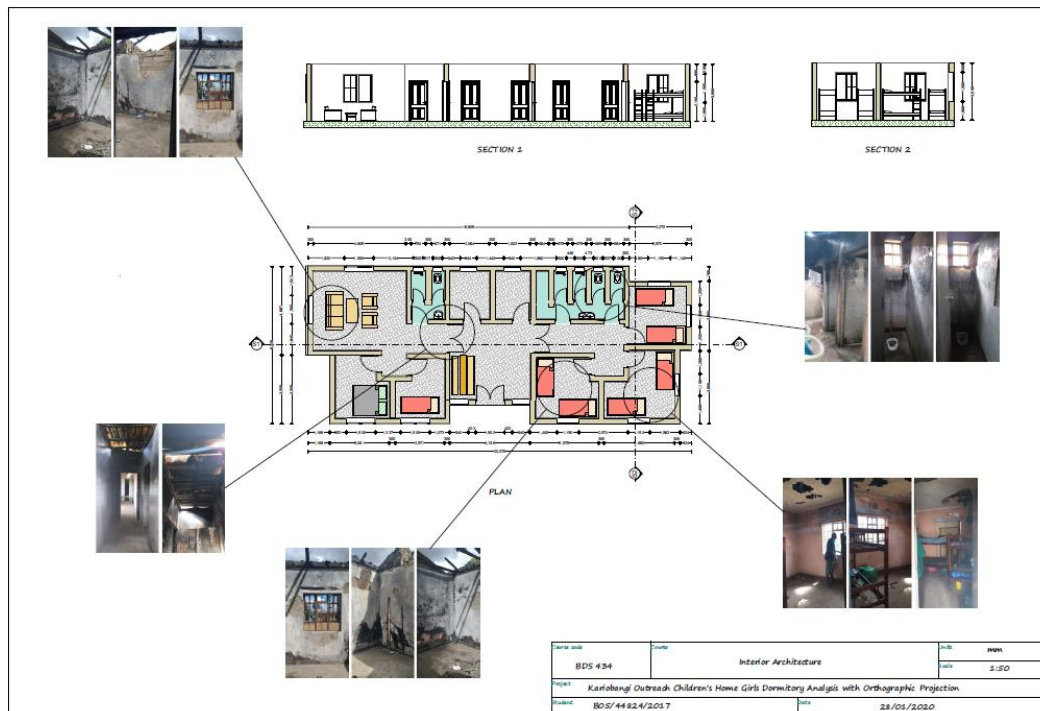


Figure 4.7: Interior Design analysis[Orthographic drawing]. (source: Author, 2019)

## Exhibition and display – Girls dormitory dining room

The girl's dorm room has a small dining room at the entrance of the building. It consists of one table and two benches.

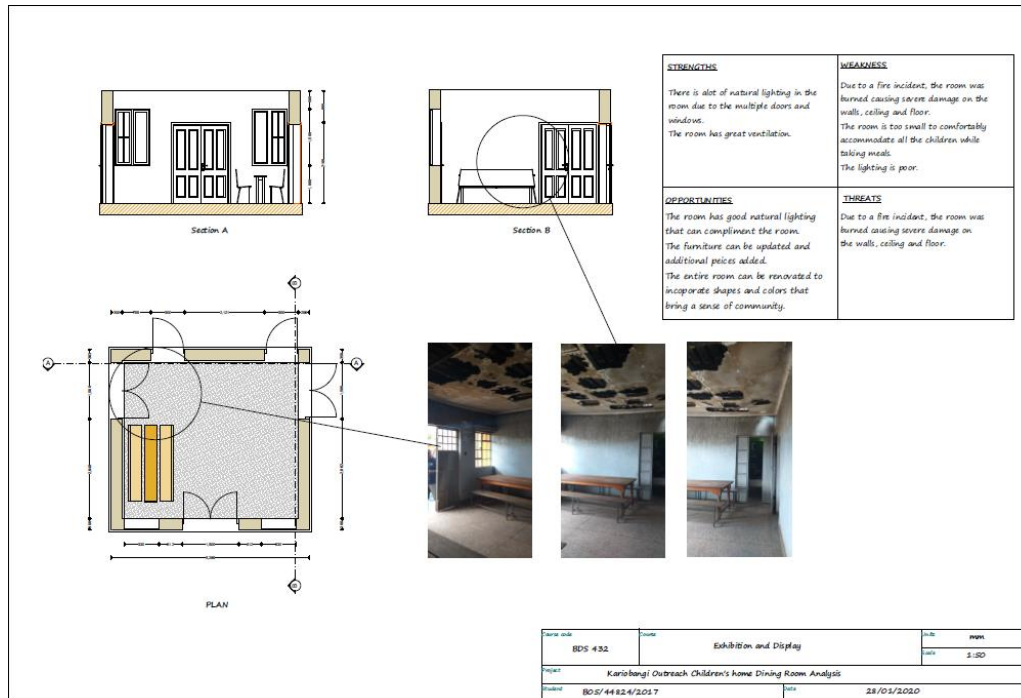


Figure 4.8: Exhibition and display analysis[orthographic drawing]. (source: Author, 2019)

## Furniture Design - The boy's dorm building

The building is a semi- permanent structure with permanent structures within it like a stone wall that separates the washrooms, bathroom and laundry area from the sleeping area. There are five windows and one door.

The walls and roof are made of iron with no paint or coat on them. The dorm has two toilets and an open space that is has slab which is used as a bathroom and a laundry area.



Figure 4.9: Boys Dormitory[Photographs]. (source: Author, 2019)

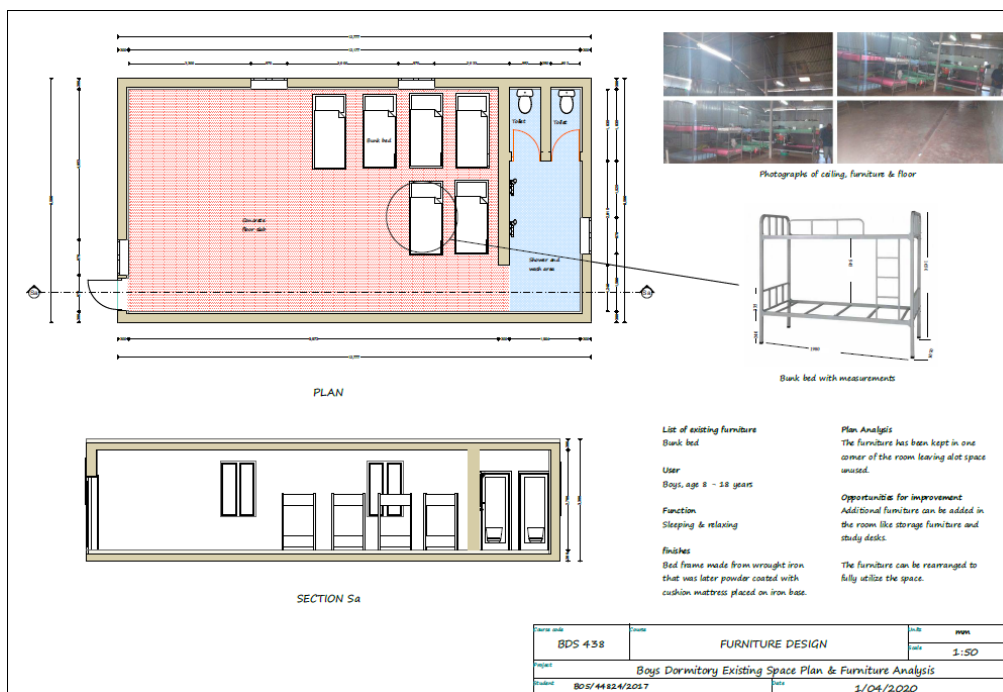


Figure 4.10: Furniture layout analysis[orthographic drawing]. (source: Author, 2019)

## Landscaping

There is a slope from the gate to the boy's dormitory. The highest point being the gate and lowest is past the boy's dormitory, right at the fence where there is Mathare river passing right after the fence.

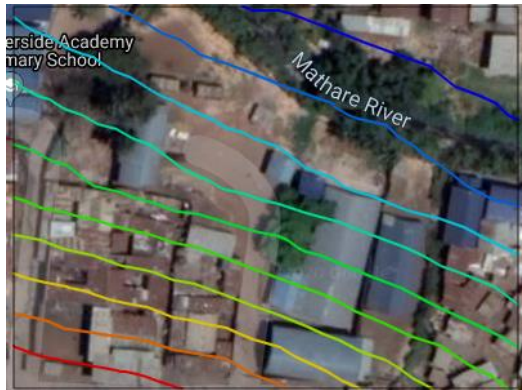


Figure 4.11: Topographic map of Kariobangi outreach children's home[topo map image]. (source: earthpoint.us, 2019)

There isn't much grass or vegetation on the site. The sand type is sandy soil. The land is fenced by metal sheets. There is a busted sewage pipe behind the girl's dorm room.

Behind the boy's dormitory, there are vegetable such as kales and spinach planted for consumption by the home. The parents expressed their intention to plant more vegetables to decrease on their expenditure on food.



Figure 4.12: Landscaping of Kariobangi outreach children's home[photographs]. (source: author, 2019)



Figure 4.13: Current Landscape[drawing]. (source: author, 2020)

### 4.3 Quantitative analysis

The questions used in the interviews were asked with the goal of establishing the type of relationship the children at the home have with colors, shapes and their surroundings. The researcher also attempts to discover if the children were aware of the impact color, shapes and their surroundings had on their everyday lives.

The Qualitative interview was conducted on four girls and four boys between the ages of 10 years to 17 years using an interview guide. The topics in question were classified in three categories; color, shapes and landscaping.

#### Color

In this category of questions, the researcher was investigating what each child's favorite color was, why they picked that color and what colors each of them would like to have in their rooms.

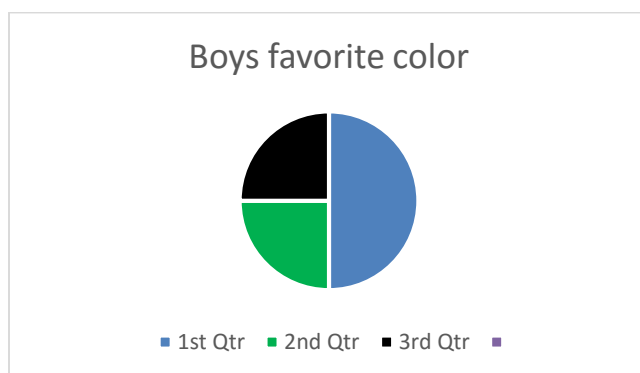


Figure 4.14: Boys favorite colors[pie chart]. (source: Author, 2020)

From the boys, 25% said they love black, 25% said they love green, 50% said they love blue.

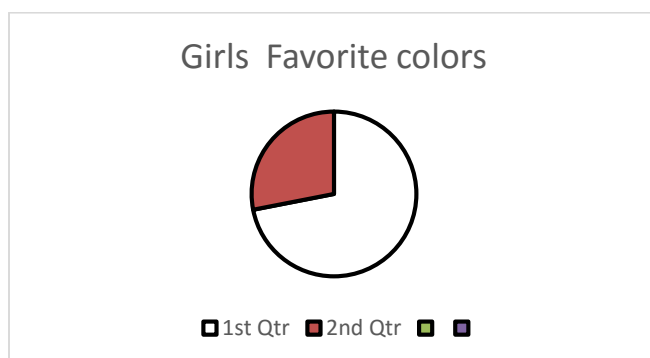


Figure 4.15: Girls favorite colors[pie chart]. (source: Author, 2020)

From the girls, 28% love pink and 72% love white.

The researcher followed up with asking the children if they enjoyed the current colors in their rooms. 50%, whose majority was boys, said No they don't and 50%, majority being girls, said they are ok with the current colors in their rooms.

The children who said No were later asked what colors they preferred to have in their rooms and the dominant colors suggested were orange and white.

## Shape

In this category of questions, the researcher was investigating what each child's favorite shape was, why they picked that shape and what shapes each of them would like to be incorporated in different elements of their rooms like furniture.

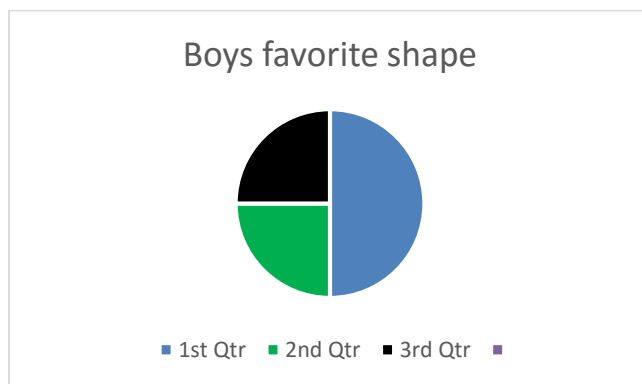


Figure 4.16: Boys favorite shape [pie chart]. (source: Author, 2020)

From the boys, 25%, 2<sup>nd</sup> Qtr, love pyramids, 25%, 3<sup>rd</sup> Qtr, like ovals and 50%, 1<sup>st</sup> Qtr, like circles.

The girls also gave me their favorite shapes.

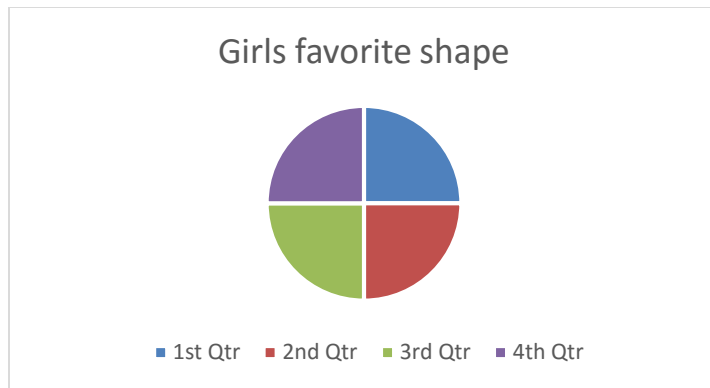


Figure 4.17: Boys favorite shape [pie chart]. (source: Author, 2020)

25%, 1<sup>st</sup> Qtr, of the girls like squares, 25%, 2<sup>nd</sup> Qtr, like rectangles, 25%, 3<sup>rd</sup> Qtr, like triangles and 25%, 4<sup>th</sup> Qtr, like circles.

Some of the reasons the children gave for choosing these shapes were; their favorite games incorporated these shapes, their favorite snacks are made in their favorite shapes for example samosas are triangle and eggs are oval. Some children's choices were influenced by nature and tourist attractions around the world for example, the shape of the sun and the shape of the pyramids in Egypt.

## landscaping

On landscaping and the compound, the children are living in, 100% of both girls and boys did not like the current situation it is in. Each of the children gave their own reasons to why they do not enjoy the current landscaping of their compound. Below is a table exhibiting the responses the researcher received from the children on the state of the compound.

Table 4.1: Responses to landscape questions from children at Kariobangi Outreach children's home. (source: Author, 2020)

Gender	Do you like your compound?	Reason for answer	Suggestions from the children for change
Boy 1	No	Difficulty accessing the parking space by cars.	Design better parking space.
Boy 2	No	The compound is full of rocks.	Flatten the compound.

Boy 3	No	There is a sewage leak in the compound.	Fix the sewage.
Boy 4	No	The slope from the gate is too steep.	Flatten the land a little.
Girl 1	No	It is dis-organized; firewood is all over.	Everything should have its place.
Girl 2	No	When it rains, it floods.	Add trenches.
Girl 3	No	There is very little grass.	Grow more grass.
Girl 4	No	There are no flowers	Add flowers to compound

The children also gave the researcher a list of preferred plants and trees they would like to have planted in their compound. These included; Cyprus trees, flowers, Eucalyptus, sugar cane and fruit trees like avocado trees.

#### **4.4 Presentation of findings**

The relevance of emotional design in the redesigning of Kariobangi outreach children's home, according to the findings, is based on the evident need for the incorporation of therapy and physiological aid necessary to assist the children and parents in tending to the trauma they may have been through before coming into the home. For the reason that emotions play a central role in the human ability to understand and learn about the world, it is appropriate that design is used as a tool to assist in providing better mental health.

In reference to the literature review in chapter 2, this study will focus on the visceral level of emotional design as it appeals to the appearance of a product and the engagement with the senses. With this in mind, the researcher chose color psychology, shape psychology and the concept of a healing garden to appropriately respond to the problem statement. Different colors, shapes and plants elicit different types of emotions in people, therefore the researcher will filter out, based on the findings from research, what triggers positive emotions from the negative and implement appropriately.

The current state of the of Kariobangi Outreach children's home interior architecture is very simple. They have done their best to provide the basic infrastructure needed to accommodate about thirty children however, in some areas they have fallen short and have not put into account the psychological needs of the children and parents. For the landscaping, there is lack of order, not enough space for children to play and very little vegetation. The interior design and finishes are very basic and the girl's dormitory unfortunately burned down. The home lacks essential furniture like storage furniture, study desks and dining furniture.

During the interview, the researcher found that the colors and shapes that the children were attracted to was heavily influenced with what the children were exposed to. Most of the girls love the color white because they have been taught that girls should be pure like angels while boys pick blue or green because they have been taught that they need to be bold and hardworking. The children chose their favorite shapes mostly based on the shape of food they enjoy. For example, a boy picked oval because he loves eggs while a girl picked triangle because she enjoys samosa. In conclusion, the children did not seem to know why they chose a specific color, shape or plant but were quick to gravitate to what was familiar to them.

#### **4.5 Conclusion**

This chapter focused on analyzing and presenting data that was obtained from the primary research. The findings were based on observations, interviews and photographs. The data has been analyzed using narrations of what was observed and photographed during the research. Pie charts have been used to for the quantitative analysis. The pie charts showed the percentages of some of the data.

## **CHAPTER 5**

### **5.0 SUMMARY FINDINGS CONCLUSIONS AND RECOMMENDATIONS**

In this final chapter, is the conclusion of the entire research paper and recommendations for further study.

#### **5.1 Introduction**

This chapter will focus on the summary of data analysis, the researchers recommended solutions to the presented design problems identified in the interior architecture, furniture, landscaping as well as exhibition and display. In addition, the researcher will give suggestions for further studies on the research topic.

#### **5.2 Summary of Data Analysis**

The landscaping, interior architecture, furniture and exhibition and display at kariobangi outreach children's home has not fully incorporated emotional design to provide a therapeutic environment for the children who live there. Due to lack of sufficient funds, they have resulted in very basic interior architecture and landscaping thus it feels very institutionalized.

The children have not been exposed to much outside of their surrounding thus relating only with what they have been in contact with. The choices made by the children when conduction the interview were in line with the stereo types of what a girl should like and what a boy should like.

While conducting the interview, it is worth noting that the girls were shy and less interactive compared to the boys. The girls took a longer time to trust the researcher with information but eventually opened up when the boys answered the questions confidently.

#### **5.3 Recommendations**

The recommendations given below include suggested colors to stimulate different emotions depending on the user and function of the space. Specific shapes are used to redesign furniture as well as recommended types of plants for the healing garden.

## Furniture



Figure 5.1: recommended furniture designs[drawings]. (source: Author, 2020)

The recommended furniture designs above have incorporated wicker weaving techniques to achieve different shapes within the furniture. The colors chosen for the furniture are to keep the furniture playful and vibrant. Considering this furniture is going into a boys' room, the recommended shapes are geometric and color scheme to incorporate hues of blue, green and orange.

## Interior design

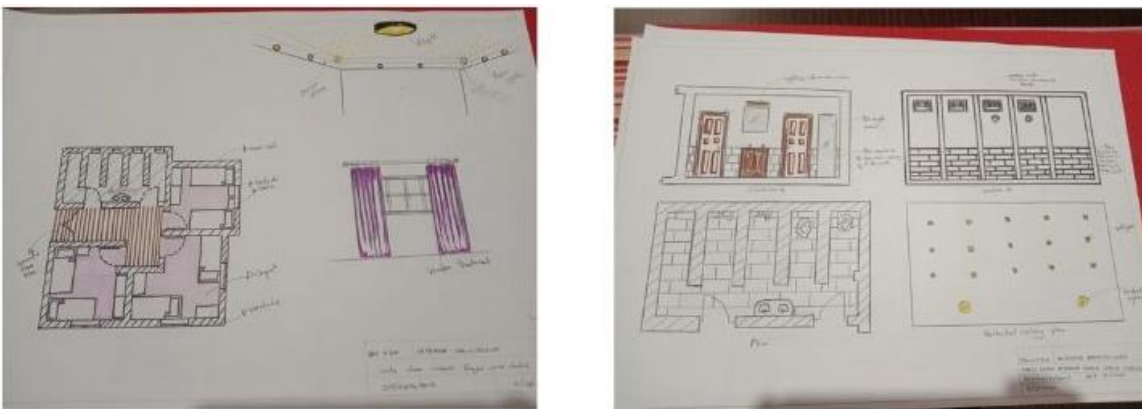


Figure 5.2: recommended interior design sketches[drawings]. (source: Author, 2020)

This is the girl's dorm room which is inspired by Afrofuturism. The colors chosen for this room are hues of purple and pinks. The implementation of the inspiration from Afrofuturism is seen on the ceiling with glow in the dark lights to create an intergalactic feel which is part of the themes in

Afrofuturism. The design will also have geometric floor tiles and African symbols and drawings on the walls. The window treatment is also in the chosen color palette to tie the room together.

### Exhibition and display

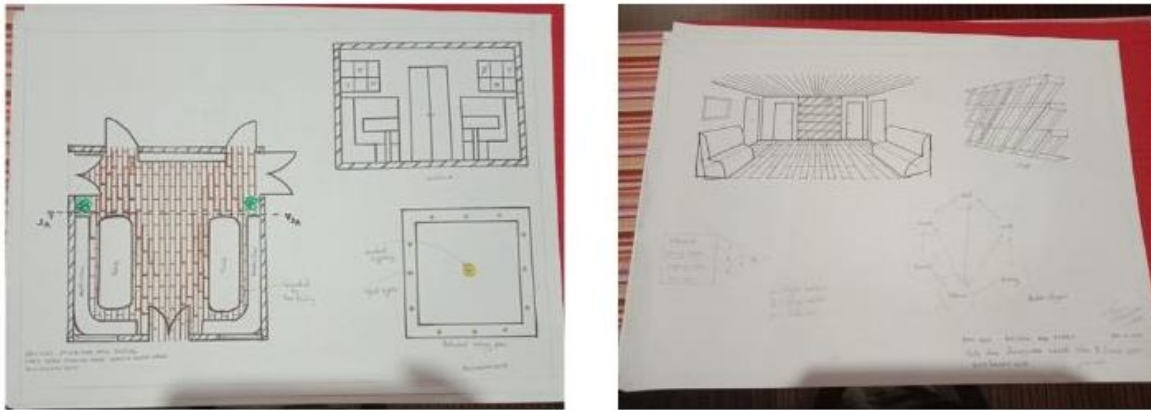


Figure 5.3: recommended exhibition and display sketch[drawing]. (source: Author, 2020)

The exhibition design is inspired by Afrofuturism and incorporates a futuristic shelf as the center piece of the dining area. The shape recommended in this space is geometric. This shelf is meant to serve as a symbol of strength and creativity. It will also be used to display the girl's art work as well as cultural symbols that represent women empowerment as is part of the themes in Afrofuturism.

### Landscaping



Figure 5.4: recommended landscaping sketch[drawing]. (source: Author, 2020)

The healing garden has a designated parking space, a fountain, playing area, flowers and benches for sitting in the garden.

## **5.4 Conclusion**

This chapter featured a summary of the data analysis, the researchers recommended solutions to the presented design problems identified in the interior architecture, furniture, landscaping as well as exhibition and display. Children homes are special places that are homes to young energetic children with dreams and ambitions.

## **5.5 Suggestion for further study**

Research to explore the possibility of emotional design as a replacement for therapy.

Research on more distinctive and impactful was emotional design can be implemented in interior design.

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## Appendix 1: Interview guide

1. Demographic information
  - a) Age
  - b) Gender
2. What is your favorite color? Why?
3. What does your favorite color make you feel?
4. Do you like the current color of your room? If no, which color would you prefer?
5. What is your favorite shape? Why?
6. What shape would you like your furniture to be? Why?
7. Do you like how your compound looks like? Why?
8. What games do you play outside?
9. What games would you like to play outside but are not able to?
10. What types of plants would you like to have in your compound?