Need-Based Facilities in Shopping Malls: A Case Study of Emerald Mall, Karachi, Pakistan

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Abstract

Shopping is an activity embedded in society and is done in different modes in different societies. The objective of this research is to present contemporary shopping as a modified activity, which is widely practiced in shopping malls. Furthermore, it intends to examine contemporary shopping behavior in light of the user's need-based facilities. It signifies the use of the shopping mall as a multi-fold activity encompassing the allied facilities. These include a washroom, a prayer area, an Automated Teller Machine (ATM), currency exchange, lost and found, a rest room, a child care area, a baby cart, a first aid room, and a bank, to name a few. These user-based facilities have emerged as distinct attributes of shopping malls, defining the peculiarity of a mall. This research focuses on some need-based facilities mainly and then narrows down to sub-categories of need-based facilities in a selected shopping mall named Emerald Mall. The research adopts the quantitative method for data collection and presents findings statistically while the standards are relevant to the shopping mall attributes collectively. The findings include the identification of inadequate facilities such as a lost and found counter, an ATM, a prayer area, currency exchange, and washrooms. Furthermore, a rest room, a child care area, a baby cart, a bank, and a first aid room for emergency care were missing. The research concluded that the selected shopping mall needs improvements in many areas, while some areas are already established, including design consideration for physically challenged users. The research establishes its contribution as the provision of framework and modular analysis of selected study for contextual approach for the development of the architectural design. Research also recommends design innovations in the selected mall in order to address the discrepancies identified.

Index Terms: Attributes, Comfort Level, Need-Based Facilities, Design Innovations, Shopping Mall.

I. INTRODUCTION

Basically, all our lives revolve around work and play. Nevertheless, in between, we must stop and exchange our wages for those goods and services that make both leisure and work possible. Shopping exhortation has been noticed in user purchasing practice for many years [1]. It has been revealed that shopping motivations are determined by utilitarian and hedonic motivations. Utilitarian shopping motivation is focused on the functional and objective attributes of visiting a shopping mall [2]. Hedonic motivation includes gratification, ideas, roles, experimentation, value, and social shopping. Satisfaction shopping involves shopping to relax and relieve stress when visitors are in a bad mood [3]. Retail centers, as they have done since the early man settled into permanent or semi-permanent dwelling structures and market places, pleasantly, efficiently, and firmly link our lives together, as they have done since the early man settled into permanent or semi-permanent dwelling structures and market places. Historically, shopping has always been a social activity. With the passage of time and user requirements, it was translated into a market but has now developed into shopping malls. These requirements may include several factors, with comfort being the most important of them. The comfort level can be increased and enhanced in design. The user of a shopping mall in current times is more interested in shopping that provides need-based facilities, easy movement, and entertainment as compared to any rapid and uneasy activity. This paradigm (pattern) shift has also inculcated the concept of attributes in shopping areas. Shopping malls, a modified form of open markets, thus have these characteristics that are likely to boost business on the one hand while increasing user comfort and satisfaction on the other.

Combining the two words, a shopping mall can therefore be defined as a building or set of buildings that provide walkways for the public to walk from one unit to another within the same building or set of buildings as they go about their business of exchanging goods and services for money [4]. Shopping malls, as a collection of independent retail stores, services, and parking areas, are constructed and maintained by a management firm as a single unit [5]. Malls are large enclosed building complexes that contain stores, restaurants, other businesses, and facilities serving the general public. Shopping malls act as pedestrianized shopping areas with enclosed walkways in a town. However, shopping malls and hypermarkets have become

important elements in the urban landscape. A larger shopping mall can facilitate a greater variety of shops and can create a more pleasant environment for shoppers, thus inviting them to visit more often and stay longer. The social demand for environmentally friendly shopping malls is increasing as a result of rapid urbanization. It has been observed that large recreational shopping malls encourage regular shoppers and tourists to shop frequently. The major qualities of shopping mall attractiveness are ease, leisure, variety, mall essence (heart), parking, and splendor [6]. The physical environment, comfort, and entertainment have totally mediated the link between ambiance and consumption, and they have a positive impact on both the environment and consumers. Physical and social sustainability is seen as dependent on the built environment and entertainment [7]. Karachi is the largest and most populous metropolitan city in Pakistan, the capital of Sindh province, and the seventh biggest metropolitan city on the planet. It is the main financial and industrial hub of Pakistan and also serves as a transport hub. Located on the Arabian Sea, Karachi is also known as the "City of Lights" and "The Bride of the Cities." The 2021 population of the city is estimated to be 16.459 million people, which makes it the 7th largest urban agglomeration and the largest city in the Muslim world [8]. The city has several shopping malls, which help the customers. Such shopping mall attractiveness may be designed in reference to several basic facilities, which ultimately define the comfort level of a shopping mall for its users. The current study examined the attributes of a shopping mall in terms of need-based facilities. Amongst all the specific attributes of a shopping mall, the ones that act as the main frontline support for comfort level are need-based facilities. If customers are unable to avail themselves of the facilities, the scope of their existence is questionable in terms of their functionality. The Emerald Mall is located in Block-5, Clifton Karachi, which is one of the urbanized zones with a dense population and aims to provide a shopping facility for the local people. As an important shopping mall in the city, some of its user facilities need to be analyzed to ensure their best usage has a positive effect on shoppers. The study aims to survey selected attributes of Emerald Mall, i.e., need-based facilities. It intends to assess these attributes to improve and work towards better facilitation for the customers.

The study focuses on the following main objectives:

1. To develop a theoretical framework that is contextually appropriate and flexible for the development of the architectural design of shopping malls.
2. To study selected attributes of the shopping mall in terms of user facilitation including, need-based facilities.
3. To analyze the selected attributes of the selected case study with respect to the standards to access the compatibility with local socio-cultural needs.
4. To find out the effective impact/s, of specific attributes, on the user comfort.

Following are the research questions of the study:

1. What are the design considerations regarding need-based facilities?
2. Which sub-attributes of the selected user facility in the case study are synchronized with the standards?
3. How the comfort level in the case study is affected due to the availability of selected attributes?

A. Rationale

The Shopping Mall facility considers several attributes at the basic and general levels. Some of the attributes are defining and are unavoidable, while some are allied in nature and enhance the basic facilities. Need-based facilities are the front attributes of shopping malls to attract customers and provide a better comfort level. With the passage of time, the facilities of Emerald Mall need to be evaluated for improvement in order to facilitate and assess end-user satisfaction to make it sustainable in the future. A structured assessment, in fact, provided the baseline to define the best possible performance of the selected attributes of the shopping mall translated into facilities. This assessment also provided a better insight into the existing situation while highlighting the possible problems and their suggested solutions.

B. Problem Statement

The existing spatial design of Emerald Mall in Karachi was organized with a limited number of attributes for customers. With an increase in population and a high influx of customers, its best performance in delivery and quality of service has suffered. Thus, there was a need to analyze its spatial design and to highlight the issues in the light of recent trends and best practices/standards in order to improve it to sustain future usage considering socio-cultural scenarios of the city. The study focused on attributes that are widely integrated into shopping malls around the world. These included objectively selected attributes; need-based facilities considering these as sub-attributes, for example, washrooms, lost and found counter, prayer area, Automated Teller Machine (ATM), and currency exchange. Furthermore, a rest room, a child care area, a baby cart, a bank, and a first aid room for emergency care were missing. This analysis may lead to configuring the effective impacts of specific attributes.

These categories were selected on the basis of their availability in terms of facilitation on design and end-user preference for their presence in the malls to ensure ample time presence to have a complete feeling of shopping and leisure.

C. Significance of the Study

The study signifies the presence of attributes in shopping malls and highlights the paradigm (pattern) shift in the concept of shopping from a pure need-based activity to a social activity with respect to the local community and frequent end-users visiting the malls.

This ultimately helps the enhancement and introduction of new design concepts that are much more user-friendly and lead toward human-centered designs in commercialized activity centers, i.e., shopping malls.

D. Limitations

The research is limited to the ground floor and three floors of the building that are used for shopping activities. The study was focused only on selected attributes for Emerald Mall; need-based facilities. The floors above, i.e., "Emerald Tower," are out of the scope of this research because of the changed activity/purpose in that area. It also de-limits the management staff of shopping malls as their movement and usage of the mall are very limited by the sample target.

II. LITERATURE REVIEW

The economic, geographical, and political conditions of any country have a direct effect on its population. Economics is in fact concerned with human needs, such as comfort, ease, and luxuries [9]. Human national foreign and international relation is a part of political life [10]. If all the matters and conditions mentioned above are according to people's needs from which they can satisfy their energy for a well-organized social life, then it can be an indicator for the erection of a successful society. Shopping has always been there since people (men and women) learned to exchange goods and services for what they didn't have. Shopping is observing, pricing, and buying goods displayed for sale. It is an action that involves a buyer and a seller. The earliest form of shopping was conducted in open-air public spaces alongside other public functions and activities. Shopping was integrated with other daily activities like cultural functions, entertainment functions, etc. The act of shopping is frequently a social activity for both utilitarian and recreational purposes [11].

Satisfaction with mall attributes causes an increase in the time spent in the mall. The more satisfied shoppers are with mall attributes; the more time they are likely to spend in the mall. It has been suggested by the research that the selection of the shopping mall to visit is based on the attributes of the shopping mall [12].

Based on many definitions made, a shopping mall is defined in the following way:

Shopping centers are complexes in which stores with more than one department and retailer units, a cafeteria, restaurant, entertainment center, cinema, exhibit hall, bank, pharmacy, and similar enterprises of all sizes are also located within a planned architectural structural unity, which is usually settled in the countryside and controlled from a single center [13].

A shopping mall is a place where consumers are in search of a location where they can relax.

According to a marketing publication, expectations are a critical, decisive factor determinant of consumer behaviors [14-21]. The limitation of this research is based on selected attributes of Emerald Mall; need-based facilities to the ground plus three floors of the building that are used for shopping activity.

The behavior of visitors in shopping malls in general and specifically for this research recommends that ease as a shopping mall's feature has a great effect when a mall is chosen for a visit [22]. Another study identified some attributes of the shopping mall retail mix that influence shopping well-being, namely, functionality, convenience, safety at the shopping mall, leisure activities, atmospherics and hygiene at the shopping mall, and self-identification [23]. Therefore, it is critically reviewed that shopping mall attributes that act as the main support are important like utilitarian and hedonic values, which, in turn, provide customer satisfaction and comfort. The global standards to measure the efficiency and attributes of shopping malls are mentioned in the standards in Time-Saver Standards for Building Types. McGraw-Hill [24], Building for Everyone: A Universal Design Approach: Booklet 5 - Sanitary facilities [25], Building for Everyone: A Universal Design Approach: Booklet 6 - Facilities in buildings [26], Building for Everyone: A Universal Design Approach: Booklet 8 - Building management [27] and Karachi Building and Town Planning Regulations-2002 Amended Up to Date March 2017 [28]. And also referred to by the scholar as mentioned in Determining shopping mall visitors' perceptions of mall attributes [29].

The critical review of the literature shows that there are a lot of requirements that need to be fulfilled for the benefit of the users, including utilitarian and hedonic values. These values can be elaborated in terms of different activities. For example, in utilitarian attributes, restrooms are crucial and must adhere to certain guidelines. Physically challenged people should be able to use the restrooms in shopping malls. According to previous studies, mall convenience is shaped by restrooms [30]. According to another study, the administration and care of common facilities is the most important component of total customer happiness; the state of a washroom is also an important dimension for consumer satisfaction [31]. There should be at least one completely accessible bathroom for each gender. Physical disability signs should be posted in washrooms. Similarly, previous research has revealed that a shopping mall must include an adequate child care space, which is a room with facilities for care personnel to attend to the particular needs of newborns and toddlers. This purpose must be considered by the building designer in order for them to be located in an accessible and functional position [32]. According to previous research, shopping malls must provide enough first-aid facilities that are conveniently accessible. Several more facilities for users, as well as sufficiently skilled employees to administer them must also be provided. Another noteworthy example is the prayer room. Religion is given top priority, with a particular emphasis on the relevance of design features and the size of prayer rooms in shopping malls. Islam is the official religion of Pakistan, and the majority of Muslims pray in a shopping mall prayer room. The appropriate features of the prayer area's design and construction can be designed and constructed according to the needs of the users. The architecture of the prayer rooms at the shopping mall should take into account a variety of users, including ordinary people, the elderly, and the crippled [33].

Therefore, it is concluded that a shopping mall's motivation in terms of user satisfaction or user comfort level can be translated into shopping mall attributes. After a critical review of the literature, these attributes are translated as need-based facilities for the scope of this research. These attributes present several considerations in the design of shopping malls, which, in turn, provide customer satisfaction. In addition to this, it is also an important factor that visitors, while selecting any mall for shopping

purposes, consider the provision of the need-based attributes in the mall. Therefore, it is also concluded that shopping mall attributes, which act as the main support for comfort level, may also affect the working of a shopping mall.

This critical analysis highlights the need for the development of a framework while considering the contextual approach. The literature review also highlights that there is a knowledge gap existing as there is no framework established to be refereed while designing the shopping malls.

Henceforth, the following theoretical framework is established through this research.

III. THEORETICAL FRAMEWORK

The literature review has signified some of the attributes of shopping malls specifically relevant to the need-based facilities. It is also revealed from the literature review that the attributes of shopping malls should consider the contextual approach while developing the architectural design for this activity. Therefore, the theoretical framework developed here reflects the contextual approach which may further be used as a baseline for analysis of need-based facilities according to the specific context of the shopping mall considering, for instance, its location, outreach area, the civic approach of customers etc. to name a few. This is important to establish here that architectural design constraints of context are different for individual sites as well, therefore this theoretical framework is beyond generalization, yet provides an appropriately wider room for the development of such types of facilities that are related to the needs of the customers.

These attributes are summed up in the theoretical framework as shown in Table I.

Table 1: Theoretical Framework of Attributes

Most Frequent User	Selected Attributes	Sub- Attributes
Customers, Shopkeepers	Need-Based facilities	Wash Room
		Prayer Area
		Automated Teller Machine
		Currency Exchange
		Lost and found
		Rest Room
		Child Care Area
		Baby Cart
		First Aid Room
		Bank

These attributes are selected for the conduct of further research by the quantitative method are need-based facilities.

IV. METHODOLOGY

The research adopts a quantitative methodology for collecting data through a selected case study. The case study was selected in the city of Karachi. The secondary sources included literature reviews, which consisted of documents, i.e., publications, earlier research, reports, census, archives, books, personal records, and referential material available in relevance to the area of study. The primary sources included questionnaires separately

structured for customers and shopkeepers and observations (through site visits, photographs, and architectural drawings for reference). Following this, a checklist was developed in accordance with selected attributes, which is the combination of the standards as prescribed by different relevant sources available in the literature and observations. Both data collection sources were processed through the developed checklist of selected attributes. The responses from the questionnaires were collected and statistically processed for the findings. These findings were further analyzed to draw conclusions.

A. Justification for Selection of Case Study

Emerald Mall is located near Do Talwar in Clifton Block-5, Karachi. By responding to the expanding demands of both local corporate firms and multinationals, the Clifton area is swiftly converting into a facilitator for economic growth, development, and diversification. The mall is connected to the city's important/major areas. Public transportation is provided 24 hours a day, seven days a week. Emerald Mall is located in a safe and secure neighborhood frequented by the city's wealthy and renowned.

In this shopping mall, there is good parking facility inside and outside the building. The area of the shopping mall is not too big, so users are not suffering from long walks. Whereas the Emerald Mall's lack of vibrancy suggests that present user facilities are insufficient in every way to deliver a comfortable and pleasant atmosphere. This is why the number of customers in this retail mall is often fewer than in other shopping malls. If given as proposed by users and specified in standards, these facilities may be able to meet a wide range of customer needs.

B. Population

The population of the study is mainly users of the shopping mall. These users are sub-divided into two categories, i.e., customers and shopkeepers. The management staff of the shopping mall is not included in the research as their movement and usage of the mall are very limited.

C. Sample and Sampling Techniques

The sample consisted of two categories of users in relevance to the type of population, i.e., customers and shopkeepers, regardless of the type of shop. The sample consists mainly of 210 participants in total. This includes 20% of the total number of customers, which is equal to 180 out of 900 customers per day (as per record from the administration of Emerald Mall). The selection of customers was based on the level of interest of the customers in responding to the questionnaire questions. Large samples are usually used in descriptive research; the sample size is suggested to be 10% to 20% of the approachable population. While 30 shopkeepers were chosen from a sample of 90, it is recommended that at least 30 respondents be included in a sample because the number allows for the use of large sample statistics, which reduces the chance of standard error. The intention was to find out their experiences when using the shopping mall.

D. Formulating the Problem

Research focuses on formulating the problem based on the main attributes of a shopping mall, i.e., need-based

facilities. It takes into account the further sub-sections of these selected attributes and thus attempts to find out the active functions of these sub-sections. The research questions are based on the basic formulated problem, which poses the question of how the selected shopping mall is benefitted or deficient in terms of selected attributes.

E. Research Design

The primary goal of the research is to identify the issues related to comfort level and user satisfaction. Data collection of Emerald Mall, Clifton, Karachi was carried out on-site from January 2018 to December 2020 during multiple mall visits.

The research design adopts the process of defining the objectives, which are translated into the research questions and observations. These research questions have defined the framework for the literature review, culminating in the feasibility of the research. It then follows the process of selecting a sample from the user population while the research is conducted through a quantitative approach/method as shown in Table II, and Figure 1 shows the flow chart/diagram of the research.
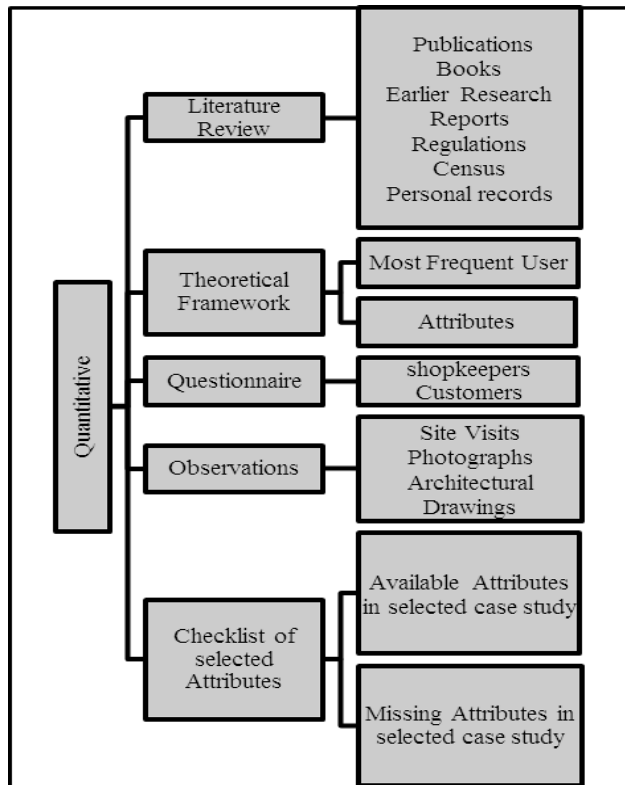
Figure 1: Flow Diagram of Research Design

Table 1I: Phases of Research

PHASE 01	Step 1	Desk Review of data i.e., Collection of Secondary data.
	Step 2	Theoretical Framework Primary data Collection.
	Step 3	Selection and Development of Research Tools.
	Step 4	Fill out Questionnaires and Observational Sheets through Site
	Step 5	Visits, Photographs, and Architectural Drawings. Developing basic analysis regarding Shopping Facilities
	Step 6	about Attributes of Shopping Mall through Checklist Developed.
PHASE 02	Step 1	Formal and Informal Surveys
	Step 2	Analysis of data Findings
	Step 3	
PHASE 03	Step 1	Discussion
	Step 2	Conclusion Recommendations
	Step 3	

F. Research Instruments

The research uses two main instruments for the data collection process; firstly, questionnaires (for users, separately structured into two categories); and secondly, observations (for analysis of existing attributes through site visits, photographs, and architectural drawings for assessment).

G. Data Collection

Two types of data are collected for this research; primary and secondary. The primary data sources are the questionnaires and observations (site visits, photographs, and architectural drawings) made on-site during the case study. The secondary data caters to the literature resources of multiple types, like books, articles, websites, newspapers, and more.

A detailed survey on-site data collection consisted of producing baseline drawings of the building. This included the preparation of drawings to enable an environmental analysis of key aspects; measured drawings; and explanatory and analytical drawings. Attributes that achieve the goals and purposes of the shopping mall, i.e., a local case study were selected for the research entitled Emerald Mall, Clifton, Karachi.

a) Location:

Emerald Mall is situated in Clifton Block-5, Karachi on a 200-foot wide double road, Khayaban-e-Iqbal near Do Talwar. Figure 2 marks the location of the mall. The area of Khayaban-e-Iqbal Clifton is quickly transforming into a facilitator for economic growth, development, and diversification by catering to the rising needs of both local corporate businesses and multinationals [34]. The entire neighborhood is also scattered with numerous shopping malls, most of which are frequently crowded with shoppers throughout the year. All major schools and hospitals are near the site. All types of public transport are available 24 hours a day. It is one of the most secure and commercial areas with its future high-rise commercial, residential, and shopping malls [34]. It is observed as a residential place for the rich and famous people of the city. South of Clifton lies

Clifton Beach, which is Pakistan's most popular beach. Clifton can easily be reached via rail, road, and sea. The Karachi Cantonment Railway Station is located in the vicinity. While the neighborhood is connected with the rest of the city via a network of bridges, a boat can easily be hired to travel to Port Grand from Keamari Harbor or the DHA peninsula. The international airport is approximately 25 to 35 minutes away [35]. This mall has a link to all the commercial roads in all locations, namely, Clifton, Defence, Saddar, and the main parts of Karachi, as shown in Figure 2. It is very close to and ideally accessible from the Central Business District, I. I. Chundrigar Road, and prime residential areas like Civil Lines, Frere Town, Bath Island, Defence, Clifton, PECHS, Gulshan-e-Iqbal, Federal "B" Area, North Nazimabad, etc.
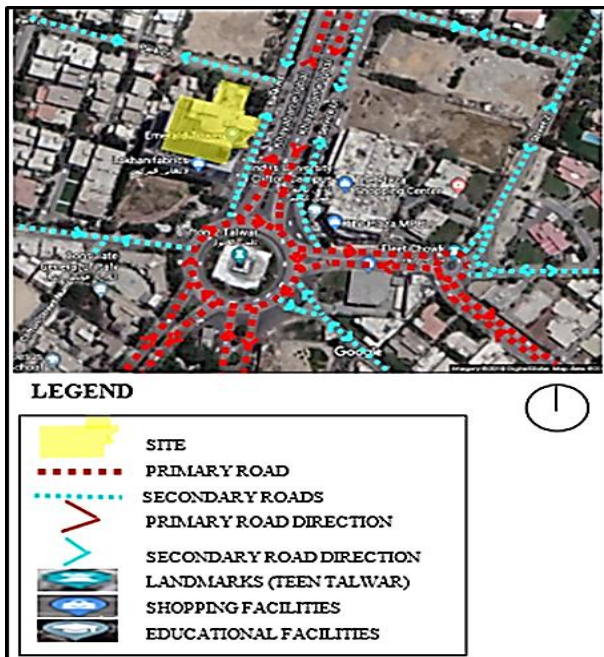
Figure 2: Location of Emerald Mall showing the Development Connected to Land Boundary [36]

b) Overview of the Emerald Mall:

Emerald Mall is constructed at Do Talwar, Clifton, Karachi with a unique and innovative concept. The location of the Mall is near the business hub of the city.
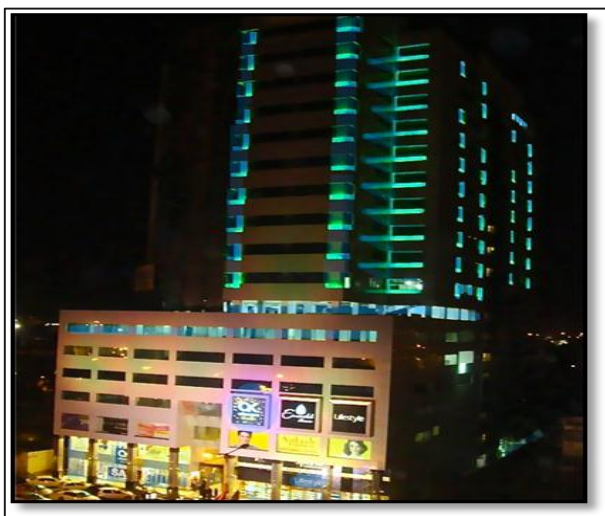

Figure 3: Emerald Mall is on Ground Plus Three Floors and Emerald Tower Offices are above the Mall [37]

The overview of the chosen Mall is given below:

* Name of the Shopping Mall: Emerald Mall.
* Design of Shopping Mall: Shamim Alam (SA Architects).
* Location: Khayaban-e-Iqbal, Clifton, Karachi.
* Year of Completion of Shopping Mall: 2010, December.
* Area of the Plot: 140'-0''x 230'-0''=32,200 Square feet (Sqft), 32,200/9=3,577 Square yards (Sqyd), 3,577/4840= 0.7392 Acre.
* Building Type: Retail and Corporate Offices.
* Height: Roof Height 180'-0" and Antenna 236'-0".
* Floors above Ground: 16 as shown in Figure 3.
* Floor underground: 1.
* Office Floors: 10.
* Shopping Floors: Ground, First, Second, Third, and Fitness Club/Gymnasium located on the fourth floor.
* Parking Floors: 1 basement and 4 Uppers.
* Timing: 11:00 am to 11:00 pm.

The selected Mall is one of the most important commercial towers, offering many facilities such as six passenger-cargo lifts, electronic and staffed security systems, and firefighting systems on each floor. An attractive architectural fair-face facade and an elegant exterior create a new business landmark [34].

Services, firefighting, security, and surveillance systems are as follows:

* Fully centrally air-conditioned, powered by 100% KESC with 100% backup generation.
* Fire alarms, firefighting equipment, fire sprinklers, smoke detectors, and water hose reels are installed throughout the building on each floor also in the plant room, control room, and sensitive areas.
* There are digital vehicle scanners, electronic and physical barriers, security checks, scanners, metal detectors, and turn-style gates available at the main entrance. CCTV, manned guards' security, and surveillance with a central security control monitoring room [38].

Figure 4: Internal View of Emerald Mall showing Customized Showrooms

The ground floor, first floor, and second floor of Emerald Mall are entirely kept for customized showrooms as shown in Figure 4. The centrally air-conditioned third floor has six spacious kitchens with contemporary outlet counters, giving an icon of innovative standards. A large food court is an additional advantage for the workers at Emerald Mall and for their guests. On the third floor, there is also a children's play area and a prayer room. It was the first time in Pakistan that a Five-Dimensional (5D) movie cinema was launched in this mall, but now Jest 5D Theater is not there [34]. The shopping mall has less consideration for the pleasure which gives a valid reason not to come frequently to this mall.

c) Characteristics of Emerald Mall According to Selected Attributes:

The Mall is located in Clifton, Karachi, which is one of the urban zones with a dense population. This research aims to explain the importance of selected attributes in the performance of the spaces in the shopping mall. Emerald Mall was analyzed based on these selected attributes: It aims to consider these attributes so as to improve customer comfort and facilitate service for customers. Only twelve washrooms were on the third floor, with consideration for disabled people as shown in Figure 5. The prayer room had inadequate space and was without an ablution area. The Automated Teller Machine (ATM) was only on the ground floor in a congested area. The currency exchange facility was on the inappropriate floor i.e., on the first floor. The lost and found counter and reception were common facilities; however, the lost and found counter is not located in the Emerald Mall's central area or atrium. Furthermore, a rest room, a child care area, a baby cart, a bank, and a first aid room for emergency care were missing.

Figure 5: Washroom for Physically Challenged People in Emerald Mall

Thus, people did not seem to choose this shopping mall for the fact that there was a form of minute need-based facilities going on. This shows that need-based facilities are part and parcel of a shopping mall.

H. Interpretation of Data

The research focused on the analysis through a quantitative approach collected through selected instruments (Questionnaires and Observations), i.e., through site visits, photographs, and architectural drawings. This quantitative approach is further analyzed and interpreted through a statistical method. Obtained data from the survey were analyzed. A comfort level of attributes was established. Analysis was important to get to conclusions.

V. ANALYSIS/FINDINGS AND DISCUSSION

A. Analysis
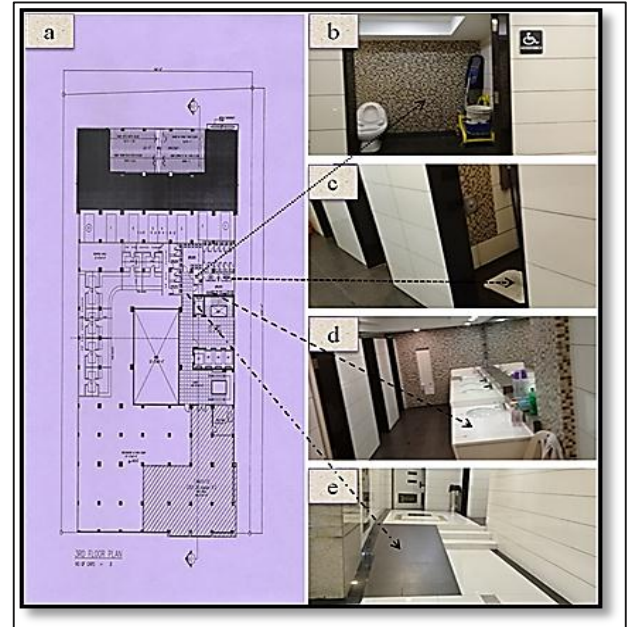
a) Location of Washroom:

Figure 6: (a) Layout of Washrooms at Corner on Third Floor (b) Separate Washroom for Physically Challenged People (c) Indian Commode in Washrooms (d) Low Height Wash Basin for Children (e) Ramp near Washrooms for Special Persons, Children's Carts and Elder Person
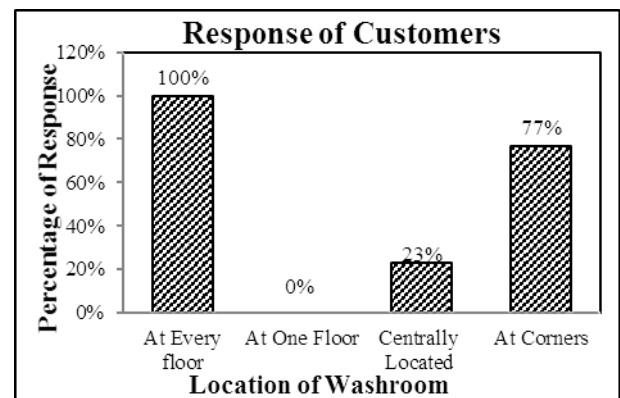

Figure 7: Response of Customers about the Location of Washrooms

In response to the location of the washroom, 100% of the respondents mentioned that washrooms should be on every floor, while no respondent stated that they should be on just one floor. 23% stated that they feel washrooms should be centrally located, which could be because of elderly or physically challenged people who are unable to cover long distances, while 77% stated that they feel washrooms should be at corners, as shown in Figure 6 and Figure 7.

This is important to note here that due to the excessive movement of customers in the shopping mall selected, it is

unavoidable to provide at least one set of washrooms with one washroom for disabled persons of each gender on every floor and in good condition with hygienic facilities.
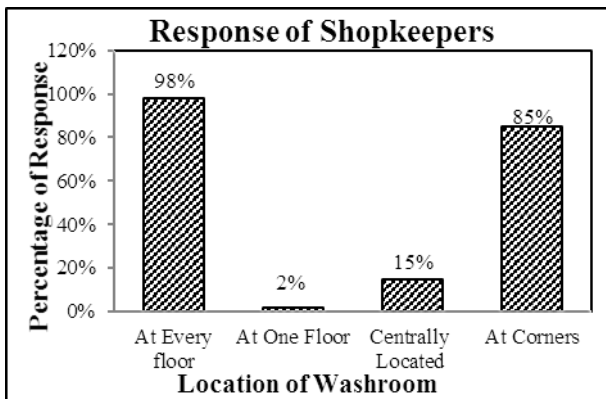

Figure 8: Response of Shopkeepers about the Location of Washrooms

98% of the shopkeepers responded that washrooms should be on every floor, while 2% stated that the washroom should be on one floor because people who are usually do not have problems walking long distances. As shown in Figure 8, 15% stated that they feel the washrooms should be centrally located. This could be because of elderly or physically challenged people who are unable to cover long distances, while the other 85% stated that they feel the washrooms should be at corners as shown in Figure 8.

However, it was observed that the washrooms were on the third floor, which is not accessible. Therefore, it is suggested that the respondent's viewpoint may be considered for design interventions.

This is mentioned in Section II: literature review; stated in standards [24], [25], and [28], and referred by scholar [31].
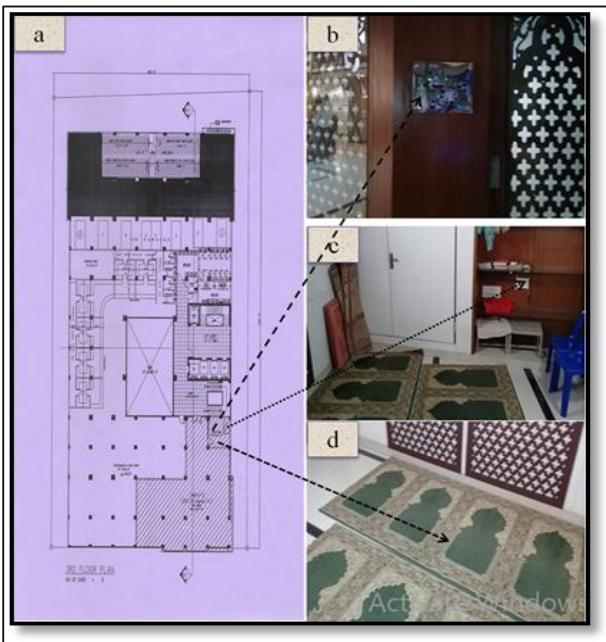
b) Suggestion in Prayer Area:

Figure 9: (a) Layout of Prayer Area on Third Floor (b) Separate Prayer Area for Women (c) Book Shelf and Chairs for Elderly People (d) Prayer Area on Floor
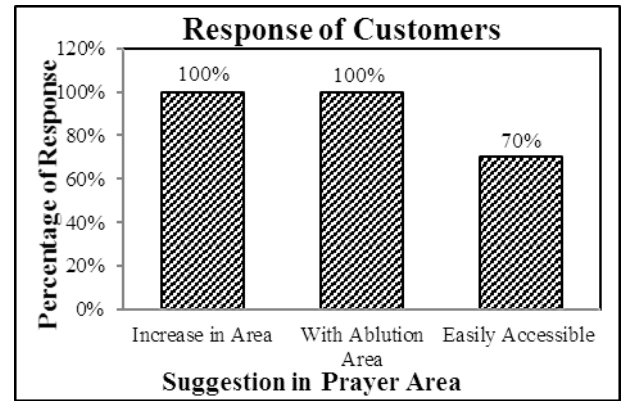

Figure 10: Response of Customers about the Suggestion in the Prayer Area

Figure 9 and Figure 10 show that 100% of the respondents indicated that the area of the prayer was not enough. 100% of the respondents also suggested that it should be adjacent to the ablution area, and 70% of the respondents indicated that it was easily accessible.

The findings indicate that the current space for the prayers needs elaborated changes in the arrangements so that it can be used with allied facilities like the ablution area. Moreover, it is a part of the need-based facility, so customer preferences need to be addressed here.
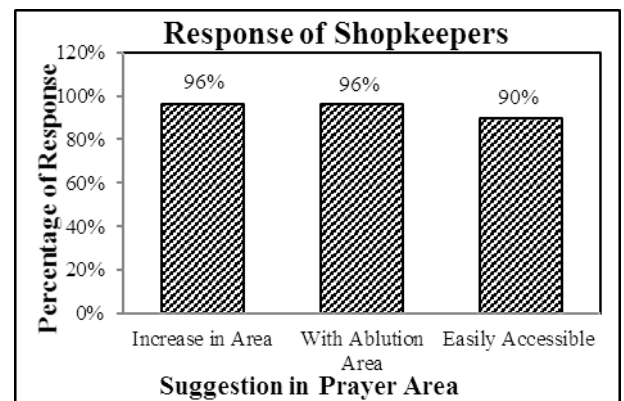

Figure 11: Response of Shopkeepers about the Suggestion in the Prayer Area

Figure 11 shows that 96% indicated that the improvement required in the prayer area should be provided with an increase in area. 96% of the respondents also suggested that it should be provided with an ablution area for the users, and 90% of the respondents indicated that it was easily accessible.

As mentioned in Section II: literature review; an expert has notified us that a prayer area is important for the shopping malls located in Islamic countries. It is also a matter of common experience that many shopping malls have already taken care of prayer areas specifically. The same is suggested for improvisation.

This is also mentioned in Section II: literature review; stated in the standard [28], and referred by scholars [33].

c) Location of Automated Teller Machine (ATM):

Figure 12: (a) Location of Automated Teller Machine in Layout (b) Location of Automated Teller Machine at Ground Floor (c) Automated Teller Machine Accessibility from Both Entrances
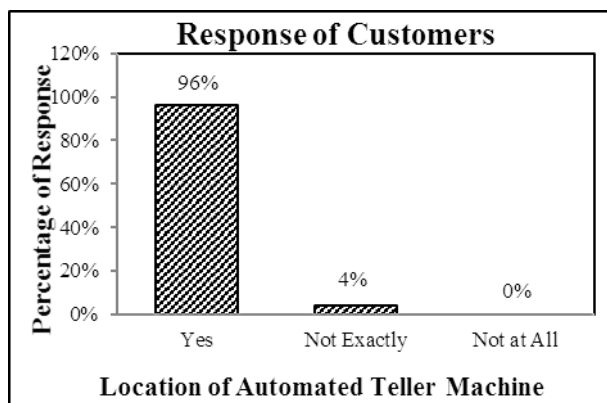

Figure 13: Response of Customers about the Location of Automated Teller Machine (ATM)

The survey result showed that 96% of the respondents were satisfied with the location of the ATM, while 4% of the occupants responded that the location of the ATM was not exactly suitable, as shown in Figure 12 and Figure 13.
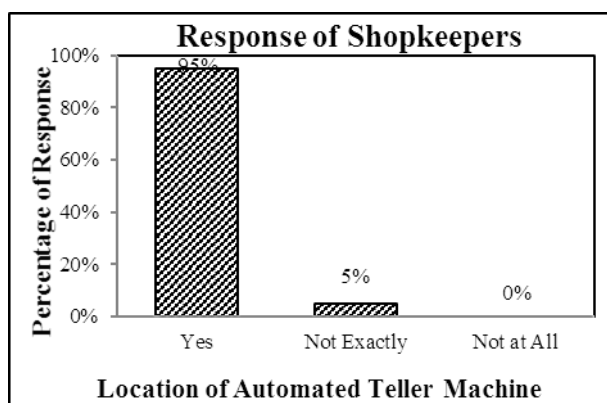

Figure 14: Response of Shopkeepers about the Location of Automated Teller Machine (ATM)

This may not be appropriate for those who come to the mall in a hurry for an ATM rather than to shop. While no respondent opted for the totally wrong position of an ATM. However, it was observed that the ATM was on the ground floor, but it should also be on the third floor in the food court to make it easily accessible for the customers.

The survey result showed that 95% of the respondents were satisfied with the location of the ATM, while 5% of the occupants responded that they were not satisfied with the location of the ATM, as shown in Figure 14. This is because it is not exactly accessible to every shopkeeper, as they are operating on different floors than the ATM placement. Moreover, in shops that are operated by a single shopkeeper (small stalls), he/she would not want to leave the shop all alone since there is a chance of missing out on a customer. While no respondent opted for the totally wrong position of an ATM. Though, it was observed that the ATM was in a congested area and only on the ground floor.

This is mentioned in Section II: literature review; stated in the standard [26], and referred by scholars [29].

d) Location of Currency Exchange:

Figure 15: (a) Location of Currency Exchange in Layout (b) Location of Currency Exchange on Inappropriate Floor; First Floor in Emerald Mall (c and d) Location of Currency Exchange near the Lift and Escalator
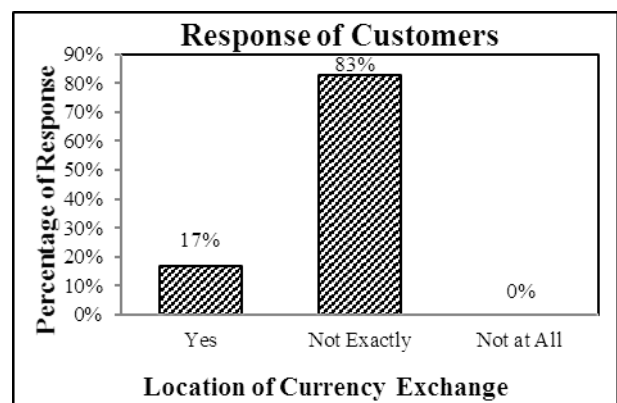

Figure 16: Response of Customers about the Location of Currency Exchange

The survey results showed that 17% of the respondents were satisfied with the location of the currency exchange, while 83% were not satisfied with the location of the currency exchange. The people who are satisfied may not be the users of the currency exchange. While no respondent stated the totally wrong location of the currency exchange, as shown in Figure 15 and Figure 16.

It is, therefore, suggested that currency exchange should be on the ground floor. This is because of the observational fact that there is ample space on the ground floor for this facility. Moreover, currency exchange is an activity that customers may use on an urgent and causal basis, so it is more appropriate to locate it on the ground floor.
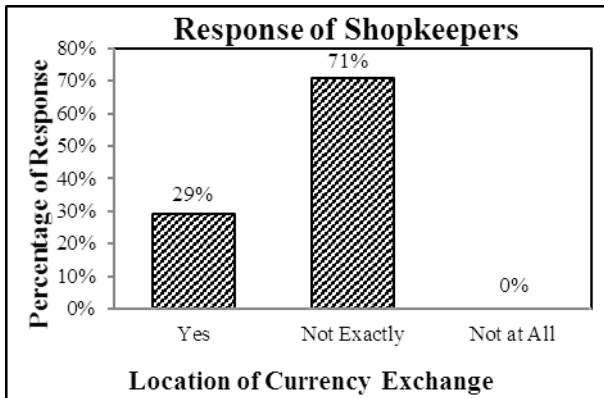

Figure 17: Response of Shopkeepers about the Location of Currency Exchange

The survey result showed that 29% of the respondents were satisfied with the location of the currency exchange, while 71% were not satisfied with the location of the currency exchange, as shown in Figure 17.

The shopkeepers who are satisfied with the location may not be the users of the currency exchange. And if they are the users, then their shops may be on the same floor as the currency exchange. None of the respondents stated the totally wrong and inconvenient location of the currency exchange facility.

The same set of suggestions as for customers is recommended here, considering the similarity in the objectives of the questions asked.

This is also mentioned in section-II: literature review; referred by scholar [29].

e) Location and Access of Lost and Found counter:

The survey result showed that 90% of the respondents indicated that the location was prominent, 95% indicated that it was easily accessible, and 0% indicated that it was not located properly, as shown in Figure 18 and Figure 19. It was observed during the survey that the reception and lost and found counters were in the same facility, well-defined and easily operated.
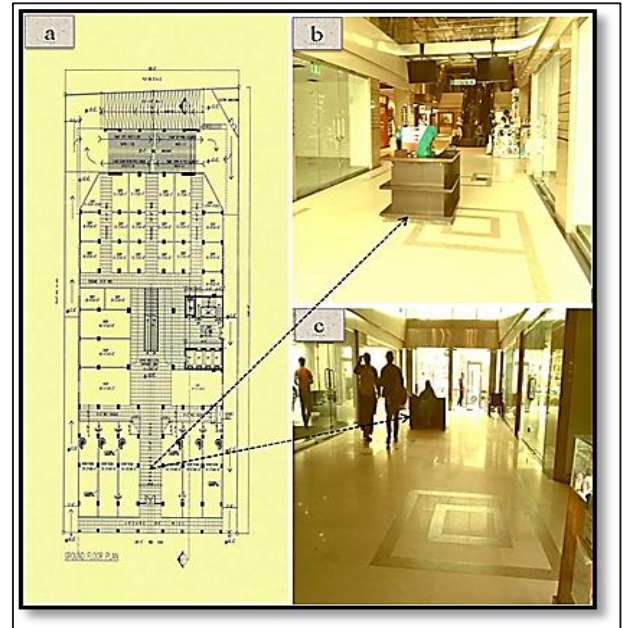

Figure 18: (a) Layout of Lost and Found Counter at Ground Floor (b and c) Lost and Found Counter Combined with Reception Near Main Entrance
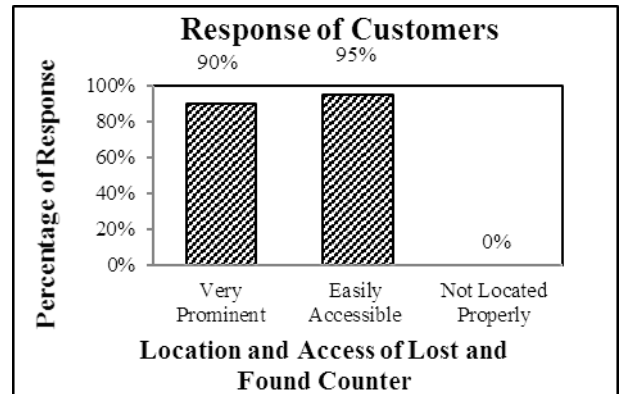

Figure 19: Response of Customers about the Location and Access of Lost and Found Counter
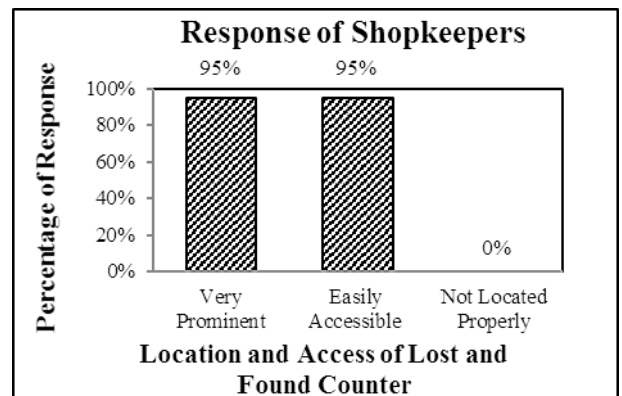

Figure 20: Response of Shopkeepers about the Location and Access of Lost and Found Counter

The survey result showed that 95% of the respondents indicated that the location of the lost and found counter was prominent, 95% indicated that it was easily accessible, and 0% indicated that it was not located properly, as shown in Figure 20.

Therefore, the same sets of observations are valid for the shopkeepers as for customers. Therefore, the same

suggestions are recommended to be implemented if improvising is required.

This is mentioned in Section II: literature review; referred by scholar [29].
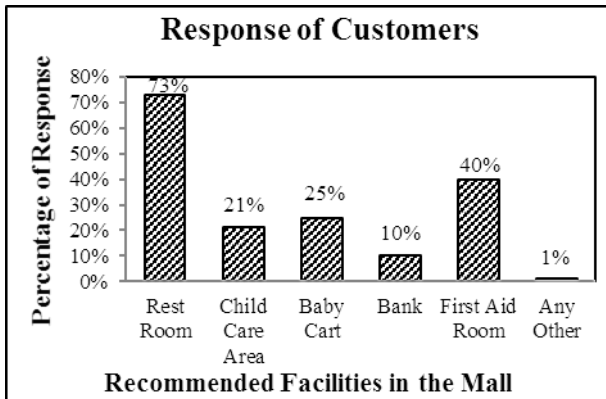
f) Recommended Facilities in this Mall:

Figure 21: Response of Customers about the Recommended Facilities in this Mall

The above Figure 21 graphical representation shows that 73% of respondents suggested that there should be a rest room or mother's room, 21% of respondents suggested that there should be a child care area, 25% of respondents suggested that there should be a baby cart or cuddle cart, 10% of respondents suggested that there should be a bank, and 40% of respondents suggested that there should be a first aid room. While 1% of respondents suggested that there should be any other.

It was observed that rest room was not present in the mall. This is mentioned in Section II: literature review; referred by scholars [29] and [30].

The same is the case with the child care area, which was also not there. This is also mentioned in the literature review; referred by scholars [29] and [32]. In addition to this, the baby cart/cuddle cart was also not present.

This is mentioned in Section II: literature review; referred by scholar [29]. To add to this, the first aid room was also not there. This is also mentioned in the literature review;

stated in the standard [27]. Some of the other facilities that are not present in the mall are stated as banks.

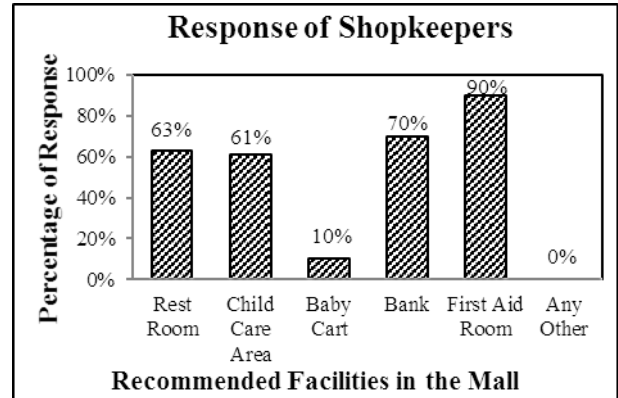This is also mentioned in Section II: literature review; stated in the standard [24], and referred by scholars [29].

Figure 22: Response of Shopkeepers about the recommended facilities in this mall

The above Figure 22 graphical representation shows that 63% of respondents suggested that there should be a rest room or mother's room, 61% of respondents suggested that there should be a child care area, 10% of respondents suggested that there should be a baby cart or cuddle cart, 70% of respondents suggested that there should be a bank, and 90% of respondents suggested that there should be a first aid room. While none of the respondents suggested that there should be any other.

While the observations about the questions inquired about are the same, the shopkeepers are much less concerned about the facilities discussed. because they are coming to the shopping mall for their job and not coming with children.

B. Checklist of Selected Attributes for Shopping Mall

A checklist of selected attributes of Emerald Mall was developed through two major approaches of data collection i.e., Secondary data and Primary data after the survey as shown in Table III.

Table III1: Checklist of Selected Attributes for Shopping Mall

S. No.	Attribute	Sub Attributes	References From Literature Review; Standards and Scholars	Observations
1	Need Based Facilities	Washroom	[24], [25], [28] and [31].	Washrooms were there. This is important to note here that due to the excessive movement of customers in the shopping mall selected, it is unavoidable to provide at least one set of washrooms with one washroom for disabled persons of each gender on every floor and in good condition with hygienic facilities. However, it was observed that the washrooms were on the third floor, which is not accessible. Therefore, it is suggested that the respondent's viewpoint may be considered for design interventions.
2		Prayer Area	[28] and [33].	The Prayer Area was present. The findings indicate that the current space for the prayers needs elaborated changes in the arrangements so that it can be used with allied facilities like the ablution area. Moreover, it is a part of the need-based facility, so customer preferences need to be addressed here. Expert has notified us that a prayer area is important for the shopping malls located in Islamic countries. It is also a matter of common experience that many shopping malls have already taken care of prayer areas specifically. The same is suggested for improvisation.
3		ATM	[26] and [29]	ATM was given. However, it was observed that the automated teller machine was on the ground floor, but it should also be on the third floor in the food court to make it easily accessible for the customers.

				Though, it was observed that the Automated Teller Machine was in a congested area and only on the ground floor.
4		Currency Exchange	[29]	Currency exchange was there. It is, therefore, suggested that currency exchange should be on the ground floor. This is because of the observational fact that there is ample space on the ground floor for this facility. Moreover, currency exchange is an activity that customers may use on an urgent and causal basis, so it is more appropriate to locate it on the ground floor.
5		Lost and Found	[29	Reception and lost and found were the same counter. It was observed during the survey that the reception and lost and found counters were in the same facility, well-defined and easily operated.
6		Rest Room	[29] and [30].	It was observed that rest room was not present in the mall.
7		Child Care Area	[29] and [32]	The same is the case with the child care area, which was also not there.
8		Baby Cart	[29]	In addition to this, the baby cart/cuddle cart was also missing.
9		First Aid Room	[27]	To add to this, the first aid room was also not provided.
10		Bank	[24] and [29]	Some of the other facilities that are not present in the mall are stated as the bank.

C. Findings/Results: Effective Impacts of Specific Attributes on User Comfort

The findings of the research are summarized below according to the need-based facilities of the shopping mall discussed. The washrooms were situated only on the third floor, in appropriate conditions, and accommodated the needs of the differently-abled people. However, there was insufficient space in the prayer area, and the portion for ablution was missing. The ATM was only on the ground floor and had a congested area around it. In addition, the mall included a currency exchange facility; however, it was located on an inappropriate floor – on the first floor, not the ground floor. While the lost and found counter was placed with the reception in the same facility, there was no lost and found counter in the Emerald Mall's central area. However, the restrooms, childcare area, baby cart, banks, and first aid room were missing.

Emerald Mall lacked the necessary facilities, which are highly recommended to be provided. It did not greatly offer these selected attributes in terms of user facilitation, and it seemed to focus much more on retail services. These attributes are largely need-based facilities the play an important role in attracting a large number of customers to shopping malls.

D. Discussion

It can be said that, according to the observations carried out on the Emerald Mall, its status comprises of these attributes that are under study, namely, need-based facilities. The Washrooms were clean and checked for supplies regularly. Bathrooms were offered on only the third floor, and there was consideration for disabled people. Due to this unavailability on every floor, users have to move to and fro between different floors. A religious facility like a Prayer Area has been provided in the shopping mall, but there was inadequate space and no ablution area. The use of the prayer place is limited due to the lack of space since people must wait their turn to pray. A prayer area is important for the shopping malls located in Islamic countries. There was not enough room surrounding the Automated Teller Machine (ATM). And it was only on the ground floor. This was the reason that some users had to use the automated teller machine outside the premises of the mall, and this may have affected the sales of some shops where users are in need of cash and are reluctant to go outside the mall for this facility. The Currency Exchange facility was on the unsuitable floor; it was on the first floor of Emerald Mall. Moreover, currency exchange is an activity that customers may use on an urgent and casual basis, so it is more appropriate to locate it on the ground floor. It is a business that has the legal right to exchange one currency for another for its customers. This currency exchange is a good service provider in terms of user facilities and has impacted the users very effectively. It also provides safe use of the facility as it involves a cash amount of currency in the process of exchange. It was observed during the survey that the reception and the Lost and Found Counter were in the same facility. The same desk was used for both reception and the lost and found counter. A lost and found counter is a counter in a public building where people can go to recover lost items that may have been found by others. Furthermore, a room in a shopping mall for people to relax was not provided. User comfort is directly affected by the unavailability of Rest Rooms. If a Childcare Area had been provided, it could have improved the revenue generation for the mall. Better than bringing kids, who can make getting any shopping done a hopeless task, adults can leave children for up to two hours while they shop or go see a movie. Meanwhile, the kids will be entertained with various activities that were missing. The facility of the child care area has actually affected the user's comfort in the mall as shopping hours and the stay of users in the mall have increased. The Baby Cart is a fun toy that can act as a stroller as well, which makes little ones more excited about the trip. It was observed that the baby cart/cuddle cart was not present in the mall. However, if the baby cart had been provided in the mall, then it could have increased the user's comfort. The first-aid room was also not present. Emergency care or treatment is given to an ill or injured person before regular medical aid can be obtained. The provision of a first-aid facility is a value-added user comfort if provided in the mall. The bank was not available in this mall. Bank accounts offer convenience and safety. Your money will be protected from theft and fire. Bank accounts can help you access credit. These are all factors relevant to bank facilities that are affecting the user's comfort in the mall. This is with reference to some other malls in the city where the bank facility is provided and works inside the mall premises for the user's comfort.

In a summarized form, it was found that Emerald Mall did not offer many attributes and seemed to focus much more on retail services. These attributes, mainly need-based facilities, act positively in attracting many people to shopping malls.

VI. CONCLUSION

The research concluded that an analysis conducted after the research study had assisted in meeting the aims of the research. The findings of the research that was based on different questions concluded that Emerald Mall has some need-based facilities that were improper in many respects, while some of the necessary facilities were suggested to be provided. The findings of the research also demonstrate the inclusive nature of the attributes of the shopping mall in the case study. Because of the fact that users of shopping malls are of several age groups and genders, these attributes are dependent on each other in terms of user-based facilities. These different types of users have defined the facilities in several ways. Moreover, the non-vibrant character of the Emerald Mall was the reason that the number of customers in this mall was generally lower than the number of customers in some other malls. These facilities may address many customer requirements if provided as suggested by users and recommended in standards. Since the study was focused on selected attributes for user comfort, it was also concluded that satisfaction of a customer's needs can be fulfilled by these attributes. These shopping attributes have an influence on the architecture and design of the shopping mall, which defines the attributes of shopping. The conclusions of the research were summed up in a few points. It was concluded that washrooms were not located on every floor. The prayer area was there but not with adequate space, and the ablution area was missing. An Automated Teller Machine was not located on every floor and had a congested area around the machine. In addition to this, the currency exchange was not located on the ground floor, but on an inappropriate floor, the first floor of Emerald Mall. A common facility was a lost and found counter and reception. Emerald Mall's central area/atrium, on the other hand, does not have a lost and found desk/counter. In addition, there was no rest room, child care area, baby cart, bank, or first aid room for emergency care.

Emerald Mall was not appropriately offering these selected attributes in terms of user facilitation and seemed to focus much more on retail services. These characteristics, which are primarily need-based facilities, play a significant role in attracting a large number of customers to shopping malls.

VII. RECOMMENDATIONS/ SUGGESTIONS

The research culminates in several different ways that suggest some of the key points regarding need-based facilities that need to be addressed in order to enhance the user facilities. As it is a basic need, it is recommended that the washrooms be on every floor rather than having users move up and down in search of washrooms, and they must accommodate differently-abled people on every floor. The prayer area should have sufficient space that caters to the ablution area too. This is because it will make it easy for people to perform ablution for prayer and pray at the same

place. Moreover, some people prefer using chairs for prayer; a sufficient space will enable them to do so. An Automated Teller Machine should be on every floor, especially on the third floor where a play area and a food court should be and should have sufficient area around the machine for their ease and security. Similarly, currency exchange should also be on the ground floor in order to assist the customers on an urgent and casual basis. The lost and found counter should be located in the central area/atrium of Emerald Mall. Moreover, a rest room, a childcare area, a baby cart, a bank, and a first aid room for emergency care should be in the shopping mall. These facilities cater to parents who are on a visit to the mall. It is recommended to focus on need-based facilities for user comfort. This proceeds categorically by inviting numerous customers to shopping malls. The shopping mall designers should consider the recommended attributes according to standards as these attributes play a vital role in attracting customers to preferably visit Emerald Mall.

Authors Contributions

The contribution of the authors was as follows: Reena Majid Memon's contribution to this study was the concept, technical implementation, and correspondence. The methodology to conduct this research work was proposed by Bushra Danish Talpur. Data collection and supervision were performed by Yasira Naeem Pasha. Zoya Gul Kaka facilitated the data compilation and validation. Nazia Iftakhar's contribution was project administration, and paper writing.

Conflict of Interest

The authors declare no conflict of interest and confirm that this work is original and not plagiarized from any other source, i.e., electronic or print media. The information obtained from all of the sources is properly recognized and cited below.

Data Availability Statement

The testing data is available in this paper.

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