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**CONTEMPORARY ARCHITECTURE OFFICE  
PRACTICE IN PAKISTAN IN TERMS OF  
HUMAN AND SPACE**

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Master's Thesis

Supervisor

Assoc. Prof. Dr. Gülay YEDEKÇİ

Istanbul, 2023

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The thesis titled CONTEMPORARY ARCHITECTURE OFFICE PRACTICE IN PAKISTAN IN TERMS OF HUMAN AND SPACE prepared by MUHAMMAD SALMAN SHAHID and submitted on 28/04/2023 has been **accepted unanimously** for the degree of Master of Science in Architecture.

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Muhammad Salman SHAHID



## **DEDICATION**

I dedicate this thesis to my family, friends, well-wishers and to all those who never left my side.

A special thanks and appreciation to my father, Shahid Mahmood, my dearest mother, Alia Shahid, my elder brothers, Samir, Saad and my younger sister, Arouba. You all are very special to me.

I also want to remember my late grandparents. May they find peace and happiness in Paradise!

Last but not least I would also like to dedicate this thesis to my friends who have supported me throughout my career. Thank you so much.

## **ABSTRACT**

### **CONTEMPORARY ARCHITECTURE OFFICE PRACTICE IN PAKISTAN IN TERMS OF HUMAN AND SPACE**

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Architecture is defined by human requirements, such as shelter, comfort, and place. As humans, however, we have other needs, the need to create, construct, play, survive, inhabit and communicate. In order to address the question of how these ideas intersect, the relationship between human and architectural space will serve as fuel. This thesis explores the contemporary architecture and new development in terms of human and space and to what extent are these principles helpful and needed in Pakistan. Human and architectural space relation is mostly based on function, scale and human dimensions and our way to design or build goes through these changes and then accordingly the architect can decide what to create by using his ability to design according to human needs. By exploring through research, the real potential of this relationship can be defined and expanded to improve the understanding between an architect and other humans who belong to other fields. In this thesis four important architectural spaces will be discussed in detail and then architects of Pakistan will be asked whether these spaces affect their contemporary architecture practice or not.

**Keywords:** Open Space, Public Space, Living Space, Outdoor Space, Human Scale.

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# 1. INTRODUCTION

The relation between human beings and the current architectural structures is extremely old and historical, and it is reflected in the way that current architectural spaces consistently affect people on a mental, emotional, and physical level. In the end, it is the human who methodically establishes the boundaries of the architecture in accordance with the satisfaction of particular needs like comfort, shelter, or location. The creation of large living spaces and public spaces in urban settlements served to accelerate the transition since from the start, architecture was strongly reliant on the user's demands as they changed with the times.

Humans have a huge influence on architectural space, particularly in terms of design and use, because architecture is eventually generated to serve human requirements and desires, it is closely linked to our lives and experiences. The way people use and occupy a space has a big effect on its design and functionality. A room intended for a lot of visitors, for instance, may need to be solid and easy to clean or several materials, colors and architectural details are associated with particular cultures or time periods. The requirements along with the feel of a space's individuals can also have a significant impact on its design. A medical facility room, for example, will have distinct needs than a cafe and a large family house will have different specifications than a small apartment for a single individual.

Our body dimensions play a very important role in creating any architectural space. An average adult represents the requirements which helps in planning and to create architectural space. Architects must know the importance of this because at the end if the user is not comfortable then what will be the point of crating any architectural space. There are other reasons which explains why human dimension is important in architecture like positive user experience, safety, accessibility, functionality, aesthetics, culture, traditions and environment. In any type of construction, the human dimension is an important part of any architectural space design process.

The relationship between human and architectural space involves many important factors such as human dimensions, human scale and human activity. It is very important to keep these factors in mind when an architect starts the design process. Also, architecture have a

huge influence on human feelings, emotions, memories for example a hospital building can give stress to anyone because of its cold interior and exterior style and that is why architects started making home themed psychiatric hospitals to improve mental health of patients. Daylight plays a vital role in any architectural space, as it provides comfort, improve mood and health. In architecture, delivering sufficient daylight is a crucial component of our design that adds value for example huge openings, like a glass window in a particular location that lets a lot of light into the space can be beneficial for human psychology and as well as architecture itself.

There is no doubt that there has been a connection among architecture and a human being for a long period. It's crucial to keep in mind that problems arise when this relationship is investigated that extend beyond figuring out what dimensions and arrangements of an architectural space are necessary to support a human and their activities. We are also catered mentally, psychologically and physically while we are in the same space. The procedure of developing architecture takes into account both human and architectural environments, and the findings of this study shed light on some of the fundamental ideas that drive this procedure. It is expected that by focusing on open space, public space, living space, indoor and outdoor space, Human Scale and architecture relationship can improve and solve many mistakes which are common in the design process these days.

Buildings tell us about the people behind them, about what's in them, and influence how we behave. Architecture can control human behavior and every choice made by architects influences humans and that is why this topic plays a huge role in future developments because at the end we are responsible for our own way of living.

## **1.1 IMPORTANCE OF THE SELECTED TOPIC**

This topic is the foundation of the relation between any architectural space and its inhabitant because wherever there is human there is architecture and a building built without human dimension and scale is just a pile of concrete. Even this type of construction when it is inhabited it will develop human psychological relation because of the experience and memories of the human living inside the building and the human actions will leave a mark which becomes its identity. Human needs including a feeling of comfort, place, and home

all have an influence on architectural style. By choosing this topic for research, it is feasible to show how architecture space and human dimensions are related. Along with the desire to construct and produce, humans also have the drive to get entertained, thrive, and interact. The relationship between humans and architecture space will serve as a starting point for discussion of how these notions fit together. This thesis particularly intends to examine the relationship between humans and architecture in Pakistan including how that relationship may support further expansion by identifying space, place, and scale. By doing research about contemporary architecture and comparing it to the current state of architecture in Pakistan, we can find many solutions to problems related with human and architecture. When we know how important it is to fulfill human requirements then all the advanced technologies and new ways of construction will merge together and help us to create a better and more useful architectural space for humans.

## **1.2 PROBLEM STATEMENT**

With the evolution of technology architecture is also evolving and changing in terms of design and construction but most architects are ignoring the importance of human connection with what they are designing. Instead of giving importance to human needs they are focusing on latest technology and trying to make everything aesthetic. In Pakistan development is more focused on construction rather than function which lead to lack of services and human centered design. This way of thinking must be adjusted in order to put the human scale, dimensions and requirements as a priority before anything else because primary function of recent development should be fulfilling the most important thing which is human needs.

## **1.3 AIM AND OBJECTIVES**

The link among humans and architecture is examined in this study. The following aims have been created to fulfill the study's purpose:

- i. To know if the Pakistani architects are following the contemporary trends in their practices.
- ii. To assess how human dimensions and scale affects design process of Pakistani architects.
- iii. To understand how to make architectural spaces more useful for people in Pakistan.

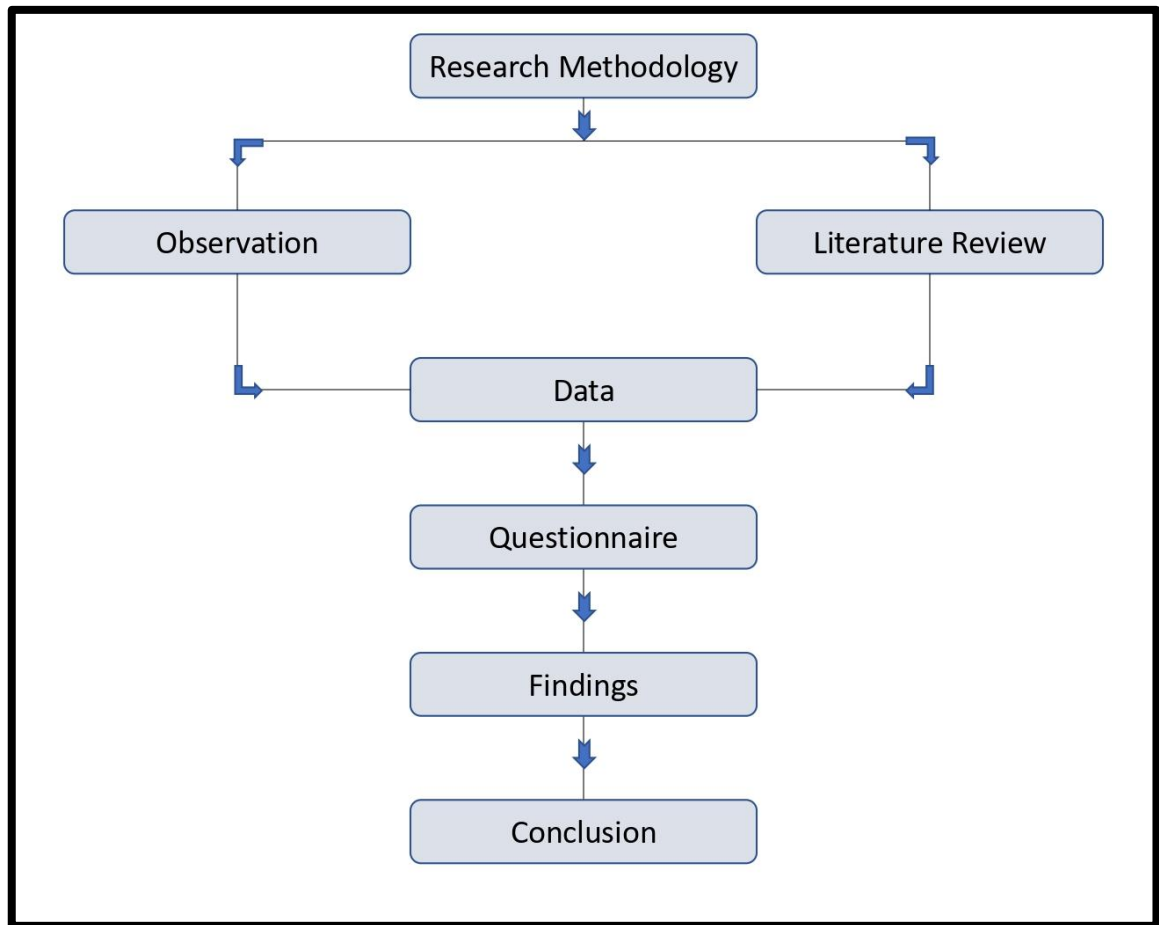
## **1.4 RESEARCH QUESTIONS**

- i. Why human dimension is important in architecture?
- ii. What effect does human have on architectural space?
- iii. How different spaces in architecture can change according to human and location?

## **1.5 RESEARCH METHODOLOGY**

### **1.5.1 Framework of Research**

This study will layout and define the research approach for the appointed subject which will further help a researcher to closely evaluate the topics expected issues while also utilizing the pertinent information and outcomes of the work that is readily available from a thorough literature review. The purpose is to test and challenge the current practice of Pakistani architecture and to make a connection between contemporary architecture. This research methodology uses procedures, methods, approaches, and plans to collect evidence in order to provide accurate accounts of events and unearth pertinent information. In addition, the research methodology used incorporates certain data collection procedures, such as google form questionnaire from which the answers were analyzed and compared with literature reviews and used to give the final findings. The conclusion of this research will add knowledge and help the Pakistani architects to understand the current trends and solutions for their daily life problems which they're facing during their architectural design practice.



**Figure 1.1:** Thesis Framework (Author).

### 1.5.2 Research Type

This research is quantitative that involves collecting data from several literature reviews in addition to a questionnaire targeting a large number of people to gain authentic information about the topic. Quantitative results can better manage the research questions and by using casual comparative research which compares the results of questionnaire and literature review.

The analysis of studies is crucial to this subject because it will be based on them to develop effective methods with application to the real world. The numerous data sources consulted in this thesis will back up previous conclusions.

### **1.5.3 Data Collection Method**

In carrying out this research data were collected from the main sources such as journals, articles, books, conferences and web sites. These sources were helpful to gain the information and understanding about literature reviews while the questionnaire was completed by more than one hundred people which were related directly with architecture. The questionnaire was sent to different architectural offices in Pakistan.

#### **1.5.3.1 Justification of using questionnaire**

Among the most complicated procedure that needs special licenses and has to take rigorous ethical standards into consideration is interviewing people. This procedure takes a lot of time since it depends just on individual's physical availability. A more practical strategy for this research topic is the questionnaire. By rapidly connect with the responders and get their response by using a variety of communication methods, such as email and messaging the questionnaire and because of this the whole process gets more interesting as well as time saving.

#### **1.5.3.2 Ethical consideration**

With the help of a questionnaire, this research investigation gathered respondent raw data. All respondents have received the questionnaire. The protection of the respondents' private information has been guaranteed. Given all of these details, this research project has no legal problems.

### **1.5.4 Observation**

According to the situation of architecture in Pakistan the observation showed that due to increase in construction there are several factors which are getting affected like natural habitat, lack of outdoor spaces, lack of pathways, privacy, security and green spaces. Lack of street lights and poor pedestrian proportions are leading to limited access to safe and secure walking areas and it also effects the social and economic environment.

Human experience is also being compromised due to lack of human scaled buildings which leads to discomfort in daily life. In a busy city like Lahore, lack of human scaled entrances

is also a prominent feature that was observed within public spaces. Living spaces are also being compromised due to lack of insulation which leads to problems like lack of sunlight, reduces energy efficiency and affects overall comfort. Lack of proper usage of windows to connect indoor and outdoor spaces is also a major issue in Pakistani architecture and due to that the human experience is being compromised. Some contemporary buildings in Pakistan are constructed without proper planning which results in defected structures like houses with poor ventilation and insufficient lighting. Some architects neglected traditional way of construction and local materials which resulted into losing the identity of the Pakistani architectural style. By giving too much importance to aesthetics some architects even neglected the functionality and did not follow the human dimensions.

The aim of the observation was to evaluate the Pakistani architecture situation and to find the problems to see if the contemporary architectural offices are aware of them and if they are then are they working to solve these problems or not.

## **2. ARCHITECTURAL SPACE**

The term "contemporary architecture" describes the modern aesthetic style and design movements that have emerged in architecture during the 1960s. It differs from conventional styles and forms and places of architecture and emphasis on innovation, sustainability and technology. In addition to that, many contemporary architecture structures use not only sustainable design concepts but also energy efficient components. Contemporary architecture often emphasis on minimalistic design style with straight, simple and uncluttered lines with the use of specific materials like concrete, steel and glass. Another characteristic of contemporary architecture is the integration of technology into the design and construction process. This includes utilizing innovative construction systems, computer-aided design (CAD) software and smart technologies that enable structures to adapt to their surroundings and occupants (Geilman, 2018).

Pakistan's contemporary architecture is a reflection of the nation's distinctive fusion of traditional and modern influences. Innovative buildings and homes designed by Pakistani architects respond to the climate, culture and setting of the nation by combining native resources and methods with more contemporary ones. Architecture is impacted by Pakistan's growing urbanization as well as the demand for urban planning and design.

In Pakistan, modern villa architecture and outdoor design are on the rise, especially in the country's largest cities like Lahore, Karachi, and Islamabad. Contemporary villas often include open floor layouts, minimalist furnishings, a focus on natural light and modern features and facilities. Contemporary villa living in Pakistan incorporates outdoor design extensively, with many homes including well planned outdoor areas including terraces, courtyards and gardens. With elements like huge sliding doors, covered patios, outdoor kitchens and eating areas, outdoor spaces are frequently created to enable a smooth transition between indoor and outdoor areas.

**Table 2.1:** Shows Examples Of Contemporary Architecture Office Projects In Pakistan (Jahanavi, 2022).

| Architecture Office Name | Location            | Email                | Example                                                                              |
|--------------------------|---------------------|----------------------|--------------------------------------------------------------------------------------|
| ArchXStudio              | Lahore, Pakistan    | info@archxstudio.com |   |
| Kapadia Residence        | Karachi, Pakistan   | info@coalesce.pk     |   |
| Orad Space               | Islamabad, Pakistan | orad.works@gmail.com |   |
| Arcop (Pvt) Ltd.         | Islamabad, Pakistan | info@arcop.com.pk    |  |

The foundation of architecture is space. Designing requires conceptualizing and thinking about the structured environment around us, analyzing its nature and finding meaning in its constructed forms. This level of knowledge aids architects in selecting the guiding ideas and concepts for their intended spaces. Primarily, it has a structural shape that can be quickly understood and described by certain traits like dimension, size, shape, as well as material, color and light. Not only can the uses of a space influence human desire to be there, but also how we feel about the space. To understand space, we must consider its users and it is not possible to create space without understanding its end user (Dursun, 2009). From inside a structure should be designed to maximize available space. Rather of building anything that tells the person how to feel, it will be flexible enough to let individuals to discover and analyze it themselves.

Even the color of a structure 's interior can influence human feelings and emotions. For example, observe the interior design decisions at a restaurant. Someone that wants visitors to stay and relax themselves properly will use warm colors projected in dim lighting and on

the other hand a restaurant in which you'll be rushed would use strong lighting to persuade you to hurry up. Likewise, a building full of lights affects our moods and emotions for example, vibrant lights enhance our moods in both good and bad ways. Considering the lighting's color as well. Blue can make people feel more energized and alert, leading us to finish activities more swiftly and precisely (Nicholas, 2022).

Architects must consider both the current state of space as well as any changes to those properties throughout time. Since space is created when many components combine over a set amount of time. Several individuals can have different perceptions of the same space. It is formed by human wants, interests, desires, and motion patterns. In other words, the users of a location can customize or individualize it. We attempt to comprehend space using its physical qualities as well as our own subjective feelings, memories, assessments, moral standards, etc. The criteria we apply to a living area are what we define it. The first consideration is size or measurements. In other words, it's important to decide how broad a space will need to be for humans to live there (Dursun, 2009).

All structures are constrained by space, which changes over period. Additionally, there is also a lot of limitless, formless space. The environment may be physical or virtual, and it creates a variety of psychological techniques. Different three-dimensional magnitudes that the human brain has assigned to form, material, position, and shadow may be the source of altered thinking techniques (Kondo, 2018).

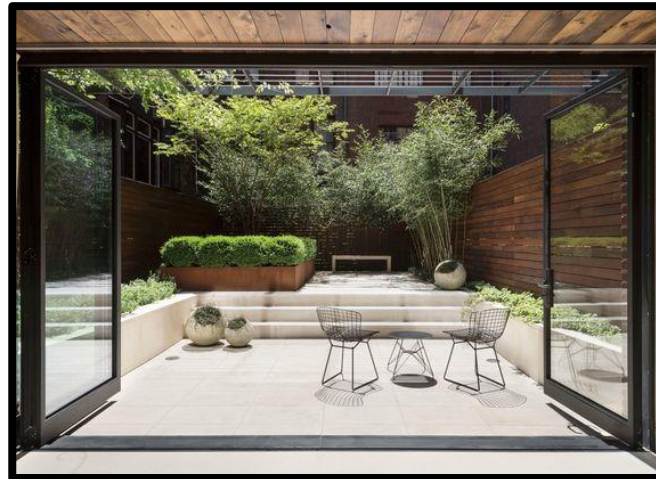
There are several types of spaces when it comes to architecture and each space have its own specifications and relation with human. In this thesis I will aim some of the important spaces like open space, public space, living space and indoor and outdoor space. Architects continually need details on individual rooms, space considerations, furniture measurements in order to turn a design idea into a workable project.

## **2.1 OPEN SPACE**

The concept behind open space in architecture states that a structure should be constructed to meet the requirements of its people by encouraging social interaction, cooperation, and innovation. A feeling of freedom and mobility can be provided by an open area encouraging humans to move freely and interact with each other in a number of ways. Open space is a

space which is deliberately made to accommodate humans. For example, areas like parks, gardens, outdoor activity areas, terrace, patio, schoolyards, galleries and roof tops (Pahuja, 2021). In construction, there are numerous approaches to generate open space. To increase the level of daylight and fresh air which can enter a place, one typical option is to follow passive design. Another method for creating open space is to design a facility that is physically exposed to the outside, such as a courtyard or patio.

All of the above-mentioned open spaces serve as a catalyst in architectural design for experiencing the urban environment in nature's elements, such as greenery, soil, air and water, in the most efficient way possible along with its many other varied functional and social characteristics. An increase in development has resulted in increased concrete covers and less open spaces as a result of the fulfillment of housing, agricultural, public structures, factories, and other service areas (Pahuja, 2021) . Due to these causes, the destruction of green areas has been planned for a long period of time, which had an impact and imbalanced the urban effect of the city. To balance the development and open spaces it has become more of a concern for both government officials and citizens. With the urban development projects, several measures are included to create open spaces inside or surrounding buildings and cities (Pahuja, 2021) .



**Figure 2.1:** Open Space Utilized As A Personal Garden (Williams, 2016).



**Figure 2.2:** Open Space (Greige, 2016).

#### Advantages of Open Spaces:

##### i. Natural Ventilation

Open spaces help the outdoor fresh air to come inside by placing openings depending on the buildings structure while considering wind direction of the surrounding environment. It improves building electricity economy by lowering the use of electrical ventilation. Factors such as airflow direction have a significant impact on the entire performance of space, both efficiently and financially.

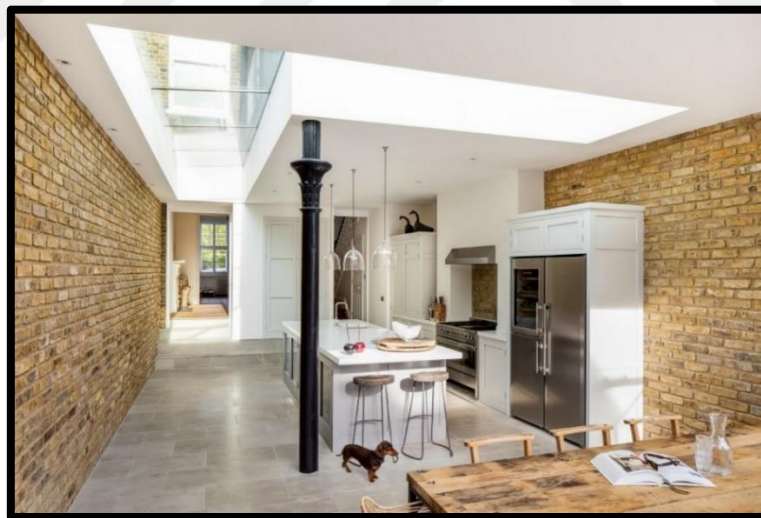
##### ii. Natural Light

Natural lighting can also be achieved through open spaces. which is essential in the architectural design of any structure to create more positivity inside the environment and mood improvement.



**Figure 2.3:** Natural Lighting On A Terrace With An Open Space Design (Pahuja, 2021).

Natural lighting properly integrated into built-up area raises the potential of space. The spaces appear bigger, and wide openings allow natural light to pour into the building. Proper daylight control via openings can however improve the beauty of interior furnishings.



**Figure 2.4:** Dining Room With Daylight (Bhattacharjee, 2022).

### iii. Human Interaction

Landscape design is used to provide green outdoor places where people may relax or socialize away from the stress of work and be at ease underneath the blue sky. These areas also serve as a resort for recreational activities. In organizations, offices, hospitals,

neighborhoods, and towns/cities. A community park is indeed a venue that promotes individuals to participate in activities such as walking, running, training, entertaining, or having social get togethers.



**Figure 2.5:** Shows River Front Park, Ahmedabad From Oasis (Pahuja, 2021).

It functions as an attraction in a city, attracting individuals of all ages with diverse cultures and origins, along with visitors seeking to feel peace with the environment. This urban construction transforms such spaces into active functional areas where people can relax and play. They improve the lives of those around them by bringing people near to mother Nature (Pahuja, 2021) .

#### iv. Human Health Benefits

Humans go to open spaces to just be connected to nature, to feel lively, and to boost their mood and attention. Humans were all trapped under roofs during the pandemic, but what made everyone feel optimistic and gave hope were open areas around dwellings like patios and private terraces. Open space gives the user to have physical activity inside their own house which is proven to be a important factor of human health (Duchman, 2019).

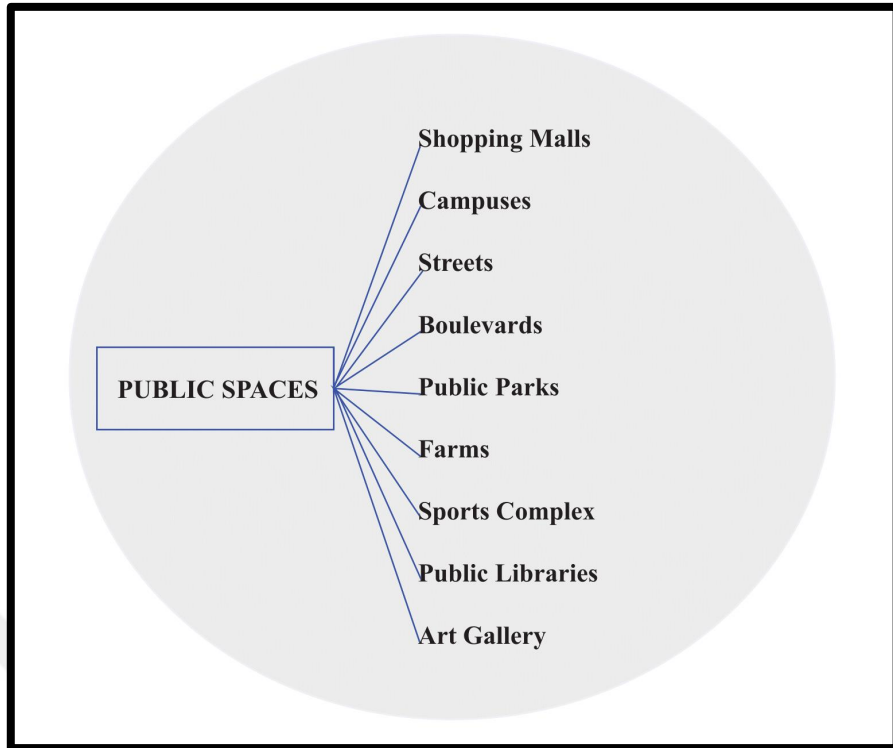


**Figure 2.6:** Shows Private Patio Environment (Brennan, 2019).

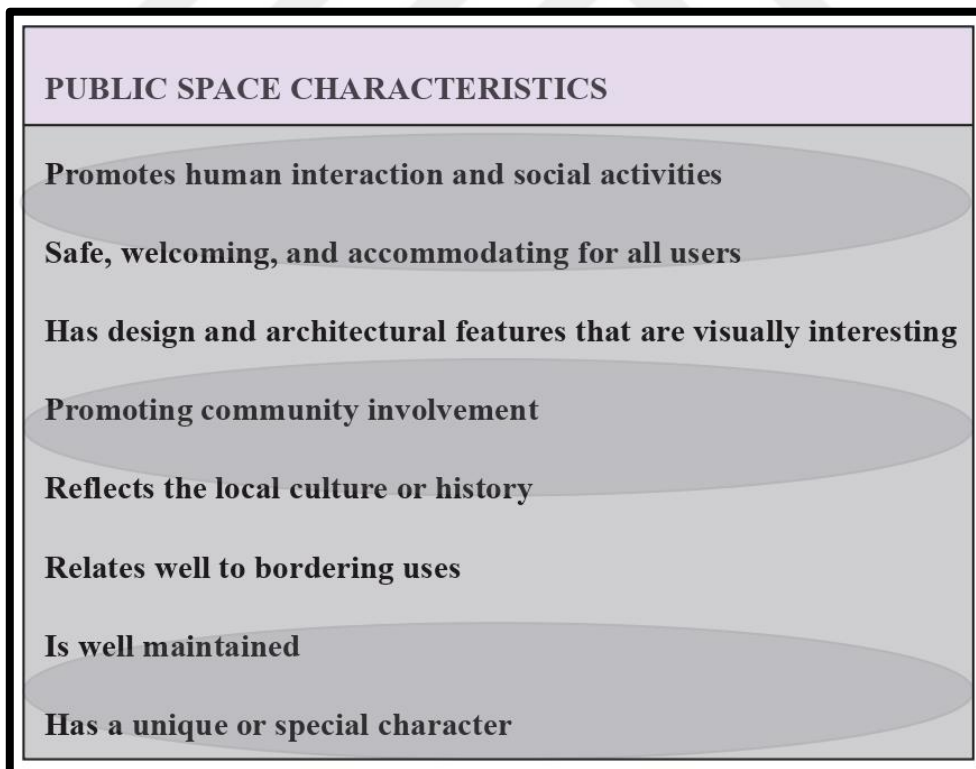
Spending time on a patio on a sunny day is the best source to get vitamin D. Physical mobility inside an open space can be taken into account by designers. Wellness focused design can be useful even in an all-enclosed environment when occupants need to get some fresh air. Adding more stairways and easily available elevators is part of building.

## 2.2 PUBLIC SPACE

All cities rely heavily on public spaces. It offers numerous possibilities for people to come meet and connect within the community. The term public space relates to urban space that is easily approachable by the general public at any hour. An obvious example is a street which people can easily enter and exit physically at any time. Public spaces, which add life to urban areas, are linked to the development of what we consider a city and impact the connections that develop inside them. Neighborhood social bonds are shaped by public spaces. They serve as meeting locations and can aid in political activism, action, and violence prevention. They are places for socialization and the sharing of views that have an impact on the condition of the urban setting. Coffee shops, bookshops, and clubs, while not called "public areas," have similar effects. People are happier and become more active in nice public settings, which provide both physical and emotional health benefits. A good public place represents great diversity and allows people to coexist around each other easily, creating the basic conditions for stability and inviting people to be out on the street. People are drawn to the liveliness of spaces (pps, 2016).



**Figure 2.7:** Shows Types Of Public Spaces (Middle, 2017).



**Figure 2.8:** Characteristics Of Public Space (Middle, 2017).

A great public place should create a feeling of ease and stability to individuals who use it, promote social connection among people, and offer programs or events that draw and keep individuals in the public area. Communities and cities expanded in the twentieth century, with residences on large yards. Shops have relocated to distant malls. Mobile phones, tv and technology revolutionized our lives. People are staying away from public places. Many new projects ignored sidewalks, gardens, downtowns, public transportation, and playgrounds (Estate, 2016).

**Table 2.2:** Shows The Benefits Of Public Spaces (KIM, 2015).

| <b>Environmental Value</b>                   | <b>Social Value</b>          | <b>Economic Value</b>               |
|----------------------------------------------|------------------------------|-------------------------------------|
| Reduces energy consumption                   | Improves quality of life     | Increases the value of the property |
| Promotes ecosystem                           | Improves security and safety | Attracts investors                  |
| Decreases noise and air pollution            | Promotes social equality     | Increases business opportunities    |
| Promotes the relationship of nature and city | Promotes cultural vitality   | Increases job opportunities         |
| Protects habitat                             | Promotes socializing         | Generates tax revenue               |

The question of how to make useful and good public spaces can be answered by following these important factors which are mentioned below:

i. Variety of Usage

The merging of houses, work places and commercial sectors, such as cafes, shops, salons and local merchants attracts people while also making the atmosphere safe. The variety of uses produces additional events that promote to space safety. More individuals on

the streets reduces crime. This diversity must extend to all hours of the day. If the streets are just busy and crowded throughout the day, then it will be dangerous at night. Planning public areas in a manner that promotes human coexistence and permanence is another method to invest in safety (Pacheco, 2017).

## ii. Human Scale

Human health can be harmed by large-scale, dense building. Jan Gehl discovered in his field investigations that humans prefer to walk quicker when going through quiet or inactive places, as compared to a slower speed of walking in vibrant and attractive environment. Human scaled buildings have a favorable influence on individuals' impressions of public spaces because they feel included in the design process (Pacheco, 2017).

## iii. Lighting

Effective and human oriented lighting promotes the use of public spaces at nighttime by increasing safety. When built on pedestrians and cyclist scale, lighting improves the environment for more safe movement even if there is no sunlight. Light plays a vital role in any architectural space, as it provides comfort, improve mood and health. In architecture, delivering sufficient light is a crucial component of an architectural space. For example, lighting and brightness levels have an impact on how stressed or anxious people feel. As a result of exposure to psychological pressures, this creates darkish regions that have a harmful impact on stress levels (Pacheco, 2017).



**Figure 2.9:** Contemporary Aluminum Lights (Technilum, 2022).

#### iv. Green Areas

To improve air quality and helping the temperature to stay low, green areas plays a huge role but also previous study shows that humans feel a sense of happiness when they are in green area like gardens or parks. Greenery and natural environment make human brain relaxed and fresh. Kids like to play in public spaces like parks more than inside the house because of the natural effect caused by nature. Flowers create a specific smell which gives a soothing experience while sitting in a garden. Humans use greenery indoors as well because it gives natural effect and that is how it influence human feelings in any environment (Pacheco, 2017).



**Figure 2.10:** Example Of Functional Green Area For Public Use (Burrowes, 2022).

#### v. Social and Cultural Specifications

Local shops that represent the community should be given public places. Large industries, such as malls and other chain stores, can help the economy in overall, however they have limited involvement on a neighborhood basis. Small companies and projects have long term effects and they also contribute to the individuality and uniqueness of the location. In order to create a strong interaction between humans and space, it is essential to consider the social aspects and cultural specification of the area when designing a public space (Pacheco, 2017).

### 2.3 LIVING SPACE

Living spaces typically utilized for a variety of purposes, such as entertainment, relaxing, sleeping, studying, playing, pursuing hobbies and so on. Kitchens, bedrooms, entryways, and bathrooms are examples of living space. Living space can serve many uses and functions in a house (Bath, 2020). Prioritizing living space is very important for any individual because it can affect daily routine activity for example morning coffee, family gathering, relaxing after the whole day, cooking and work from home routine.

To create living spaces which are useful and directly related with the user some factors are important to follow. I will mention them below with examples of how these factors can improve living space itself.

## i Privacy

Want to enhance your living space, overall peaceful atmosphere of your house, and the environment of your living space? Curtains are indeed the answer because these marvelously versatile lengths of cloth provide excellent window coverage while also providing a sense of coziness and privacy whenever it is required. Using windows properly and elegantly can ensure room is welcoming, comfortable and livable (Qmotion, 2015).

## ii. Scale

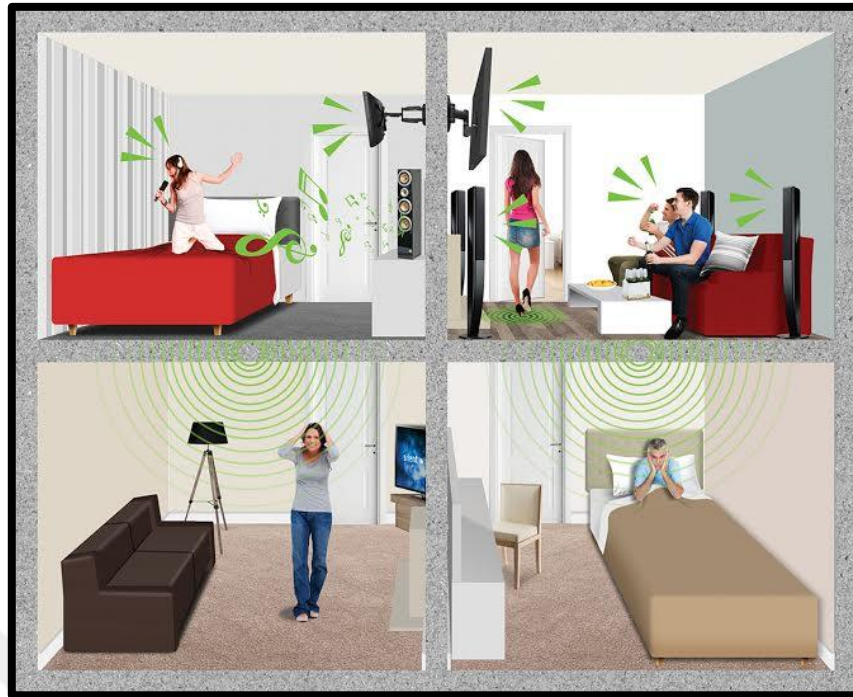
Whenever living spaces become excessively large, it is easy to be disoriented. The key to create a space that feels friendly and welcoming while remaining spacious enough for gatherings is to achieve the scale correct and the ways to achieve it includes: building little corners in large living rooms like study corner or reading corner, using natural light by providing windows and using specific materials like timber to give a warm effect. All these factors can improve the flow of the living area and helps to make the living space more useful (O'Gorman, 2019).

## iii. Nature

Including nature to indoor living areas can improve its environment. Including some flowers or plants according to the given interior setting can enhance the look of the space. Nature can boost creativity, reduce stress, boost learning understanding and speed up recovery from disease. It is important to put indoor plants near a place where it can be seen easily and its presence enhances the environment of the room (Moduleo, 2019).

## iv. Insulation

On your ability to sleep, level of tension, and general health, excessive noise might have negative impacts. All of this can be aided by wall insulation. According to Jason Todd, director of market development and building science at green fiber an insulation company, when you insulate your wall, the climate of a structure will become completely equal, suggesting your body won't need to change as you travel from one room to another. Unhealthy conditions including obese, diabetes, and heart disease can result from poor sleep quality, which is impacted by a noisy home (ReenergizeCO, 2016).



**Figure 2.11:** Unhealthy Conditions Of House Due To Noise (Acoustics, 2022).

#### v. Color

Utilizing various colors can also effect living spaces like low clarity, poor color opacity, frigid color, or mild color all have the potential to evoke a feeling of retreat. High color opacity, bright color, and funny texture forms may elicit positive emotions. This could surprise people and it is also simple to understand and it might also produce different volumes and create a sensation of living space. Color can do more than simply make a room appear nice. It has an impact on human moods and mental condition. Every color evokes an emotional response and emotions plays an important role in our daily life. Colors can be used to give the sense of a larger or smaller environment. If the room is smaller and daylight is poor then light colors can be used. Dark colors will produce a pleasant, cozy atmosphere in a large room (Mehta, 2019).

**Table 2.3:** Shows The Effects, Association And Character Of Color In Living Spaces  
(Yedekci, 2000).

| Color  | Effect                                | Association                                                                                                      | Character                                                                                   |
|--------|---------------------------------------|------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| Red    | Exciting,<br>stimulating              | Positive: passionate,<br>active, strong, warm<br><br>Negative: intense,<br>aggressive, raging,<br>fierce, bloody | Dominant and<br>dynamic color                                                               |
| Orange | Exciting,<br>Stimulating,<br>Cheering | Positive: lively,<br>energetic, extroverted<br>Negative: intrusive,<br>blustering                                | Less masculine than<br>red                                                                  |
| Yellow | Cheering                              | Positive: sunny,<br>cheerful, radiant, vital<br>Negative: egocentric,<br>glaring                                 | The happiest of all<br>colors, warmth,<br>cheerfulness, and<br>inspiration                  |
| Green  | Retiring, Relaxing                    | Positive: tranquil,<br>refreshing, quiet,<br>natural<br>Negative: common,<br>tiresome, guilty                    | The most restful<br>color to the eye.<br>Green can<br>symbolize nature<br>but also sickness |

**Table 2.3:** Shows The Effects, Association And Character Of Color In Living Spaces  
(Yedekci, 2000) “Table Continued”.

|        |                    |                                                                                                          |                                                                                                                                           |
|--------|--------------------|----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Blue   | Retiring, Relaxing | Positive: calm, sober, secure, comfortable, noble<br>Negative: frightening, depressing, melancholy, cold | Appears to be transparent, wet, cool, and relaxing. Opposite to red, blue will decrease a person’s blood pressure and pulse rate          |
| Purple | Overcome           | Positive: dignified, exclusive<br>Negative: lonely, mournful, pompous, conceited                         | Purple is a mixture of red and blue the two colors that are psychologically most opposed. Delicate and rich, or unsettling and degenerate |
| Pink   | Lively, Calming    | Positive: lively, calming, intimate<br>Negative: too sweet, weak                                         | Must be handled carefully. Considered feminine                                                                                            |

The effects of these colors are according to its environment. Human reaction can be changed for the same color in interior or exterior environment and it depends on where the color is being used like walls, ceiling or floor and colors are highly affected by natural light conditions also.

## 2.4 INDOOR AND OUTDOOR SPACE

As humans spending more time indoors because of covid or the usage of technology like screens and video games, the value and need of outdoor spaces grows for human mental

health and wellbeing. The expense and access of space are two issues that prevent many people from having their dream indoor and outdoor living environment. Creativity and technological advancement on the other hand are contributing to cost effective alternatives that fit into current ecosystems and when performed effectively help them thrive. Human desire for the outdoor spaces is more than ever since the Covid 19 outbreak forced humans to stay inside. Those who could afford it left the city for residences in the hills or inhabited suburbs.

The trend will remain in 2023. Home owners who understand how nature affects their wellbeing desire decent air quality, lush environment, and accessible outdoor leisure are still demanding outdoor spaces. Architects and designers worldwide are taking note. They, too, are gaining the benefits by creating outdoor spaces because its less expensive, enhances the user quality, and reflects a dedication towards the environment (Hannan, 2022).

To connect indoor and outdoor spaces with each other properly, architects must consider some important factors which are mentioned below:

i. Glass doors/windows or French doors

Introduce Glass doors or French doors to give user a unique perspective. Design for something like a view of the outdoor places, such as a garden, a nice courtyard and an outdoor pool. Consider the following nighttime scenarios like the sky, the greenery, and the inviting ambiance of a tiny outdoor sitting room nicely decorated outside the house. All of this is plainly visible because to the sheets of glass that create visual and special consistency with its house's interior.

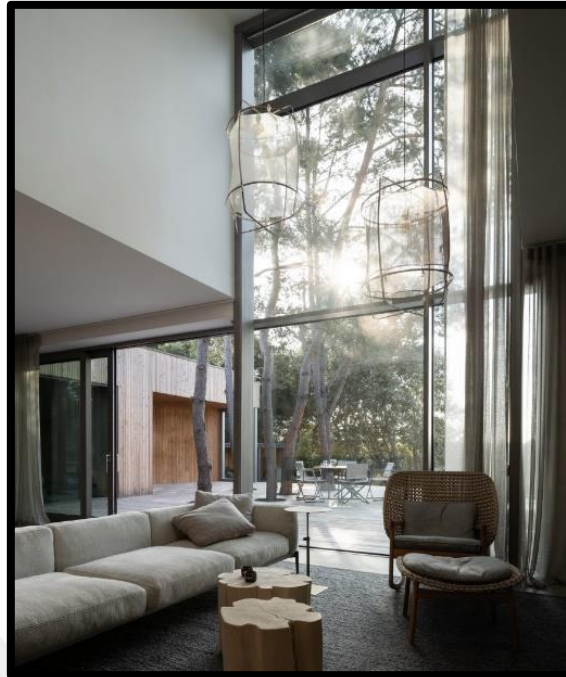
If you want to bring in more direct sunlight then consider glass windows with thinner profiles that let the sunlight rays in and can be shifted to one direction if required to establish consistency among the indoor spaces and outdoor spaces. Windows can also impact and effect human response on a certain environment. Presence of windows can impact human health in a positive way and some of the impacts are mentioned below in the table (Bastianelli, 2020).

**Table 2.4:** Shows The Impact Of The Windows And Daylight On Humans (A. Veitch, 2001).

| Design Features           | Impact on Human Experience                                                           |
|---------------------------|--------------------------------------------------------------------------------------|
| Presence of windows       | Presence of windows increase the speed of recovery from stress and attention fatigue |
| Presence of small windows | Small windows prevent occupants from restoring from fatigue                          |
| Presence of natural light | Natural light helps relax and ease the occupants stress level                        |
| Presence of nature view   | Nature view induces refreshing and restorative feelings                              |



**Figure 2.12:** Example Of Indoor And Outdoor Space Connected With Each Other With Help Of Sliding Glass Door (Crook, 2022).



**Figure 2.13:** Huge Windows In The Lounge Providing Sunlight To A Dull Indoor Environment (Shoots, 2022).

## ii. Matching Floors

Individuals' attention to a certain environment or space is very important. By choosing the same material for indoor and outdoor floors it is easier to get human attention and it can also help to give continuity to outdoor spaces. Choose the same material indoor and your outdoor floor as an interior design technique. Too many various types of flooring might make your house appear disconnected and narrow (Yeager, 2020).

To know which floor material is the best option for the specific situation is by exploring different options, to know if the tile will fade in the sun, its durability and water proofing. It must be non-slippery and hard to fulfill the outdoor requirement. Some of the suitable material for floor are mentioned below.

**Table 2.5:** Shows Four Floor Materials And Its Qualities (Yeager, 2020).

| Material | Quality                                                                          | Example                                                                            |
|----------|----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Marble   | Durable<br>Watererproof<br>Natural<br>Long lasting                               |  |
| Slate    | Color ranging to neutral to vibrant<br>Resistant to scratches<br>Water Resistant |  |

**Table 2.6:** Shows Two Outdoor Floor Materials And Its Qualities (Yeager, 2020).

| Material  | Quality                                                      | Example                                                                              |
|-----------|--------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Porcelain | High temperature<br>Tough<br>Durable<br>Weatherproof         |  |
| Granite   | Strong<br>Waterproof<br>Variety of colors<br>Stain resistant |  |

### iii. Indoor and Outdoor Furniture Theme

Both indoor and outdoor furniture theme must be connected and similar to achieve the desired results. It is important to choose similar furniture to achieve the continuity of aesthetic. By choosing neutral color scheme like brown, tan, white and green it is possible to maintain the connection of both spaces (CHILDRES, 2022).

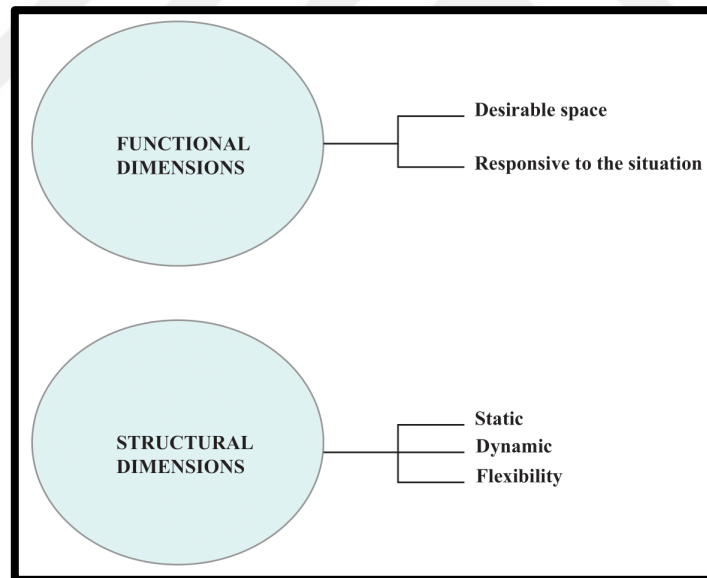
### iv. Greenery

Applying plants where the indoor and outdoor of the house joins could be a clever method to link these two spaces and create the illusion of a continuous large space. By bringing the garden near to the windows can also help to create a sense of continuity (GREG TOON, 2020).

### 3. HUMAN DIMENSION AND SCALE IN ARCHITECTURAL SPACE

#### 3.1 HUMAN DIMENSION

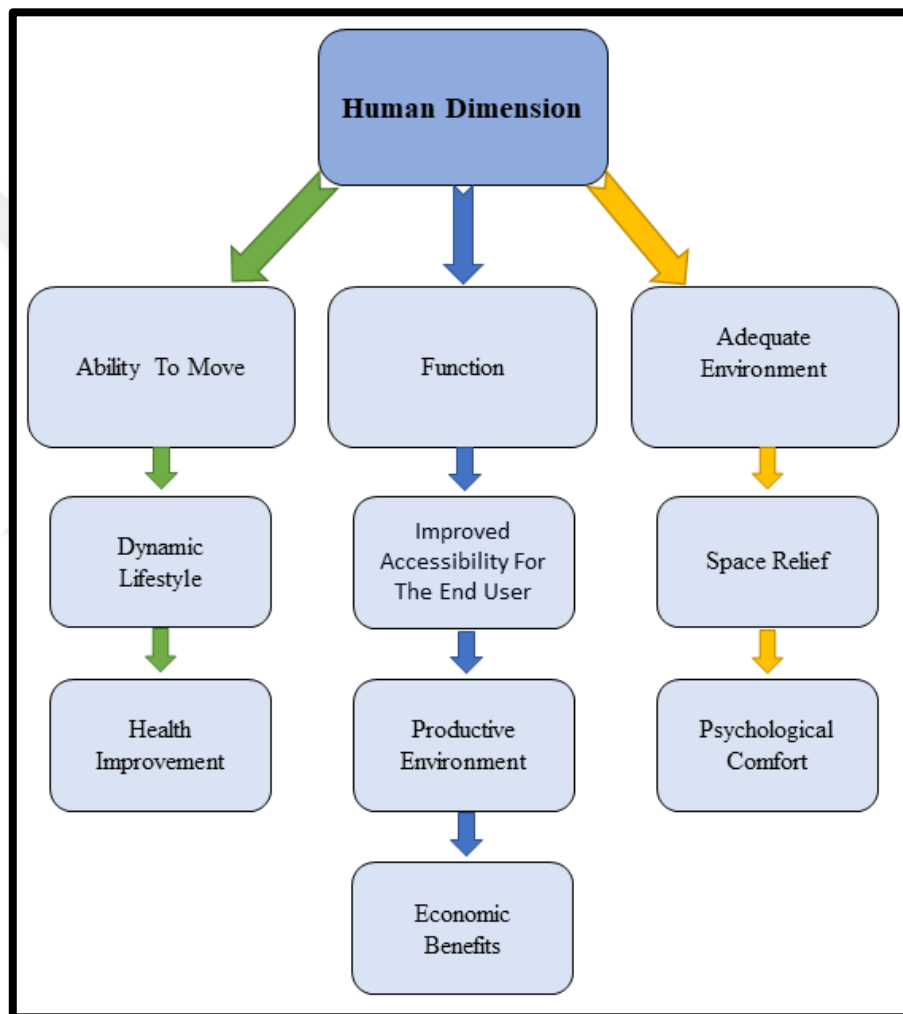
The dimensions of our bodies, as well as how we navigate and experience space, are key factors in both architectural and interior design. The average adult's measurements and space serve as the minimal specifications for use in designing building plans and furnishings. If at all possible, space ought to be raised to make room for those who are bigger than usual comfortable. Entrances and hallways should rarely be constructed solely around the demands of the ordinary adult because they typically need to be large enough to accommodate the movement of furniture. The structural dimensions of our bodies are distinct from the dimensional needs that arise from the method we reach for objects on shelves, sit at tables, descend stairs, or engage in social interactions. As seen in the figure, the functional dimensions change depending on the type of activity being done and the social context (Nejati, 2018).



**Figure 3.1:** Shows Specification Of Functional And Structural Dimension (Nejati, 2018).

If architects follow human dimension to design their projects, it can benefit in various aspects such as health improvement, economic benefits and psychological comfort. First following human dimension will give user the ability to move inside the living space which will lead to a dynamic lifestyle which proved to improve human health. Second, human dimensions

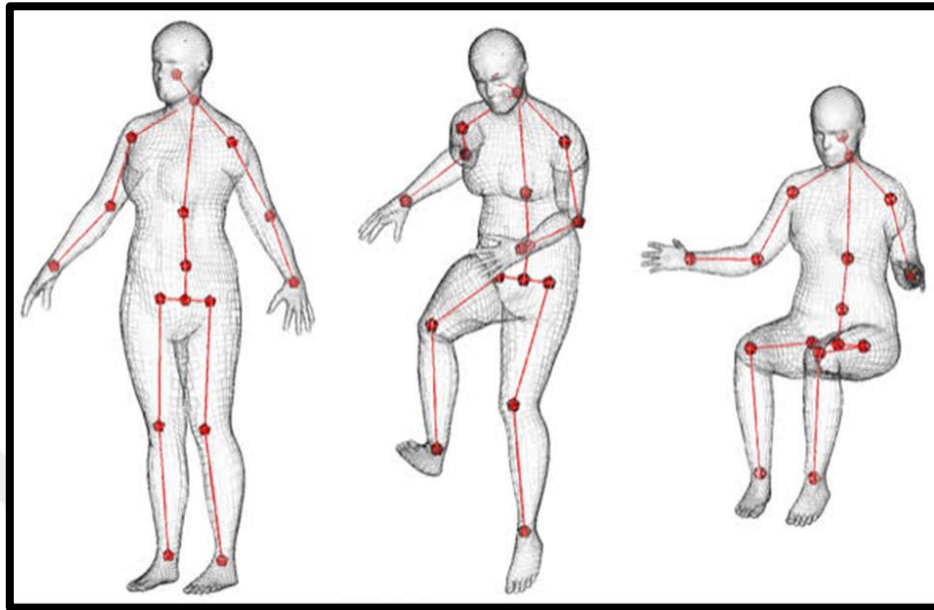
according to the function of the space will improve the accessibility for the end user for example in a cafe making the space and tables fit to the public and their movement will help them to interact properly and it will help them to attract more customers in the suitable space, this will finally reflect on the improvement of commercial value and economic benefits. Third, using human dimension to create adequate environment will help the user to be relieved in the space he is occupying which will lead to psychological comfort (Nurwidyaningrum, 2018).



**Figure 3.2:** Showing The Benefits Of Following Human Dimension While Designing Architectural Space (Nurwidyaningrum, 2018).

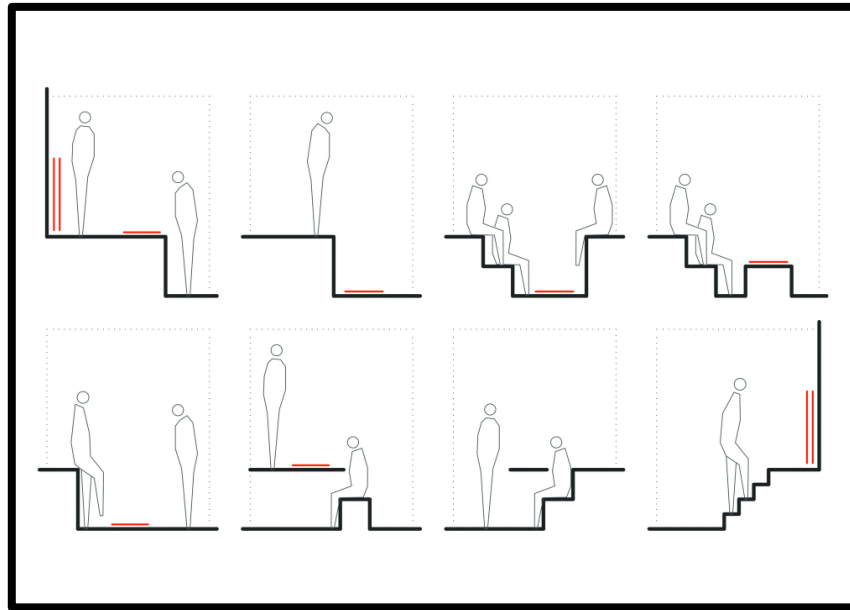
Building interiors are intended to be locations for movement patterns, activity, and responsiveness. As a result, the shape and size of the internal space should match those of

our actual bodies. When we sit on a chair, lean against a wall, or huddle inside an alcove, we can achieve this fit in a static manner.



**Figure 3.3:** Static Fit With Human Setting (Patel, 2016).

Additionally, there may be a dynamic fit when we walk through a building's rooms and hallways, climb stairs, or enter a building's lobby. Static fit considers alignment between human and equipment and requires understanding anthropometric characteristics of target users and geometric equipment features. Dynamic fit assesses how the human and equipment move and interact with each other, with a focus on the relative alignment between the two systems.



**Figure 3.4:** Dynamic Fit (Design, 2020).

The way that space fulfils our need to manage our own space and sustain acceptable social distances is a third sort of fit. Space also possesses sensory, visual, aromatic, and thermal properties that affect how we feel and what we do there, in addition to these physical and psychological dimensions.

Different aspects of architecture define the sensory imports of space. As a result, an architect has considerable influence over how people behave since he designs the user's environment. The major purpose of architectural components is to shelter or protect the human body, hence how effectively they do so determine their effectiveness. User dimensions are a crucial component of building design. The cultural and social areas, in contrast, are much larger and enlarged in comparison to the human scale, symbolizing the grandeur of existence. Humans engage with their surroundings through their senses, their physiological abilities, and their perceptions. These interactions are influenced by cultural influences, individual preferences, expectations, and incidents as well. As a result, it is impossible to foresee how the interior characteristics of space, such as mass, acoustical reverberations, and lighting, would affect human experiences.

The principle of scale in architecture creates space that is human centered and liveable. The individual is most receptive to architecture that is on a human scale. A fundamental human propensity is to measure everything by its dimensions. So why does user psychology value

human? Small scale is always in accord with a human scale since humans have such a horizontal sense of sight. Human angle of vision is between 50° and 55°, so it is rather challenging for a user to associate with tall buildings or extra-large created spaces. It is simpler to view low structures than over horizon line-built settings. The physical dimensions of the body and sensory perception are influenced by human size in architecture, which has a warm and indulgent effect on psychology. These places encourage communication and are relatable (Kothari, 2022).

### Anthropometry

The word "anthro" represents human or mankind and "metron," which means measure. These are the two ancient Greek words from which the word "anthropometry" is derived (Yuri, 2022). According to standard definitions, anthropometry is a field of research that is closely tied to taking measurements of human body proportions. Additionally, the study of body size is a particular focus of the field of ergonomics, which includes anthropometry. The definition of anthropometry, according to Sanders & McCormick (Yuri, 2022), involves measuring of a human figure proportion as well as the other properties of the figure that are important for the creation of items which humans wear, use and live on a regular routine.

**Table 3.1:** Shows Involvement Of Anthropometry In Human Body Measurements (Amorós, 2021).

|                    |                              |
|--------------------|------------------------------|
| <b>Size</b>        | Height, Weight, Volume, Area |
| <b>Structure</b>   | Length, Width, Height        |
| <b>Composition</b> | Body Fat, Body Mass          |

Architecture uses a variety of measurements in the construction of a house. This is so that structures that are both visually stunning and pleasant to live in can be made using the proper calculations. To accomplish this, anthropometric measurement serves as one of the measurements that must be taken into account. The following factors that affect human

dimensions must be taken into consideration while taking anthropometric measured data: Age, Gender, Region, Diet consumption and Daily activities (Amorós, 2021).

Addressing the movement and area needs of a construction is among the objectives of anthropometry's application in architecture. How did it take place? This is so that people who are moving around the building may do it more easily thanks to the precise dimensions that were taken. In addition, this measurement requires to be modified to account for the ethnicity and age range of the building 's residents. so that the architect may calculate the precise amount of space required. reducing workplace injuries or accidents caused by improperly designed structures.

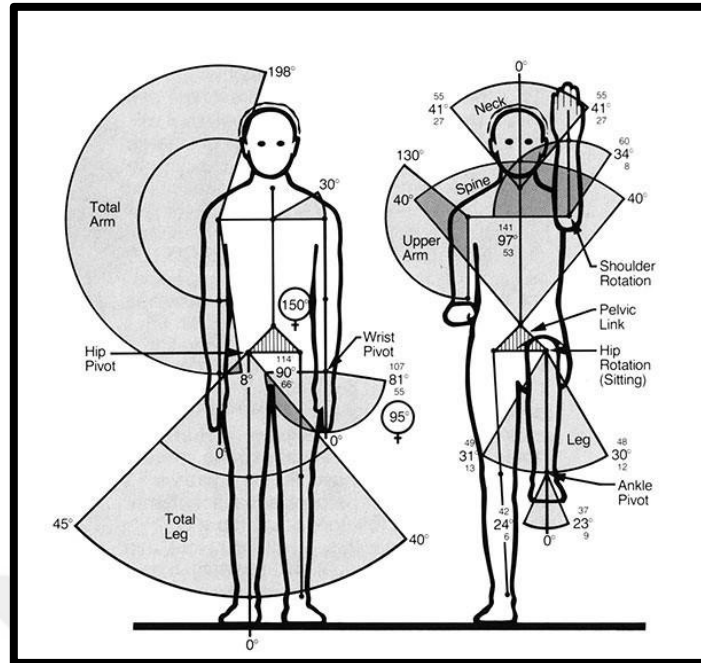
Anthropometry is divided into two types:

Static Anthropometry (Ergonomics): Static anthropometry is the measurement of a person's body size while they are at rest or using an object, for example a chair, table, bed, mobility device, etc.



**Figure 3.5:** Static Anthropometry Ergonomics (Lab, 2022).

Functional Anthropometry: It is the measuring of skills linked to finishing actions, such as reaching, moving, and other aspects of using space and equipment.



**Figure 3.6:** Functional Anthropometry Ergonomics (Lab, 2022).

In constructing a structure of the building, all the architects are obliged to construct a building that has ergonomic fundamentals. Ergonomics and anthropometry are linked with each other. So, it means that in order to generate ergonomic settings, the architect must study anthropometry. When creating a building, an architect needs to collect dimensions for a variety of construction elements such as ceiling height, door width and height, stair size and height and even objects such as handles and hooks. Each the mentioned things should always be ergonomically prepared so that they are appropriate for users who will be using the area or structure, keeping in mind their anthropometry (Caca, 2019).

Accessible design is the design of products and environments to meet the functional limitations of people with disabilities. Given demographic and social phenomena of the 21st century, related with the change of the society's age structure, medical care progress, and, above all, the elderly and disabled persons' efforts to lead independent and content lives, designing accessible space is becoming an imperative of residential architecture.

**Table 3.2:** Shows The Dimensions Required For A Dining Area According To The Number Of People From Neuferts Architects' Data (Neufert, 2012).

| Number of people | Width in cm          | Depth in cm          | Space required in m <sup>2</sup> |
|------------------|----------------------|----------------------|----------------------------------|
| Four people      | More or equal to 120 | More or equal to 130 | 2.6                              |
| Five people      | More or equal to 120 | More or equal to 180 | 3.8                              |
| Six people       | More or equal to 180 | More or equal to 195 | 3.9                              |
| Seven people     | More than 180        | More or equal to 245 | 5.1                              |
| Eight people     | More than 180        | More or equal to 260 | 5.2                              |

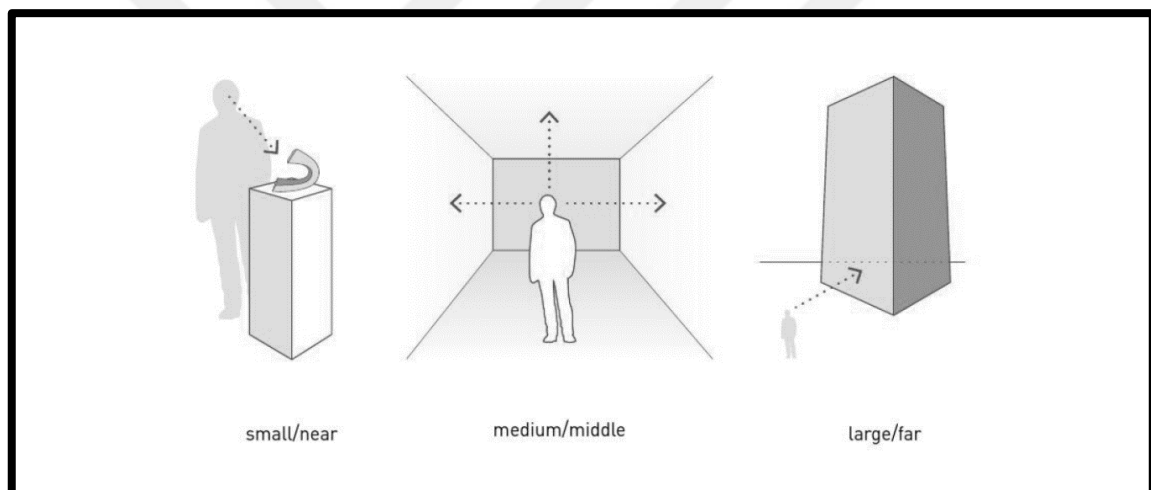
The table 3.2 above is showing how the human scale is important for each area according to the activity that will be done in a specific area. The dining area needs enough space for a person to sit and move around while on the chair to reach with his hands freely all the items on the table. That is why the dimensions mentioned in the table above are providing an empty space for each person to move around without bothering the other person and relatively with the increasing of number of people the space is also increasing. This example explains the relation of static and functional anthropometry with the dimensions of the room.

### 3.2 HUMAN SCALE

The ratio of space to body dimension is known as the human scale. It is crucial to consider the intended users of each space when choosing a unit of measurement for the building's various spaces. Human scale refers to a scale which seems suitable and pleasant to an individual. For instance, stairs, entrances, and pavilions are proportioned to feel comfortable

rather than undersized to make an individual feel enormous in comparison to the architectural form. Architecture represents the most intense visual arts. In regards to perception, a common difficulty for the users is determining the size of a structure. They utilize their own dimensions as a guideline for this. When humans compare architectural dimensions to human dimensions, they gain a deeper understanding of a buildings size. The scale of a structure refers to how large it is in comparison to the actual human being.

Although primarily visual, our connection to scale greatly influences how we perceive space. Our perception of scale is enhanced by physical sensation, particularly sensory feedback. There are three basic scales on which we see space, based on Alois Regal's (1858–1905) theories (TMD, 2017).



**Figure 3.7:** Three Scales (TMD, 2017).

Small/near: Humans are able to comprehend complex curvilinear geometry the best at this scale. when we are able to fully comprehend, grasp, spin, then, instead of experiencing the object in bits and pieces, we may create a visual map of it and comprehend it much more easily (TMD, 2017).

Medium/middle: Here, humans only see a small section of an object at once. Surface and visibility are crucial if the user is to comprehend the architecture or spaces in general. Since they are larger than the size of the human body and are impossible for humans to mentally

map in their totality, curvilinear forms lose their effectiveness. When recognizing distant objects in an area, shading and contrast become crucial (TMD, 2017).

Large/far: The capacity for tactile understanding diminishes when viewing architectural objects up close. Color & simple forms become crucial. Because we lack the visual agility to interpret complicated forms, large contrast materials or forms are crucial (TMD, 2017).

In order to design an environment that is considerate of human scale, it is important to ensure that the daily objects people use have a size and shape that is practical for the typical person to utilize.

As previously described in this chapter, researchers from various times have their individual viewpoints, but generally scale can be influenced and it can be divided into three sections which is shown below in table 3.3.

**Table 3.3:** Shows The Factors Which Influence Scale (Teng, 2012).

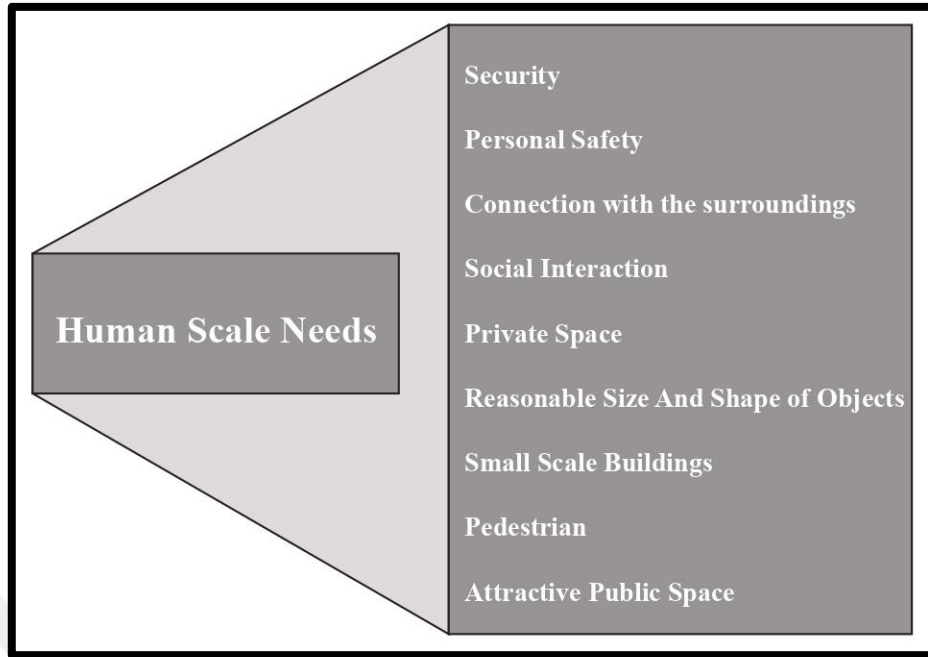
|                                                 |                                                                                                                                                                                                                                                                       |
|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The scale is connected to human body.           | It indicates to use human body as the reference for comparing, which includes the human body and some of the item's humans are associated with such as main entrance doors, glass windows, staircases, and structures.                                                |
| The scale is connected to the surroundings.     | It indicates that the nearest object is the reference for humans to sense the scale. The perception of human scale is generally highlighted by a strong contrast among the objects and its surrounding.                                                               |
| The scale is connected to the size of the space | It indicates that the size of the certain space in which the object is located defines the true scale of an object. Humans moving at a pace of approximately 1.2m/s. As a result, another aspect influencing the perception of scale is indeed the size of the space. |

Because the determining element of scale is primarily related to the human body and its surroundings. As a result, when discussing the human scale, the important issue is human being. Space quality can be judged by the human presence itself for example the number of people in a street at night can tell the quality of the public space. According to the previous research, human scale could be measured in terms of perception of scale, dimensions, and proportion of spaces and buildings (Teng, 2012).

### **3.3 PRINCIPLES OF HUMAN SCALE IN ARCHITECTURAL SPACE**

In order to provide good architectural space in general to the user there are eight human scale principles which need to be followed:

- i. A compact construction that is linked to its environment. Small scale buildings with significant density are ideal for attracting people and reducing communication distances (Teng, 2012).
- ii. Shorter and reasonable pedestrian providing direct routes to locations, with highly illustrated routes as an alternative. It provides opportunities for attracting people to walk and live in public space (Teng, 2012).
- iii. Evident spaces organizing includes dividing space into two sizes: smaller and larger. Meanwhile, after every 25 m shifting vision provides a better experience (Teng, 2012).
- iv. Structures having similar heights are known as systematically positioned buildings, typically 1 to 3 story buildings must be blended with 4 to 6 story buildings. Tall structures must be at the back while low rise buildings at the front (Teng, 2012).
- v. A proper proportion of pedestrian width and construction height is indeed a useful way to assess the public space scale. When the proportion is proper then the pedestrians can be use full (Teng, 2012).
- vi. A flexible barrier among private and public space suggests that a small distance between residences and public spaces may generate a transition space for people (Teng, 2012).
- vii. A construction should be designed to function with the sunlight. It must function so that living things can use it. Usage of the sunlight is critical in places with poor lighting. Sunlight should be available to everybody (Teng, 2012).
- viii. Air circulation should be sufficient in living spaces. Structures having courtyards may ensure the presence of glass windows on at least 2 ends of the building for cross airflow (Teng, 2012).



**Figure 3.8:** Shows Human Scale Needs (Almaz, 2022).

In previous research it is proven that architecture is incomplete without human. Humans are not only involved in scale and dimension but also it is really important for architects to make sure that the construction they did is according to human scale and it serves human requirements. Technology influenced architecture in a big way and it plays a big role in modern architecture but if architects neglect human scale because they want to fit in today's technology then it can affect the real meaning of making any architectural space. By designing according to human needs, architects can achieve the real goal and satisfactory results (Castañeda, 2022).

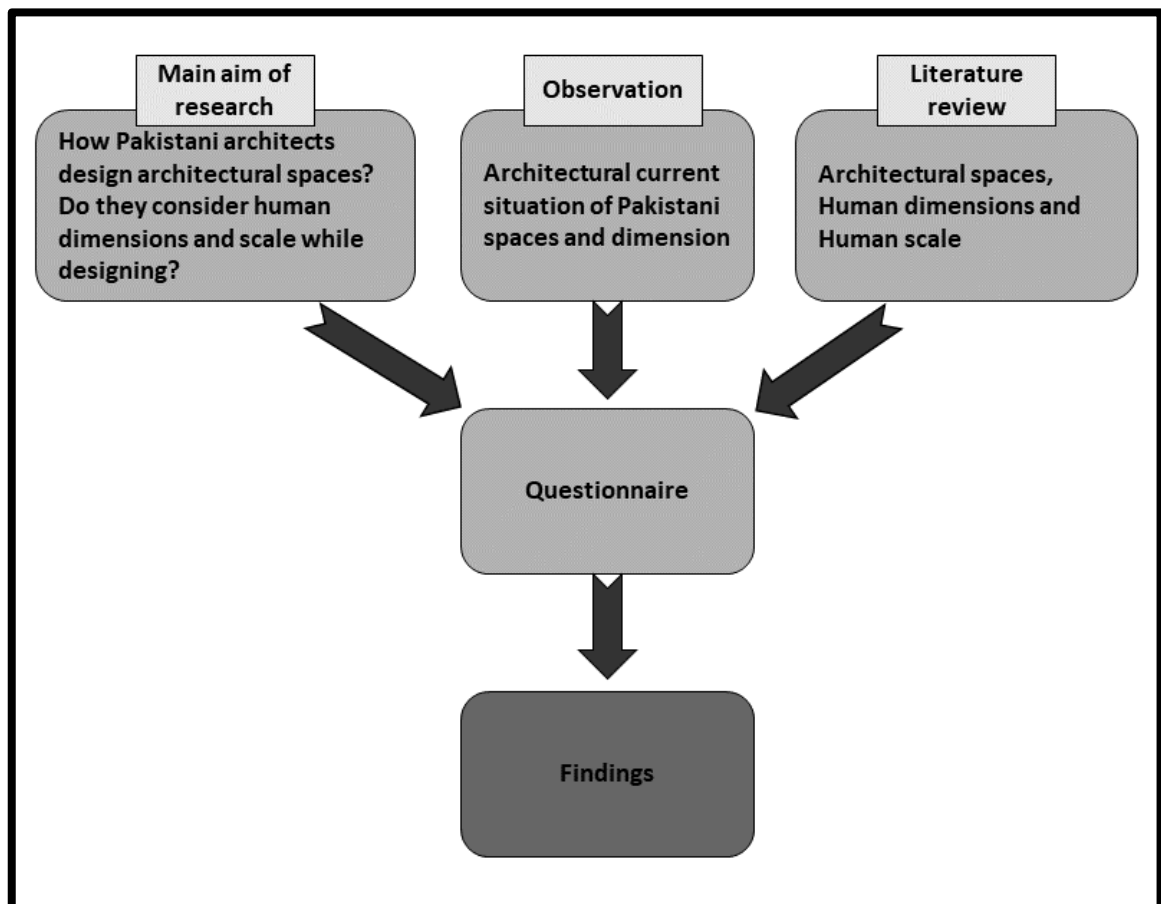
## 4. RESULTS

This chapter explores the Pakistani office practices of contemporary architecture in depth while providing an extensive comprehension of the significance of its application and its effects on the lifestyle and Pakistani culture. By searching about the meanings and applications of contemporary architecture around the world and by fulfilling extensive observations of the Pakistani culture, lifestyle and architectural heritage and existing examples of contemporary designs, this chapter combines the knowledge about the general idea of contemporary architecture and findings from the observation made previously to offer a better understanding of the trends in the contemporary architecture in Pakistan, in addition to adding valuable insight into the relation between the human dimensions and scale effects on the design process of the Pakistani architects.

This chapter aims to examine whether Pakistani architects are following the contemporary trends and principles of contemporary architecture such as the simplicity, functionality, human comfort, and the specific use of materials in their practices through a combination of questions and pieces of evidence like real examples of the contemporary projects designed and constructed by a number of architectural offices while comparing the data collected from the observation and research to responses of the questionnaire and the existing projects. At the end of this chapter, the reader will have a broader understanding of the contemporary architecture office practice in Pakistan in terms of human and space while the findings included serving as an opportunity to make a change in the existing situation of the Pakistani architectural pattern while revealing the shortcomings of the contemporary office practices and the loopholes in the existing design scheme of the old style, while at the same time suggesting some solutions that can contribute to a more efficient architectural space whether it was an open space, public space, living space or indoor and outdoor space.

#### 4.1 AIM OF THE QUESTIONNAIRE

In this chapter, a questionnaire will be included. The main aim of this questionnaire is to show how correct is the information collected from previous research and what can be improved or suggested to make the new era of contemporary architecture in Pakistan more sensible and relatable to human needs. The results will show how architectural offices in Pakistan deal with the mentioned architectural spaces and human dimensions and scale. By targeting Pakistani architects, the aim is to gain information about how they develop or design architectural spaces and whether they consider human dimensions and scale in their design process.



**Figure 4.1:** Shows The Components Used To Make The Questionnaire (Kleehaus, 2018).

To reach the desired findings from the Pakistani architects a questionnaire was designed by using three main components which are keeping in mind the main aim of the research. The research done in the previous chapters of the literature review about open space, public space, living space and indoor and outdoor space in a addition to human scale and human

dimensions, and the last component is the observation of the Pakistani architectural environment of the previously mentioned topic.

## **4.2 PROCESS**

The questionnaire consists of 25 questions all related to the field of architecture space and its relation with human dimensions and scale. These questions were spread to a range of architects who are working in Pakistan related to architectural offices. Their answers were collected with confidentiality and they were informed and reassured that the answers will not be spread anywhere else and will be used for this thesis research purposes only. The answers were then studied in order to get the findings that will be discussed later on.

Each question was formed carefully to answer whether the information collected from the previous researches are relatable to real life, and if they were reliable sources for architects to follow in order to create a better experience in nowadays style of living whether the architectural space was an open space, public space, living space or indoor and outdoor space and human dimensions. In the process of collecting information in the early stage of this thesis, I had many questions in mind, to answer those questions I looked up some previous researches that made it even more interesting to know if the answers I got are still applicable to our lives these days.

One by one, I formed the questions to get an idea about how people nowadays see architectural spaces in general, whether these spaces are specific for them or just a place where they can exist and do anything. In the process, I started noticing even broader topics that can be studied like the fact that the process of design is also important to give the identity, so I formed some questions to see how important it is to pay attention to the process. After that, it was also unbearable to hide the fact that the predictions and the perception of the function of a specific place can affect by human dimensions and scale. That is why I also added some questions to see how important and obvious is the relation between the human and space for people to perceive the architecture of any space (O'Gorman, 2019).

While looking up the architectural spaces and human connection, the fact that the human cannot be separable from the architecture space was undeniable, I investigate more about this idea and even ask how these variables can affect both human and architecture. In concise words I can say that this chapter will show the results of comparing the responses of

architects nowadays to the previous researches, in addition to giving a better view on how can architects benefit from human experiences to give them a new architecture that suits their needs better (Lehman, 2020).

**Table 4.1:** Shows The Information Of Architectural Offices Group A In Pakistan Who Participated In The Questionnaire (Edited by author, 2022).

| Architecture Office Name               | Address                                                                                        | Email                     |
|----------------------------------------|------------------------------------------------------------------------------------------------|---------------------------|
| Arch X Studio                          | 22P Ex Air Avenue DHA Phase 8, Lahore, Punjab, (Pakistan)                                      | info@archxstudio.com      |
| Architects Atelier                     | DHA Phase 4, Lahore, Punjab, (Pakistan)                                                        | archateldesigns@gmail.com |
| Arcon Associates                       | Office No 1 First Floor Nehal Plaza Khuda Baksh Housing Society Lahore Cantt, Lahore, Pakistan | arconpak@gmail.com        |
| Faisal Rasul Architectural Consultancy | 3rd Floor, 58-CCA, Phase V, DHA - Lahore, Pakistan                                             | info@faisalrasul.com      |
| Habib Fida Ali Architects              | New town, Karachi, Pakistan                                                                    | info@habibfidaali.com     |

**Table 4.2:** Shows The Information Of Architectural Offices Group B In Pakistan Who Participated In The Questionnaire (Edited by author, 2022).

| Architecture Office Name         | Address                                                                               | Email                        |
|----------------------------------|---------------------------------------------------------------------------------------|------------------------------|
| Ali Arshad Associates            | D-91/1, Block 4, Clifton, Karachi, Pakistan.                                          | mail@aliarshadassociates.com |
| Arshad Shahid Abdullah           | Ground Floor, Central Hotel Building, Karachi, Pakistan                               | info@asa.com.pk              |
| Coalesce                         | Coalesce Design Studio First 57-C, Khayaban-e-Badar Ghazi Mazar, DHA Phase 5, Karachi | info@coalesce.pk             |
| Cube Design Studio               | Plot#F73/3, Block4, Clifton, Karachi, Pakistan                                        | info@cubedesignstudio.org    |
| Cubic Feet Design                | 104-C, 4th Floor, Main Khayaban-e-Ittehad, Phase II Ext. DHA Karachi.                 | info@thecubicfeetdesign.com  |
| Design Group Practice            | E-232ndZamzama Commercial Lane, DHA-5, Karachi                                        | mail@dgp.com.pk              |
| Gravity Architecture & Interiors | Karachi, Sindh, Pakistan-75500                                                        | gravity.dnc@gmail.com        |
| Identity Studio                  | 2nd Floor Fl 19, F-7, Block 5, Karachi, Pakistan.                                     | info@identity.com.pk         |

**Table 4.3:** Shows The Information Of Architectural Offices Group C In Pakistan Who Participated In The Questionnaire (Edited by author, 2022).

| Architecture Office Name   | Address                                                             | Email                             |
|----------------------------|---------------------------------------------------------------------|-----------------------------------|
| Prospect design works      | Verona Regency, Plot #18, Karachi, Pakistan                         | info@prospect.com.pk              |
| Shuja Rahim Associates     | A-8, FL-2, Kehkashan Town Houses, Block-5, Clifton, Karachi-75600.  | info@sra.com.pk                   |
| Subtractive Architects     | Commercial Street 7A, Badar Commercial Area, Phase 5, DHA, Karachi. | info@subtractive.pk               |
| Jamshaid Khan Architects   | Jam shaid Khan Architect & Associates House#SD-9 Lahore Cantt       | jimsarc9999@yahoo.com             |
| Nayyar Ali Dada Associates | 7-F/3 New Muslim Town, Lahore, Pakistan.                            | info@nayyaralidada.net            |
| Arch Soul Design Studio    | House 18-A, Street No. 24, Sector Rawalpindi                        | archsoulconsultants@gmail.com     |
| Ahmad Riaz & Associates    | 84, Peshawar Road, Rawalpindi Cantt                                 | info@aradesign.net.pk             |
| Arch entire                | Phase 2, Opposite WTC, Main G.T. Road, Islamabad.                   | executive.architectsinc@gmail.com |

**Table 4.2:** Shows The Information Of Architectural Offices Group D In Pakistan Who Participated In The Questionnaire (Edited by author, 2022).

| Architecture Office Name | Address                                                                          | Email                             |
|--------------------------|----------------------------------------------------------------------------------|-----------------------------------|
| Arch notion              | Apartment # 001, 2nd Basement, Al-Safa Heights 2, Islamabad                      | archnotionltd@gmail.com           |
| Arsharcassociates        | Office #6, 1st Floor, Ginza Center, Jinnah Avenue, Blue Area, Islamabad Pakistan | ArshArc@yahoo.com                 |
| Arco desk                | B2, Flat # 001, Street # 73, Islamabad                                           | ceo@arcodesk.com                  |
| Db-studios               | Address: #12, Main Nazimuddin Road, Center, F-6/1, Islamabad                     | main@Db-Studios.Com               |
| Efkay architects         | Islamabad Capital Territory 44000, Pakistan                                      | info@efkay.net                    |
| MOSS Architects          | Offices 16   17   18, Floor 03, Markaz F-11, Islamabad, Pakistan.                | info@moss.pk                      |
| Montage design build     | 3A, Street 70, F8/3, Islamabad, 44000 Pakistan                                   | shayat@montagedesignbuild.com.pk  |
| Architectsinc            | Apartment 202, Park Avenue, F11/1 – Islamabad: Pakistan                          | executive.architectsinc@gmail.com |

The participants in this questionnaire were from the following cities in Pakistan: Lahore, Karachi, and Islamabad. Most of them were contacted through their emails which were found on their websites on the internet, while some others were personal contacts and acquaintances. The offices selected from the websites were chosen according to some criteria specified before the search, these criteria were achieved by specifically typing the following keywords: contemporary architectural offices in Pakistan (Graana, 2022). The second step was to shortlist the results found by checking their recent and ongoing projects on their websites and social media accounts and choosing only the ones that seemed to follow the contemporary design concepts by comparing the pictures from their websites to the

information collected throughout the literature review that explained the specifications of contemporary design. After finalizing the list 30 architectural offices were chosen to be contacted (RTF, 2022). The questionnaire was sent to the chosen offices to get their responses which resulted in 100 participants being reliable to work with in order to get the information desired. Table 4.1 will show the Architectural offices' information such as office name, email, and address.

After the collection, the responses are compared with literature review, recent researches and the observation of Pakistan current situation of architecture. The results of this comparison are shown in the findings which gives a clear view of the shortcomings and issues present in the practices of contemporary architectural offices in Pakistan and the conclusion suggests some ways to solve them.

**Table 4.2:** Shows Group A Of The Questionnaire.

| GROUP A                                                                                                                | QUESTIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| This group consists questions regarding architectural space, living space, open space, outdoor space and public space. | <ul style="list-style-type: none"> <li>i. Which of the following defines the architectural space?</li> <li>ii. Is it important to understand the requirement of the client before creating architectural space?</li> <li>iii. Do you try to know your client's personality and likes and dislikes before creating his own architectural space?</li> <li>iv. What factors do you consider most important when designing living spaces in Pakistan?</li> <li>v. Are you using insolation to improve the quality of living spaces?</li> <li>vi. Which color tones do you prefer to use in living spaces?</li> <li>vii. Do you think connecting a living space to an open space have any benefits? If so, can you find any of them in the list below?</li> <li>viii. Do you think that the increase of construction development affected the existence of open spaces in Pakistan?</li> <li>ix. Are you experiencing an increase of demand for outdoor spaces after the pandemic?</li> <li>x. If the client left the choice for you, would you recommend them to have an outdoor space?</li> <li>xi. From the list below which of these elements do you consider important for designing a public space?</li> <li>xii. Do you think designing a proper public space can help in preventing public violence in Pakistan?</li> <li>xiii. Which of the following problems are you solving in your design of public spaces?</li> </ul> |

**Table 4.3:** Shows Group B Of The Questionnaire.

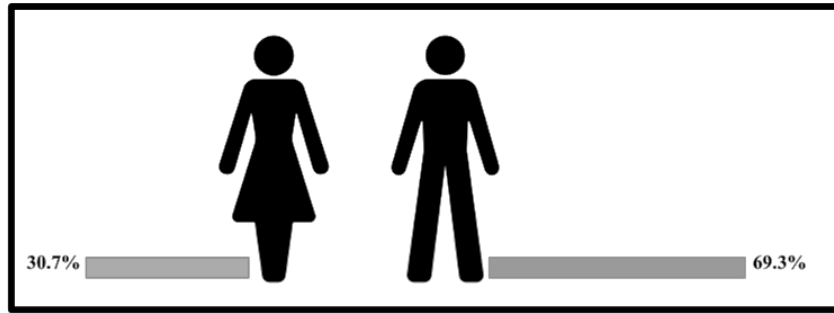
| GROUP B                                                                                                                                                                                                                                                                              | QUESTIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| This group consists questions regarding accessibility and inclusivity, human experience, human centered architecture, design process, human comfort and well-being, daylight, design element, privacy, uses of glass doors, human dimensions, human scale and experience of a space. | <ol style="list-style-type: none"><li>How important is accessibility and inclusivity in your designs for all users?</li><li>How do you envision the future of architecture with regards to the human experience of space?</li><li>How do you stay updated on current research and developments in the field of human-centered architecture?</li><li>Do you change your design process according to new trends?</li><li>In your opinion, what are the most important factors to consider when designing spaces for human comfort and well-being?</li><li>When considering adding the light features and natural daylight what are the effects and main reasons that make you choose to add them?</li><li>What is your priority: functional requirements or contemporary trends and elements in your designs in Pakistan?</li><li>Are your clients asking for more privacy in their houses than before?</li><li>What are the main uses of glass doors?</li><li>Do you design architectural spaces according to human dimensions to fulfil the maximum usage of the space according to its function?</li><li>From 1 to 5 how much importance do you give to human scale and dimensions while designing an architectural place?</li><li>What are some design elements that you consider to enhance the human experience of a space with the respect of the human scale?</li></ol> |

### 4.3 FINDINGS

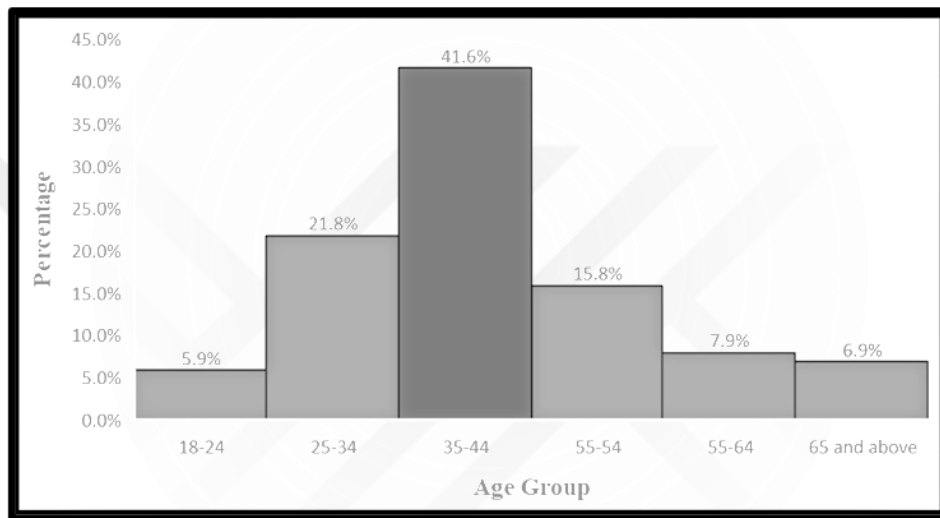
The questionnaire was divided into two sections; the first section is about the personal information of the people who participated in the questionnaire from the offices mentioned in table 4.1. The information collected in section one was age, gender, profession and city. While the section two aims to show how correct the information collected from previous research are and what can be improved or suggested to make the new era of contemporary architecture in Pakistan more sensible and relatable to human needs, the questions are related to architectural spaces, human dimensions and scale.

#### Section 1:

To get the information about participants ages a sequence of numbers was formed by dividing the ages starting from 18 ending by 65 and above according to the international formula of age collection (Alchemer, 2022). The results showed that the majority of architects working in contemporary architectural offices in Pakistan are in the range of 35 to 44 years old, and most of them were male architect with 69.3% while only 30.7% were female.

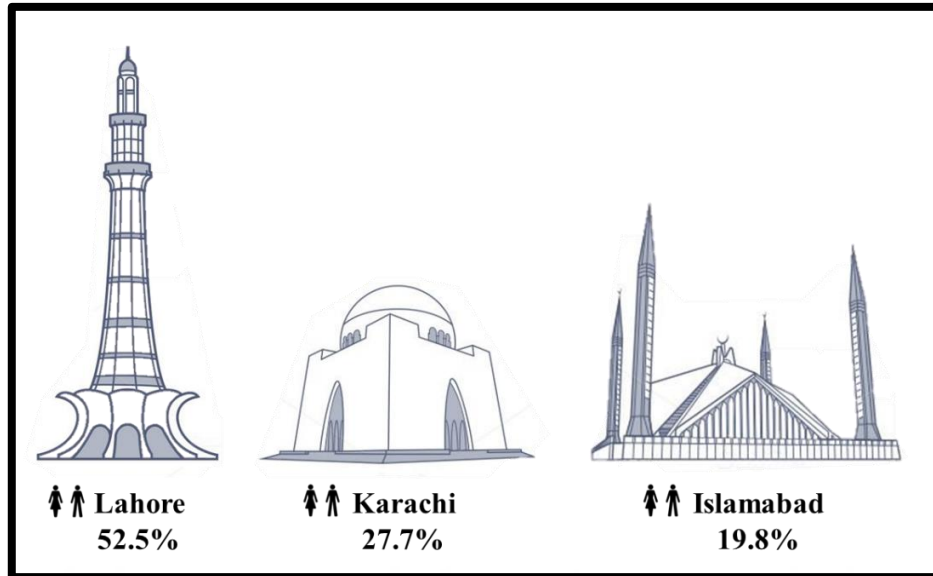


**Figure 4.2:** Shows The Percentage Of Male And Female Participants (Author).



**Figure 4.3:** Shows The Percentage Of Each Age Group Of Participants (Author).

The participants in this questionnaire were architects, junior architects, interior architects and designers from Karachi, Lahore and Islamabad. These cities were specifically chosen among all other cities in Pakistan because these are the cities with major architectural development range among all others (Baldwin, 2019). The majority of participants were architects with 71.3% where most of them were from Lahore with 52.5% of the participants.



**Figure 4.4:** Shows The Percentage Of Participants From Each City (Author).

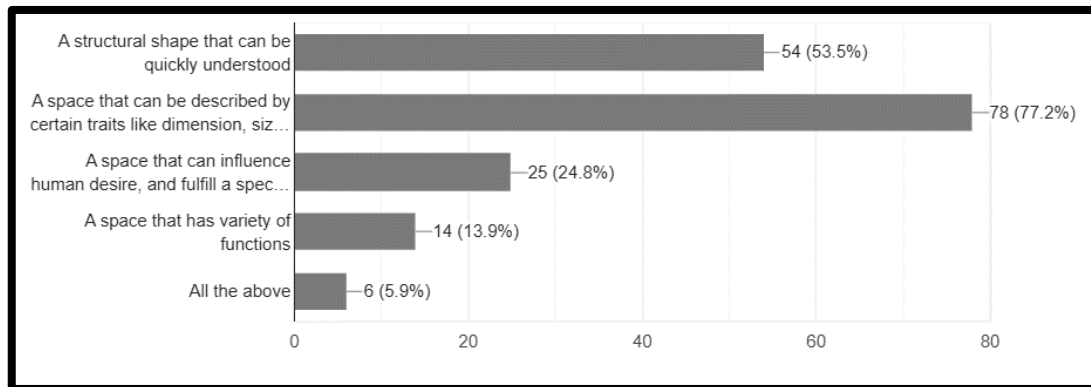
## Section 2:

The section 2 contains questions which are correlated with each other in order to achieve a better understanding of the topic and of the Pakistani office practices, some of the paragraphs answer to one or more questions because the options given in the questionnaire are related to the same topic and can serve to clarify the process of architect's work and tackling the problem from all its aspects. Each question is mentioned with the options given for the participants to choose from then the choices are discussed in detail and then compared to the information achieved from the literature review and the previous observations.

i). Which of the following defines the architectural space? (You can choose more than one answer) A structural shape that can be quickly understood, A space that can be described by certain traits like dimension, size, shape, as well as material, color and light, A space that can influence human desire, and fulfill a specific function, A space that has variety of functions.

At the beginning of section 2 participants were asked to choose among few definitions the ones that define architectural space the most. The most selected answer was "A space that can be described by certain traits like dimension, size, shape, as well as material, color and light" while the second most selected answer was "A structural shape that can be quickly understood" this shows that the information in the literature review about the relation

between architectural dimension and human scale is true, and that contemporary Pakistani architects are following this relation while designing their projects (Belganeh, 2019).

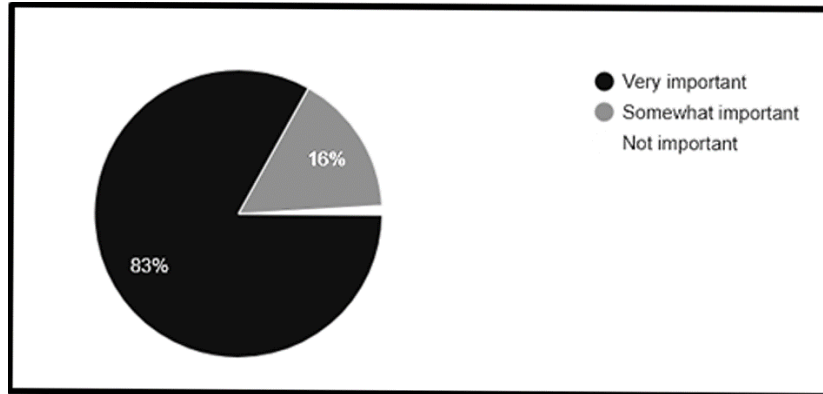


**Figure 4.5:** Shows The Elements That Define Architectural Space According To Participants (Author).

ii) How important is accessibility and inclusivity in your designs for all users? Very important, Somewhat important, Not important.

iii) In your opinion, what are the most important factors to consider when designing spaces for human comfort and well-being? (You can choose more than one answer). Natural light and ventilation, Accessibility and inclusivity, Adding open space, Integration of green elements.

From the responses of the questionnaire, I found out that Pakistani architectural offices are promoting accessibility and inclusivity in their projects as in previous literature review also showed that by designing buildings according to these two elements they can serve the needs of human, this includes main entrances, glass windows, wider doorways and enough space to counter daily life activities (Facilitator, 2022). Moreover the results of questionnaire show that accessibility and inclusivity can enhance human comfort and wellbeing if combined with natural light and ventilation, open space and green elements.



**Figure 4.6:** Shows The Importance Of Accessibility And Inclusivity In Architecture (Author).

iv) From the list below which of these elements do you consider important for designing a public space? (You can choose more than one answer). Light features, and resting areas like benches, Paved pathways, and sidewalks, Human scaled constructions with different functions like shops, Green spaces, gardens and trees.

v) Do you think designing a proper public space can help in preventing public violence in Pakistan?

Accessibility and inclusivity promote safety and security by adding public spaces with gathering points, resting areas, lights and pedestrians. This can reduce the risk of violence and accidents and gives a secure environment for people to live. The responses of participants showed that they noticed the lack of these elements in Pakistani public spaces especially the light element and according to them this is affecting the percentage of violence accidents in public spaces (William, 2008).

Some of the suggested solutions for these problems by Pakistani architects were focusing on designing paved pathways and sidewalks, adding light features and resting areas like benches and human scaled construction with different functions. Most of the participants are including these elements in their contemporary design practices to improve the situation of public spaces in Pakistan.

vi) Which of the following problems are you solving in your design of public spaces? (You can choose more than one answer) Pedestrian proportions, Lack of street lights, Lack of gathering points, Poor entrances and visually inaccessible places.

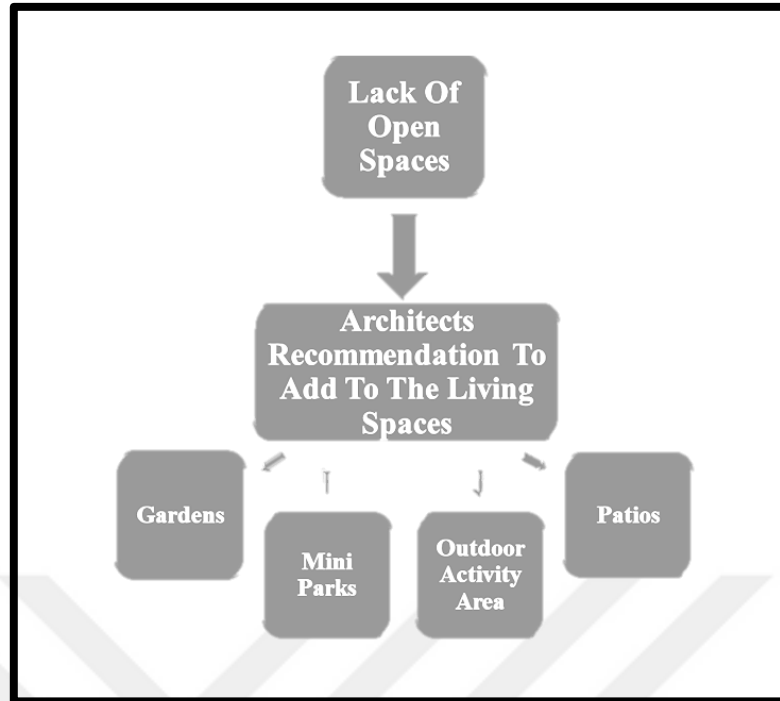
**Table 4.4:** Shows The Problems Of Public Spaces In Pakistan And Solutions Suggested By The Participants (Author).

| CURRENT PROBLEMS               | SOLUTIONS                         |
|--------------------------------|-----------------------------------|
| Non accessible public spaces   | Add pathways and pedestrians      |
| Street Violence                | Add light features                |
| Lack of human scaled buildings | Add more human centered buildings |

After discussing the problems and solutions of public spaces, one of the major things that were obvious from the responses of the participants is that the increase of construction in the 3 mentioned cities in Pakistan is affecting the number of open spaces in the country (Randhawa, 2021). This fact was obvious from the observation and confirmed with numbers in the questionnaire.

vii) Are you experiencing an increase of demand for outdoor spaces after the pandemic?

Since the problem mentioned previously is one of the contemporary challenges facing Pakistani people and architecture offices, a deviation in demand of open and green spaces related to the living spaces is emerging specifically after the pandemic because people were suffering from being inside closed spaces all the time, which affected their physical and mental wellbeing so in response to this problem clients started asking architect to incorporate more gardens, mini parks, terraces, patios and outdoor activity areas connected to their living spaces.



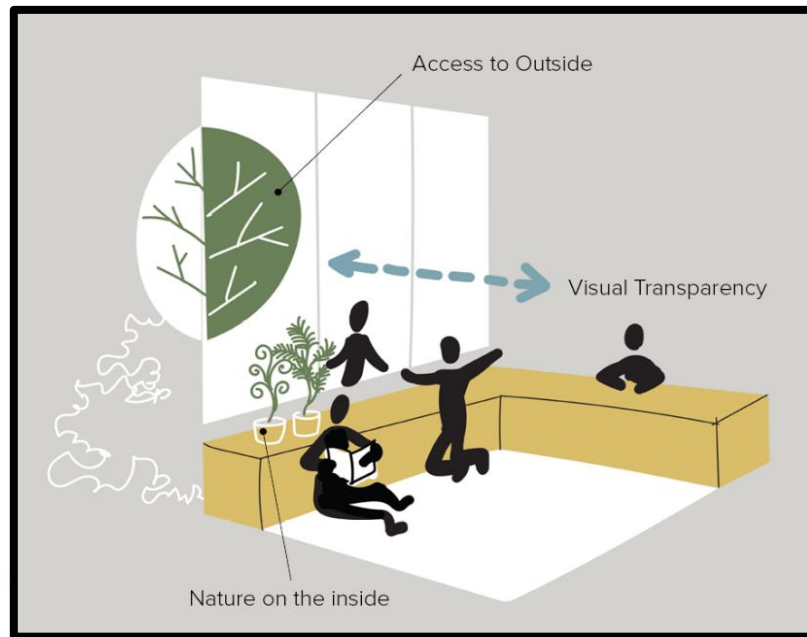
**Figure 4.8:** Shows The Recommendation Of Participants To Create More Open Spaces (Author).

viii) If the client left the choice for you, would you recommend them to have an outdoor space?

One of the questions aimed to measure the demand for outdoor spaces after the pandemic and the responses showed that the research done in previous literature review was matching to the current situation. In addition to that, contemporary architectural offices in Pakistan are even recommending the addition of outdoor spaces to their clients even if they didn't ask for it while giving them an idea about all the benefits, they can get from having an outdoor space related to their living area.

ix) Do you think connecting a living space to an open space have any benefits? If so, can you find any of them in the list below? (You can choose more than one answer). Natural Ventilation, Natural light, Human interaction, Human health benefits.

In the previous studies mention in the literature review so many benefits were mentioned for connecting living spaces to outdoor spaces such as providing natural light, natural ventilation, human health benefits and human interaction with the outside world, these benefits were also mentioned by the participants when asked about this topic, specifically the natural light and ventilation (Stevenwalter, 2021).



**Figure 4.9:** Shows The Benefits Of Connecting Indoor And Outdoor Spaces (Fielding, 2021).

x) What are the main uses of glass doors? Connecting indoor and outdoor space, Giving esthetic look to the design, Allowing natural light flow, Space saving.

Pakistani architects mentioned the importance of connecting outdoor spaces to indoor living spaces by using glass doors which according to them can enhance the natural light flow, give a better esthetic look to the living space and helps in saving spaces for smaller rooms (NanaWall, 2019).

xi) When considering adding the light features and natural daylight what are the effects and main reasons that make you choose to add them? (You can choose more than one answer). Economic, Emotional, Esthetic, Spatial.

Moreover, allowing natural light flow through glass doors and the connection between outdoor and indoor spaces can affect the emotional state of humans by giving a brighter and more open feeling especially if you have a scenic view which is very common in Pakistani house, this was also mentioned in the questionnaire, in addition to the energy efficiency and economic state by using less electric for light, less gas for heat and less fans for ventilation.

xii) What factors do you consider most important when designing living spaces in Pakistan? (You can choose more than one answer). Privacy, Scale, Color, Insolation.

Just like natural daylight and ventilation were very important for the wellbeing of people in their own living spaces, color is a major factor that can impact in a positive or a negative way on the human moods and mental condition.

xiii) Which color tones do you prefer to use in living spaces? Light colors, Dark colors, Dominant and vibrant colors, Neutral colors.

Pakistani architects gave a huge importance to the neutral and light colors when asked about their preferences in their practices, and according to the literature review light colors can enhance the environment if the room is smaller and there was lack of day light. Light and neutral colors give a cooler feeling which helps in Pakistan since the weather is very hot most of the year (Mehta, 2019).



**Figure 4.10:** Shows The Sample Of The Color Range That Participants Choose For Living Spaces (Author).

**Table 4.5:** Shows The Examples Of Pakistani Contemporary Architectural Designed Houses With The Color Scheme Chosen By Contemporary Architectural Offices (RTF, 2022).

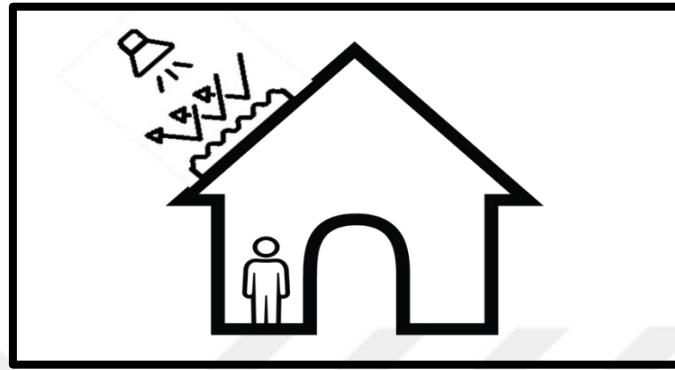
| Architecture Office Name | Example                                                                              |
|--------------------------|--------------------------------------------------------------------------------------|
| Ahmad Riaz & Associates  |    |
| Cube Design Studio       |   |
| Arco desk                |  |

xiv) Are your clients asking for more privacy in their houses than before?

As previous literature review suggested that privacy is an important factor to improve living space itself (Georgiou, 2006), the participants were asked if lack of privacy was an issue in Pakistan, and most of the participants replied that most of their clients are asking for more privacy in their living spaces, and that they are considering privacy as one of the most important factors to focus on while designing living spaces.

xv) Are you using insolation to improve the quality of living spaces?

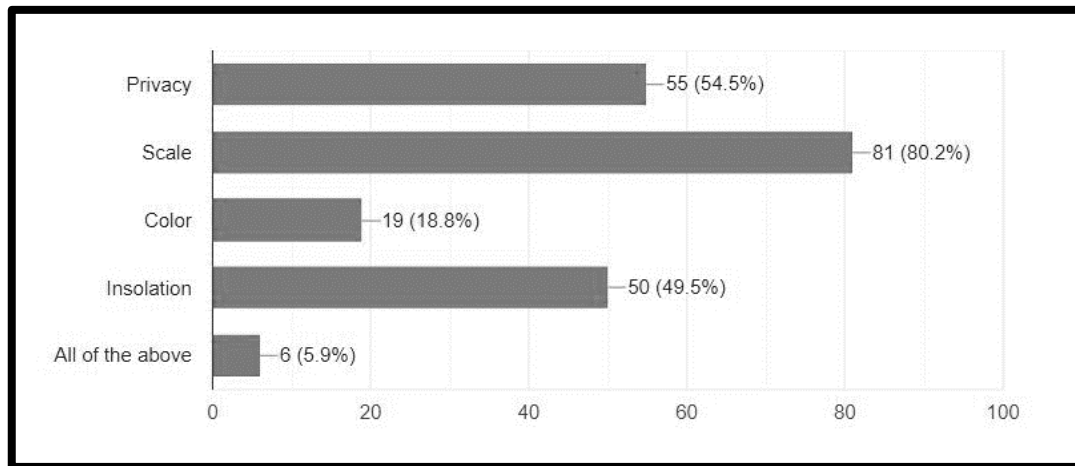
Participants mentioned the importance of insulation in enhancing the quality of living spaces and the questionnaire showed that most of the contemporary architectural offices are using insulation while finishing the construction for more privacy and noise reduction in living spaces (Rossi, 2016).



**Figure 4.11:** Shows The Choice Of Participants In Implementing Insulation To The Living Spaces (Author).

xvi) What factors do you consider most important when designing living spaces in Pakistan? (You can choose more than one answer) Privacy, Scale, Color, Insulation.

When architects were asked about the most important factor to consider while designing living spaces, the majority of participants decided that the human scale is the most important factor to consider for designing a living space, not only that it is important for living spaces but at the same time it is also very important for designing any other architectural space, whether it was public or private, open or closed scale plays a huge role in defining the space for humans.



**Figure 4.12:** Shows The Factors Of Designing Living Space According To Their Importance For Pakistani Architects Relatively To Percentage (Author).

Architects mentioned that making the scale of pedestrian pathways according to human proportions is very crucial for designing public spaces for example in Karachi motorized vehicles are dominating the whole city infrastructure and the people who are going to their desired destinations by walk are in danger. Even in the markets there are no pedestrians and people are having accidents on daily basis (Laraib, 2021).

xvii) What are some design elements that you consider to enhance the human experience of a space with the respect of the human scale? (You can choose more than one answer). Main entrance doors, Glass windows, Staircases, Structures.

Addition to the importance they gave to designing the scale of the main structure of any building in accordance with the human scale to give a more comfortable feeling and a feeling of belonging of the human experience, the size and scale of staircases was also a more critical factor for architects because according to previous studies staircases are the most functional structure that serves for a specific purpose, and if the scale was not right according to the human dimension the full purpose of the stairs is eliminated because it will become useless eventually (Siĝn, 2016), also the main entrance doors scales were even more important according to the Pakistani architects votes to give the impression of the space to the visitors even before entering, and according to previous researches the size of the main entrance door in relation with human scale gives multiple different impressions for example a huge door can give the feeling of majesty, holiness and grandeur while a small door makes the person feel like a prisoner. Gradually more importance was given to the glass windows scale which

is the main element that connects the indoor to the outdoor, and which makes people more involved with their surrounding and environment (Weir, 2020).

**Table 4.6:** Shows The Architectural Elements Considered Important In Relation To Human Scale To Enhance The Human Experience According To Pakistani Architects' Responses (Author).

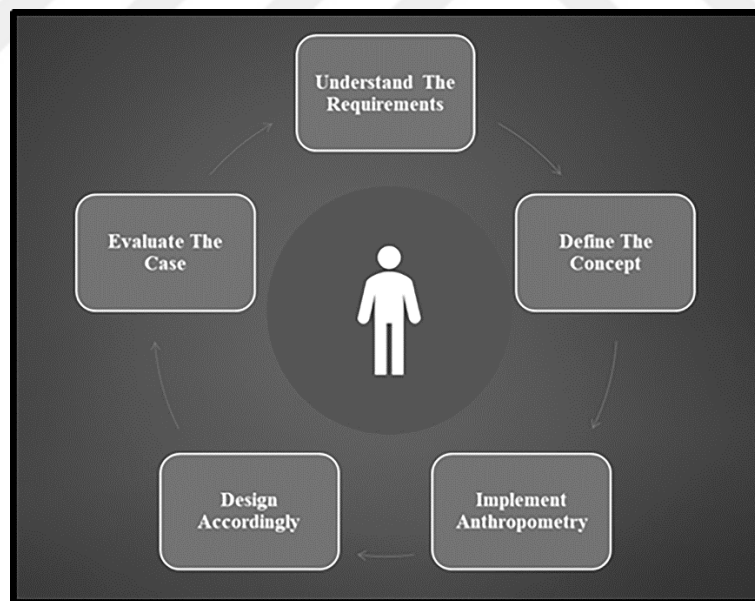
| Architectural Elements | Importance |
|------------------------|------------|
| Glass Windows          | 58.4%      |
| Doors                  | 43.6%      |
| Stairs                 | 30.7%      |
| Structure              | 13.9%      |

**Table 4.7:** Shows The Examples Of Pakistani Architect's Work (Meo, 2019).

| Architecture office name | Examples of windows implementation in Pakistani houses                               |
|--------------------------|--------------------------------------------------------------------------------------|
| Aleeya design studio     |  |
| DB studios               |  |
| Qadri Associates.        |  |

xviii) Do you design architectural spaces according to human dimensions to fulfil the maximum usage of the space according to its function?

In relation with what was mentioned before about the scale and its effects on human experience and functionality of architectural elements, architects were asked about how much they consider the human dimensions while designing any space when having in mind a specific aim or function for it. The responses showed that 100% of the Pakistani participant consider that the human dimensions are a major factor to take in mind while designing any space and that it helps them maximize the functionality of the space with the best usage and income (Pooja, 2016). The previous researches show that the human centered design is made in accordance to this rule where the architect or designer keeps in mind the importance of human dimensions and anthropometry which means that each space must be designed according to the size of the human who will use it and according to the activity which will be done within this space. Human ergonomics are crucial aspect to consider while designing any space (Attaianese, 2012) and Pakistani contemporary architect are fully aware of this factor according to the answers I got in the questionnaire.



**Figure 4.14:** Shows The Importance Of The Implementation Of Human Centered Design Within The Pakistani Architectural Design Process (Author).

xix) What is your priority: functional requirements or contemporary trends and elements in your designs in Pakistan?

The majority of participants responded that they are trying to balance between functionality and human experience by following the principle of human centered design to give the people the best experience in the architectural space while getting the benefit of the full potential of the space with all its functions (Adriana, 2020).

xx) How do you envision the future of architecture with regards to the human experience of space? More focused on functionality and efficiency, A balance between functionality and human-centered design, more focused on the human experience.

On the other hand, when I asked the participants about their preferences between functionality and esthetic or following the trend the majority answered that they are trying to balance between both in a way not to lose the main function of the space. Previous researches show that the contemporary practices are giving priority to the function and mixing a hint of the esthetic and trendy look where it will not affect the main aim of the space.

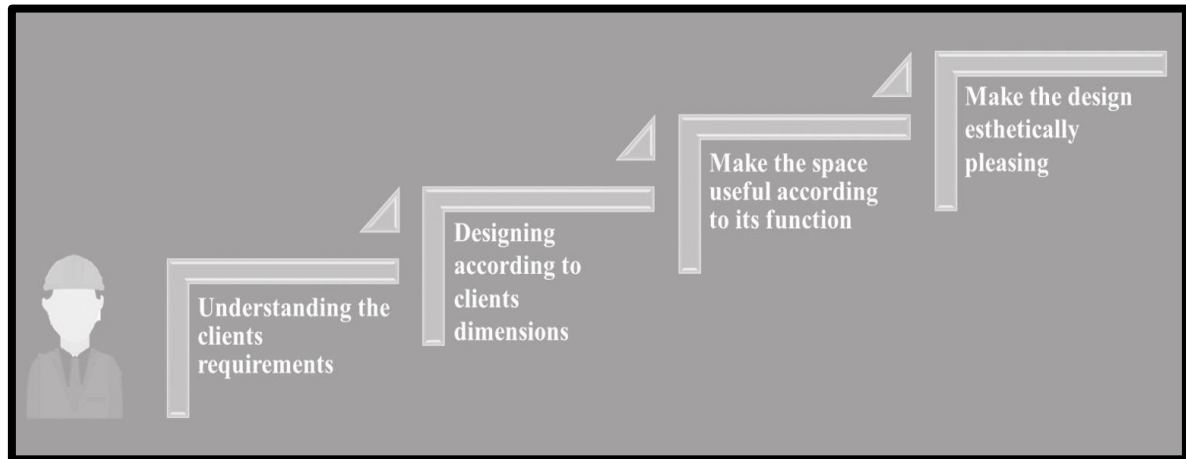
xxi) How do you stay updated on current research and developments in the field of human-centered architecture? I regularly attend conferences and workshops, I occasionally read relevant articles, I don't stay updated.

After mentioning the preferences of architects between function and esthetic, it was necessary to know the source of inspiration of Pakistani architects and where do they get their ideas for designs and how much they follow the latest trends and how much creativity do they include in their work. Therefore, I asked them first about the sources they use to keep updated about all new trends and design ideas, and most of them responded that they regularly attend conferences and workshops while others mentioned reading relevant articles and only few of them said that they don't keep updated at all and they keep doing what they are used to do before or invent their own style.

xxii) Do you change your design process according to new trends? Yes, No, Depends on my client's request.

Moreover, the trends are mostly affecting the Pakistani approaches toward new design strategies and process, since the majority said that they are changing their designs according to new trends while some others said only if the clients asked for it. This was not surprising

since one of the most important factors of design as they also agreed on in previous questions is the client, human scale, dimension and the function of the space, so it was leading to the questions where the participants were asked about the importance they give to the requirements of the client, his personality, likes and dislikes and normally their responses were as expected.



**Figure 4.15:** Shows The Design Process Adopted By Pakistani Architects To Keep The User Involved While Giving The Best Functional And Aesthetic Results (Author).

The Pakistani contemporary architect pays a lot of attention to the requirements of their clients, they ask a lot of questions to understand their preferences, their previous experiences and their likes and dislikes to have a better understanding to the necessities and their requirement. In accordance to that, the previous researches seen in the literature review show the importance of the clients input in each architectural space since the space will be an important part of the human's daily life and a great contributor in the making of his life style and wellbeing (Steemers, 2021).

These findings validate the hypothesis which was assuming that the Pakistani architects are following the contemporary trends and principles of architecture in their practices.

## Conclusion

As a conclusion it is obvious that Pakistani architects are following the criteria of contemporary architecture and the new trends in their design practices to stay updated and give their clients a better experience than they had before, and by doing that they are trying to solve some existing issues in the old practices like for example in the case of public spaces

they are finding solutions to the lack of human scaled buildings, poor entrances, visually inaccessible places, lack of street lights, lack pedestrian pathways and in the areas where there are pedestrian pathways the issue of bad proportions, where on the other hand in the private spaces they are trying to add more open spaces to compensate the lack of green areas caused by the excessive construction and architectural development, and to fulfill the higher demand on it after the pandemic. This chapter shows also that the Pakistani architects are aware of the benefits of connecting the outdoor spaces to the living spaces and even suggesting this as a solution to their clients to add more natural light, ventilation, health benefits and human interaction with the world around them, they are also promoting the accessibility and inclusivity by adding some features in their practices such as gathering areas and more accessible spaces within their project while at the same time they are focusing more on the privacy in the living spaces by adding insulation to the most private spaces for a better experience and comfort for the clients. In addition to that Pakistani architects are not neglecting the importance of green elements and the color importance since they are adding the greenery in their projects in addition to using the neutral colors which helps giving a soothing and cool feeling in the hot areas, especially in small rooms where the light colors and glass windows can help to give a more spacious feeling to the room which affects human comfort and wellbeing with the focus on their scale and the function of the space. These findings are the main key to relate between the observations, literature review and the responses of architects that showed their practices and opinions about the current situation of Pakistani architecture and will help create a conclusion where new solutions can be suggested and previous mistakes can be eliminated.

## 5. CONCLUSION

This thesis aimed to identify the contemporary architectural practices and trends which are considered while designing any modern architectural space, and focuses on the importance of human scale and human dimension in the architectural design process and how human centered architecture is a very important concept that should be followed by all architects. The literature review part of the thesis was focusing of general information and contemporary architectural practices in the developed countries, while the second part aims to evaluate how these contemporary practices are working and being followed in Pakistan by the Pakistani architectural offices. Based on a quantitative collection of data and information and on analyzing this data to compare it with the current situation observed in Pakistani areas specifically in the three cities which are experiencing the major architectural development which are Islamabad, Karachi and Lahore, and evaluating the situation in accordance with the information acquainted in the literature review this thesis showed how Pakistani architects are considering the contemporary trends and solutions greatly in their office practices and in their design process. According to the observation of the situation of old Pakistani architecture some main issues were spotted and triggered the research for contemporary designs and what makes them more appealing and practical for humans, and the research showed that human centered architecture is the main solution for all human needs and necessities by focusing on each type of architecture and making it human centered, for example the public spaces must be designed according to human scale and human dimensions with consideration of their needs to be safe and included by adding street lights, pathways and gathering areas while not forgetting the human scaled structures which make the person feel more comfortable, while on the other hand the living spaces must be designed according to their inhabitants by making them the center of focus while knowing their dimensions, proficiency, requirements and special needs. Adding more privacy and security to the living spaces was also a major point mentioned in the thesis research and it was directly related with the contemporary practices while on the other hand the inclusivity and relation between the indoor and outdoor was also a major point. The thesis showed how creating more interaction between humans and their surrounding is affecting their quality of life and the quality of architecture, because this interaction is improving their well being and their health. Creating a connection between the inside living spaces and the outdoors was mentioned as a very important aspect of contemporary architecture by using more glass

doors, and letting the daylight, natural ventilation and the green element integrate with the indoor space. All these factors and more were discussed in the literature review and were proven to be taking place in the contemporary office practices in Pakistan by asking a number of Pakistani architects about their practices, opinions, and client's preferences through a questionnaire made specifically for this purpose. Contemporary Pakistani architects see that incorporating the human centered design concept and taking care of the human requirements, human scale and dimensions are very helpful to create better architectural spaces and solve many problems that Pakistani people are facing with their old houses and the existing public spaces, in addition to the new requirements generated because of the pandemic and other modern life issues. With all that said, and after this deep research and observation I was somehow satisfied with how the future of living spaces in Pakistan appears to be flourishing but on the other hand I see that the future of urban design is still not on a good path, because the green spaces are getting fewer with the urban development and the construction sites are becoming very crowded, this will affect on the overall city planning and the green areas which can later affect on the congestion and create more pollution and health issues, so I suggest that Pakistani architects should focus more on this issue and that they should spread awareness about it among common people and the people in charge. Finally, I guess this thesis can be a great contribution to the architectural field especially in Pakistan to enlighten new architects about the current problems and show them how architecture in these three cities is improving and how they can use this as an example to improve the situation in other areas too.

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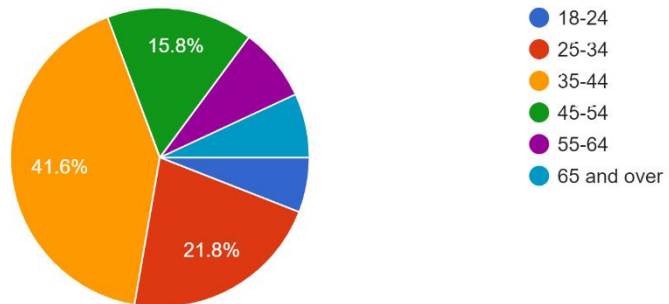
## APPENDIX A

### Questionnaire

#### Section 1: Participants Information

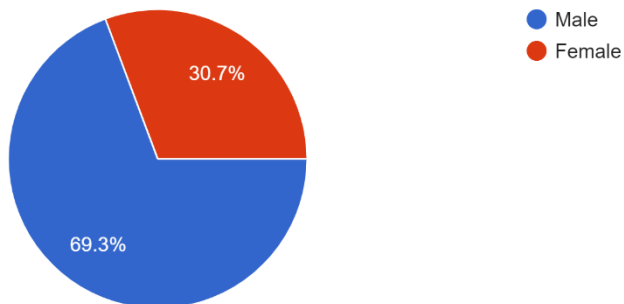
What is your age group?

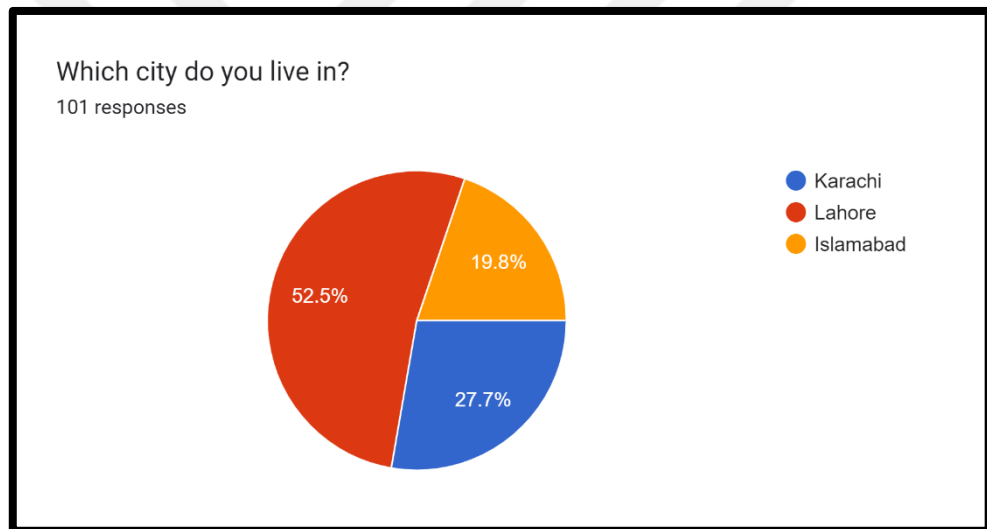
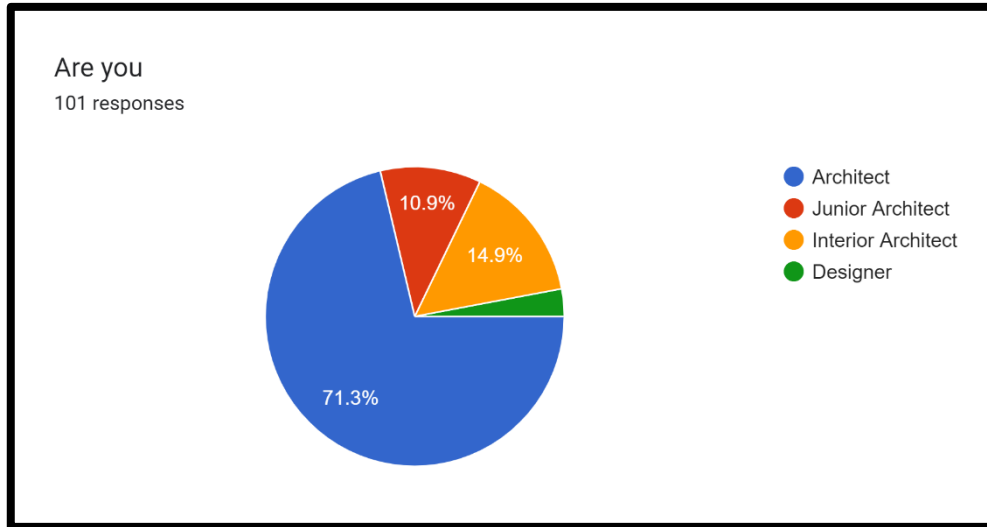
101 responses



What is your gender?

101 responses

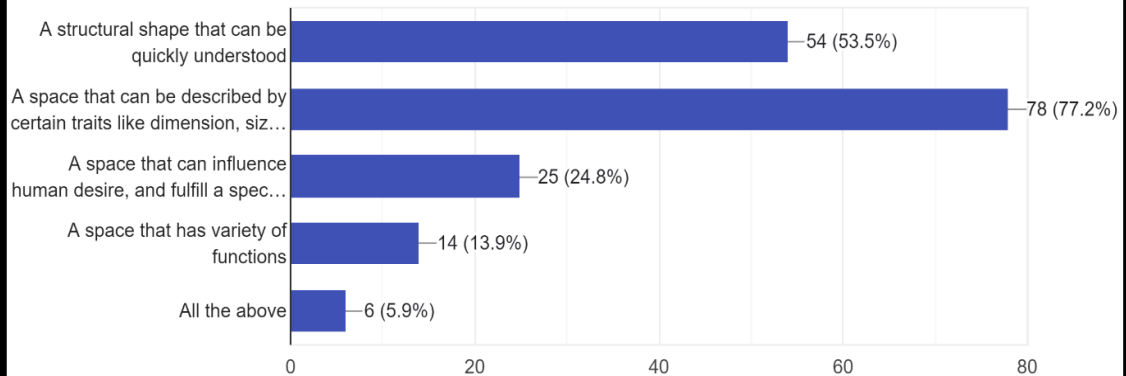




Section 2: The main aim of this questionnaire is to show how correct is the information collected from previous research and what can be improved or suggested to make the new era of contemporary architecture in Pakistan more sensible and relatable to human needs. The questions are related to architectural spaces, human dimensions and scale.

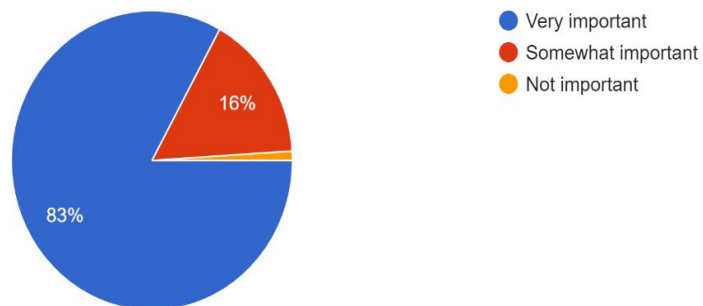
1) Which of the following defines the architectural space? (You can choose more than one answer)

101 responses

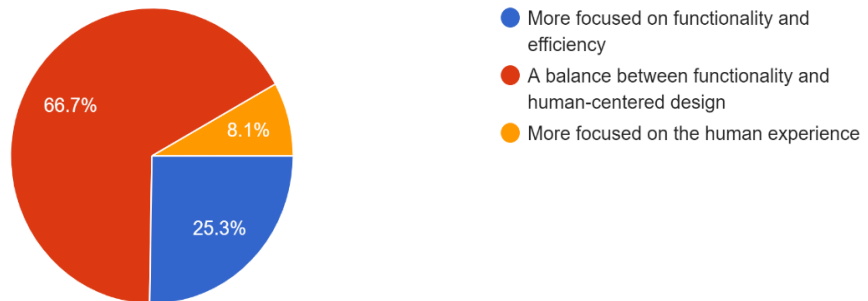


2) How important is accessibility and inclusivity in your designs for all users?

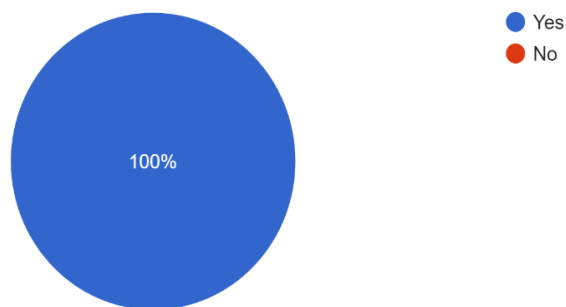
100 responses



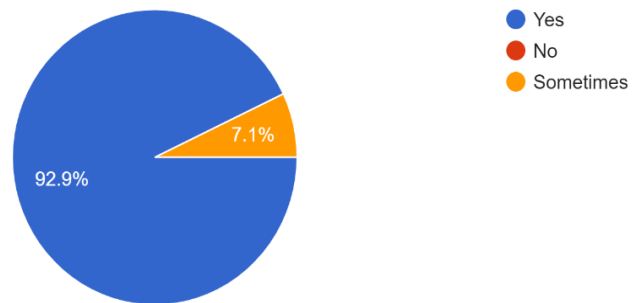
3) How do you envision the future of architecture with regards to the human experience of space?  
99 responses



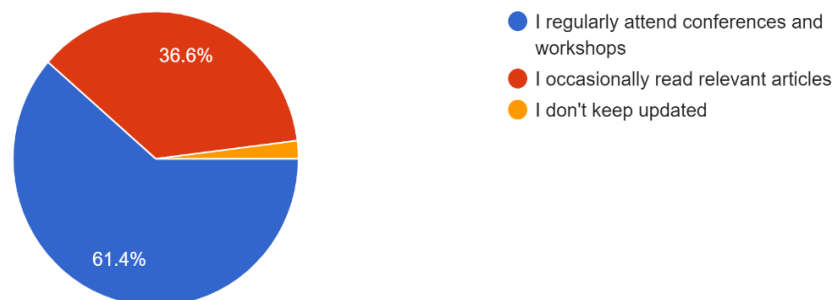
4) Is it important to understand the requirement of the client before creating architectural space?  
101 responses



5) Do you try to know your client's personality and likes and dislikes before creating his own space?  
99 responses

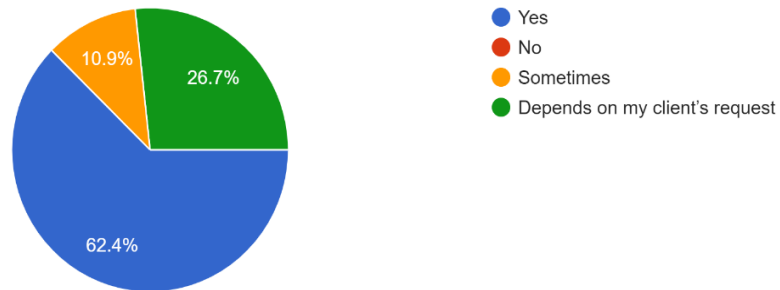


6) How do you stay updated on current research and developments in the field of human-centered architecture?  
101 responses



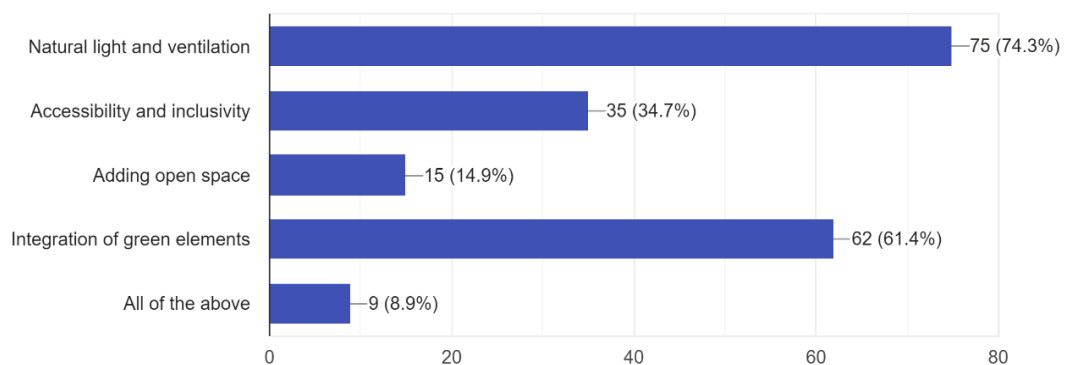
7) Do you change your design process according to new trends?

101 responses



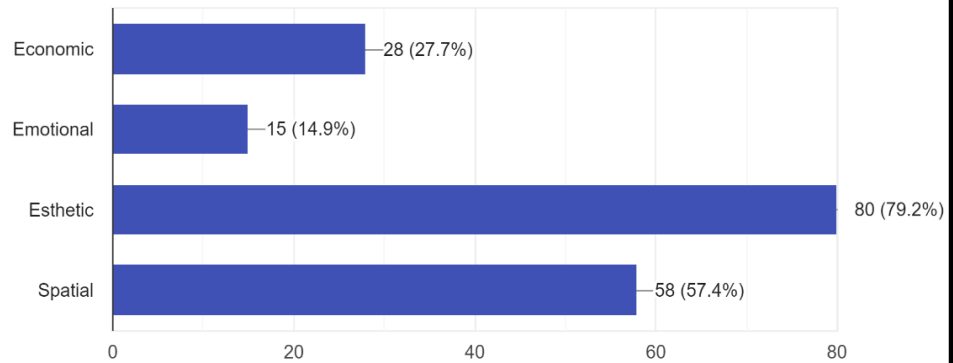
8) In your opinion, what are the most important factors to consider when designing spaces for human comfort and well-being? (You can choose more than one answer)

101 responses



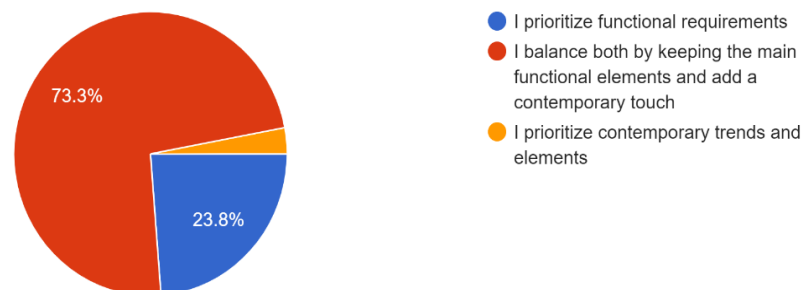
9) When considering adding the light features and natural daylight what are the effects and main reasons that make you choose to add them? (You can choose more than one answer)

101 responses



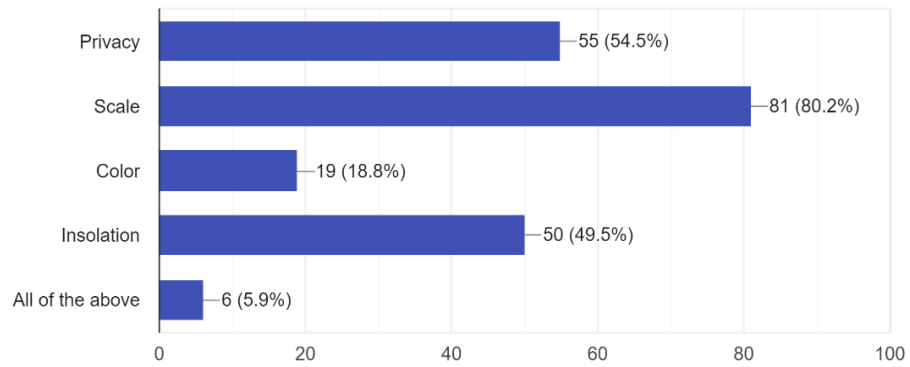
10) What is your priority: functional requirements or contemporary trends and elements in your designs in Pakistan?

101 responses



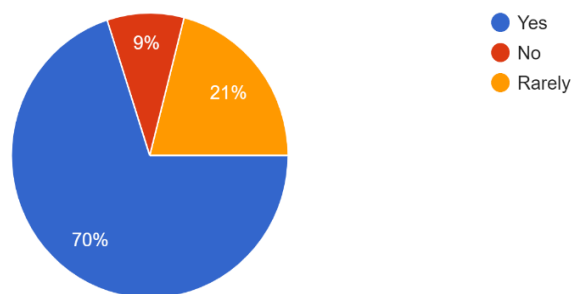
11) What factors do you consider most important when designing living spaces in Pakistan? (You can choose more than one answer)

101 responses



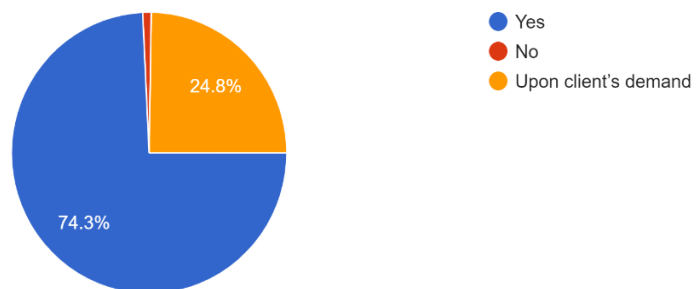
12) Are your clients asking for more privacy in their houses than before?

100 responses



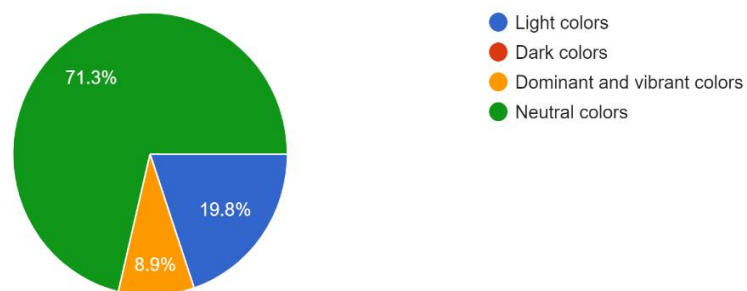
13) Are you using insolation to improve the quality of living spaces?

101 responses



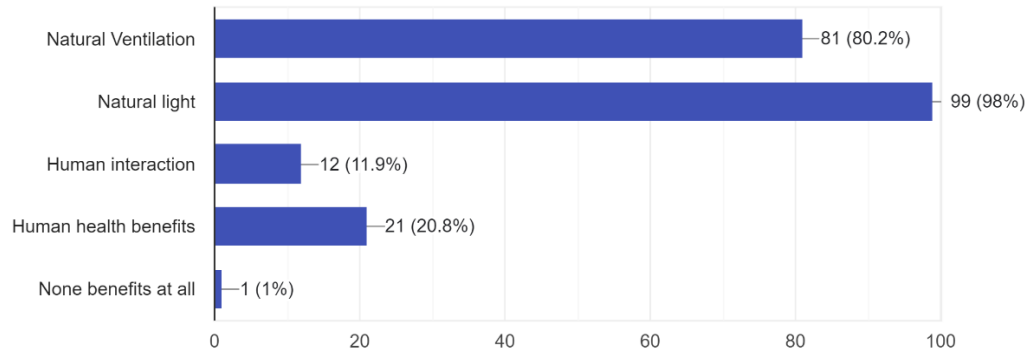
14) Which color tones do you prefer to use in living spaces?

101 responses



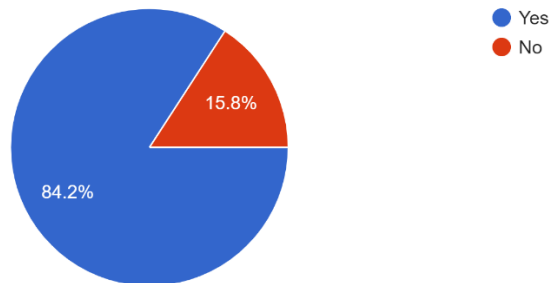
15) Do you think connecting a living space to an open space have any benefits? If so, can you find any of them in the list below? (You can choose more than one answer)

101 responses



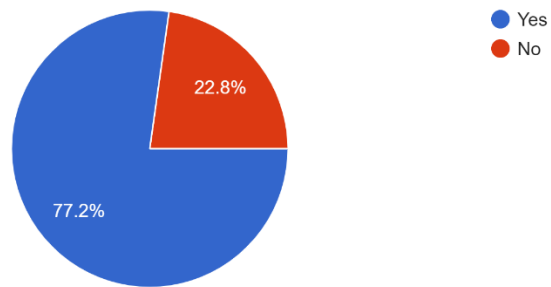
16) Do you think that the increase of construction development affected the existence of open spaces in Pakistan?

101 responses



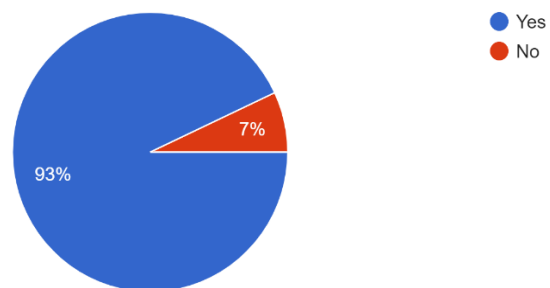
17) Are you experiencing an increase of demand for outdoor spaces after the pandemic?

101 responses



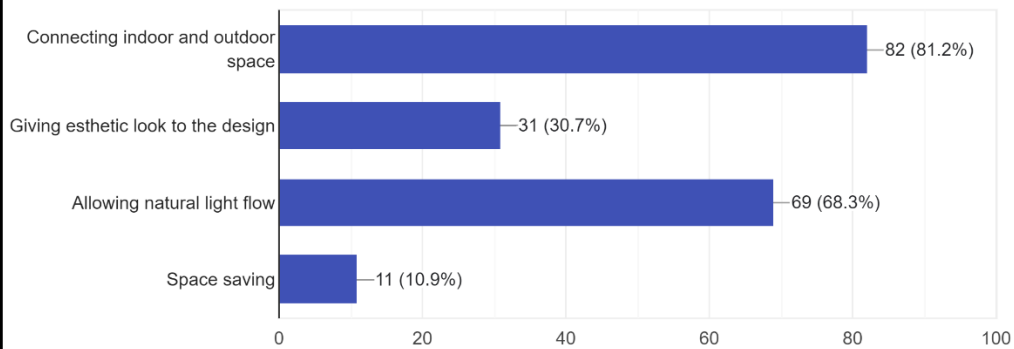
18) If the client left the choice for you, would you recommend them to have an outdoor space?

100 responses



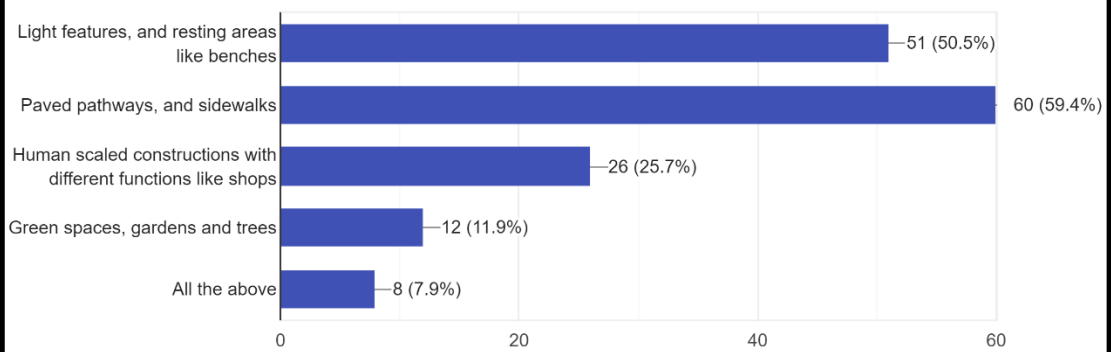
19) What are the main uses of glass doors?

101 responses



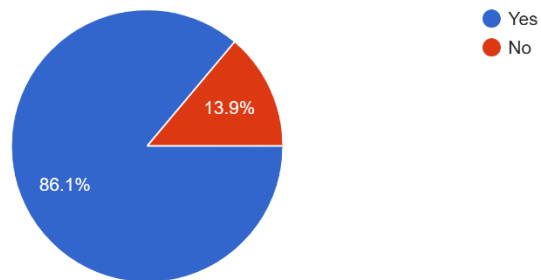
20) From the list below which of these elements do you consider important for designing a public space? (You can choose more than one answer)

101 responses



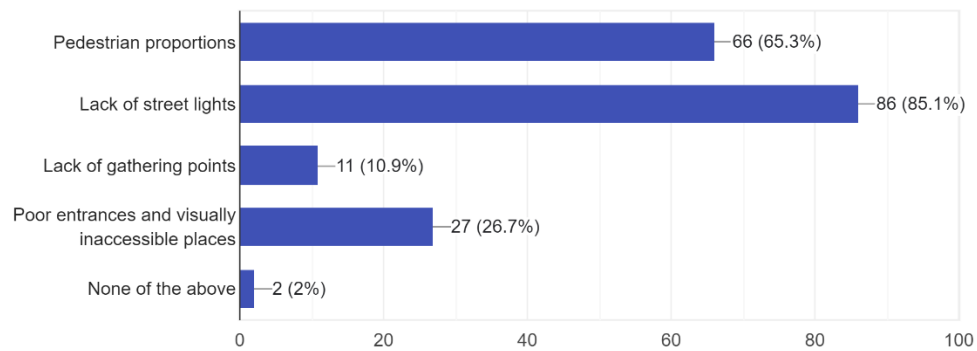
21) Do you think designing a proper public space can help in preventing public violence in Pakistan?

101 responses



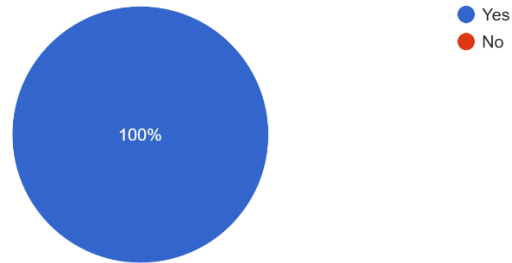
22) Which of the following problems are you solving in your design of public spaces? (You can choose more than one answer)

101 responses



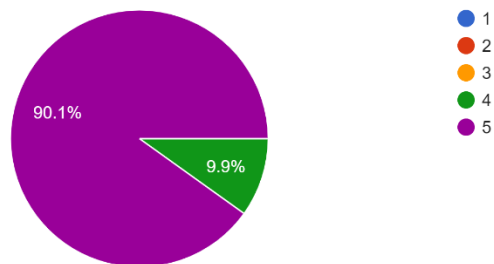
23) Do you design architectural spaces according to human dimensions to fulfil the maximum usage of the space according to its function?

100 responses



24) From 1 to 5 how much importance do you give to human scale and dimensions while designing an architectural place? (1 is least 5 is most)

101 responses



25) What are some design elements that you consider to enhance the human experience of a space with the respect of the human scale? (You can choose more than one answer)

101 responses

