

A Disability Survey of Restaurants in Lahore



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Abstract: *The built environment in Pakistan has historically neglected to accommodate people with physical disabilities and continues to do so with no consideration for the severe limitations of such citizens. May they be restaurants, shopping centers, bus-stops, public-lavatories, there is no way for the handicapped to independently access these facilities. To demonstrate this issue in detail, a survey of about 80 restaurants was conducted in Lahore. These eateries are some of the busiest and high grossing restaurants and diners in their areas. The survey entailed evaluating the buildings that these places are housed in and their capacity to facilitate the physically challenged customers. The findings of this report have been documented in detail for policymakers, and designers in particular, in understanding the situation as it is. Accommodating the physically disabled population is a fundamental civic requirement and a human rights concern for any country of the world. In Pakistan it can no longer be overlooked or dismissed.*

Key Words: Disability, Accessibility, Inclusivity, Universal Design, Restaurants, Public Spaces, Design for All

Introduction

A society's progress in social welfare can be measured by how well physically and mentally disabled people are integrated into positive interactions. Because disability is viewed as a disruption to the 'natural order of things,' the pursuit for a solution is mandatory.

Ronald Mace, an architect, developed the term "universal design" to define accessibility that extends beyond the limits of barrier-free design (Mace 1985). Mace expressed Universal Design as an approach of designing a building or structure that is both appealing and feasible for all individuals, disabled or not while also eliminating the recognized appearance of many present accessible designs. The objective was to make the environment "functional for all people" and the

integration of disability into broader conceptions (Boys J. 2017).

The concept of Universal Design reflected a desire to emphasize the aesthetics and function of access, rather than considering disabilities as an added, supplementary, and unusual issue - that is, as a "special need." (Imrie, R., & Hall, P. 2003). Universal design enhances the possibility of improving the quality of life for a wide range of individuals. It also decreases stigma by putting disabled persons on an equal playing field with the able-bodied population.

Numerous advocacy organizations dedicated to enhancing the lifestyle of individuals with disabilities have posited that the exclusion of this demographic from mainstream society is not inherent to their disabilities but is predominantly a consequence of inadequate physical

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infrastructure. This approach results in the creation of inflexible and stagnant spaces that cater only to a specific user group, erecting barriers for those who deviate from the conventional notion of able bodies. (Reid, R. [2021](#)).

Pakistan's built environment is relatively underdeveloped in terms of facilitating systems for people with impairments. Disability is difficult to identify and evaluate since it is underreported by the community, particularly women (World Bank, 2011). It has been found that society tends to disregard them, considering them incapable of engaging in the community or avoiding them as reminders of their weakness. They do not receive disability-related services in accordance with their needs, and they are severely excluded from everyday life (Afzal, [2020](#)). People with disabilities and their needs are being seen as a human rights concern on a global scale while there is evidence that people with impairments have poorer economic success than those without disabilities.

Millions of individuals in Pakistan suffer from various types of impairments. Nonetheless our societies and government organizations have generally ignored the needs of handicapped individuals, despite the fact that many of them have the potential to become well-integrated and productive members of society (Muhammad Ali, 2022).

People with disabilities (PWDs) face a wide variety of challenges, including cognitive, developmental, mental, physical, and sensory restrictions. According to the UNDP, around 6.2% of Pakistanis have a disability. Other estimates place this part far higher. Human Rights Watch estimates the number of people with disabilities in Pakistan to be between 3.3 and 27 million.

Lack of Provisions Regarding Disability in Pakistan's Construction Bylaws

Several initiatives were introduced in Pakistan to rehabilitate the disabled in different ways. One aspect was to facilitate their access to public spaces. The laws approved by government organizations such as the Special Citizens Act of 2008 aim directly at making every public space accessible to handicapped citizens including

the allotment of seats in public transport and the provision of amenities on pathways for wheelchairs and for blind people. Under this act, it is incumbent upon the government to ensure that the concerned authorities design wheelchair access before the construction of buildings in both the public or private sectors, (Ahmed M., [2011](#)) yet there is a notable absence of implementation of such provisions even in high profile areas such as the DHA (Defense Housing Authority).

The legal framework does not explicitly mandate features such as accessibility measures, open spaces conducive to wheelchair use, or signage designed to enhance inclusivity. This lack of explicit legal provisions contributes to a prevailing gap in the implementation of disabled-friendly construction techniques within the constructed environment. As a result, commercial buildings, including restaurants, often do not reflect the necessary accommodations for individuals with disabilities and thus fails to provide a desired design and, the reason being that Lahore's commercial industry lacks verifiable data and sufficient research committed to addressing this particular issue.

Universal Design Approach

In the disability criteria, there is a common assumption that designers overlook the needs of disabled people by limiting their approach to what is required by abled-bodied people. While considering the design parameters for disability one has to be creative with complex design strategies to be implemented on site. Exploring the disabling effects it can have on disabled people, on our understandings of able and disabled, on the concept of material space and on architecture as a whole (Boys J., [2014](#)).

Universal design requires designers to create environments and products that cater to people as individuals and increase their sense of self-sufficiency as capable members of society.

From the following studies there has been seven principles of universal design strategies adopted to achieve all aspects of a good design. These standards give a benchmark for measuring objects and environments.

Table 1

Principles of Universal Design Characterized according to this Research

<p>1: Equitable use:</p> <ul style="list-style-type: none"> • Provide equal usage for all • Avoid discriminating any users
<p>2: Flexibility in Use:</p> <ul style="list-style-type: none"> • Provide flexibility in use. • Provide flexibility and adaptability to the user's pace.
<p>3: Simple and Intuitive Use:</p> <ul style="list-style-type: none"> • Avoid unnecessary complexity. • Be consistent with the expectations and intuition of the user
<p>4: Perceptible Information:</p> <ul style="list-style-type: none"> • Use various methods (pictorial, verbal, tactile) for presentation of vital information. • Provide compatibility with a diversity of techniques or devices used by people with sensory limitations.
<p>5: Tolerance for Error:</p> <ul style="list-style-type: none"> • Assemble elements to minimize dangers and errors • Provide warnings of hazards and errors.
<p>6: Low Physical Effort:</p> <ul style="list-style-type: none"> • Allow user to keep a neutral body position. • Use reasonable operating forces.
<p>7: Size and Space for Approach and Use:</p> <ul style="list-style-type: none"> • Provide a strong line of sight to vital elements for any seated or standing user. • Make reach to all elements comfortable for any seated or standing user.

Methodology of the Survey

A team survey was conducted in more than 80 restaurants within the two major commercial zones of Lahore, i.e. DHA and Gulberg, to evaluate the facilities that allow accessibility and mobility of physically disabled people in each of these eateries. The required information was gathered by means of a questionnaire.

The scope of this study was qualitative and quantitative survey of the implementation of universal design approach of restaurants in Gulberg and DHA Lahore.

The study examines and identifies the problems of existing restaurants providing access, flexible layout design and other inclusive design considerations and draws recommendations to improve the overall accessibility for disabled users.

Table 2

Selected Restaurants from Gulberg and DHA Lahore

S.No	Name of Restaurant (Gulberg)	S.No	Name of Restaurant (DHA)
1.	Cinnabon	47.	McDonald's
2.	Coco Cubano	48.	Second cup
3.	Villa the grand buffet	49.	Gloria jean's coffees
4.	Lahore chatkhara	50.	Dogar restaurant
5.	Junoon	51.	14 th street pizza
6.	Theatre	52.	Veera 5
7.	Optp	53.	Jessie's burger
8.	Mocha coffee	54.	Gourmet grill
9.	Bon vivant palais	55.	Butt karahi
10.	The Brasseries	56.	Paglia bawarchi

S.No	Name of Restaurant (Gulberg)	S.No	Name of Restaurant (DHA)
11.	Nando's	57.	Bundu khan
12.	Nisa Sultan	58.	Daily deli co.
13.	Ox & grill steakhouse	59.	Meet the buns
14.	The Pantry	60.	Jade café and Chinatown
15.	Howdy	61.	London courtyard
16.	KFC	62.	Rina's kitchenette
17.	Chaye khana	63.	Cosa nostra
18.	Saku Hana	64.	Subway
19.	QB'z	65.	Dip and sip
20.	Café Beirut	66.	Ice food
21.	Soul kitchen and café	67.	Mandarin kitchen
22.	Amavi	68.	Baskin Robbins
23.	Hardee's	69.	Dunkin donuts
24.	Gloria Jean's coffees	70.	Coffee planet
25.	Bar b q tonight	71.	Go Sushi
26.	Nando's	72.	The burning giraffe
27.	Second cup	73.	Juicy chuck
28.	Bagh	74.	Wok and co.
29.	Salt and pepper village	75.	The rice bowl
30.	Jade café	76.	Hardee's
31.	Freddy's café	77.	Nando's
32.	Baranh	78.	Domino's
33.	Eggspectation	79.	Bob's
34.	Rare	80.	Papa john's
35.	Urban kitchen	81.	Pataka boti
36.	Butler's chocolate café		
37.	Tuscany courtyard		
38.	Forks and knives		
39.	Fuchsia kitchen		
40.	PF Chang's		
41.	Café Aylanto		
42.	Yums		
43.	Sichuan		
44.	East Chinese		
45.	Monal		
46.	Lamour		

With an absence of a comprehensive toolkit for evaluating universal design and the lack of legislations in Pakistan specific to this context, the study is based on internationally recognized tools such as the Universal Design Principles (UDP) mentioned above and the guidelines for the implementation of the Americans with Disabilities Act (ADA, 1990). The principles are lofty objectives followed by subsets of principles and design ideas that are relatively generic in nature and cannot be quantified. The problem is to bring forth into design the Seven Principles and match them with the performance criteria, standards, and guidelines that designers and planners are accustomed to (Preiser, W. 2008).

These frameworks provide a set of guiding principles that encompass various aspects of design, including accessibility, flexibility, and simplicity.

Design Attributes for Assessing the Inclusivity

In order to evaluate the performance of the built environment of the restaurants as a universal design approach the assessment tool for this study is divided into eight sections that are selected on the basis of guidelines provided by the seven principles of universal design and the approach of ADA guidelines through a proper literature analysis of the two guidelines. The assessment

tool employed in this study featured dichotomous questions, providing two distinct options of "yes" or "no" for each query. The details of each section are provided in the following table.

Table 3

Parameters to Assess the Inclusivity of the Design

S.No	Design Attributes	Detailed Parameters
1.	Entrance and parking	Access points Accessible parking Entrance door
2.	Ramp	Ramps for entrance
3.	Tactile	Material and finishes Surface treatments
4.	Signage	Signage for ramp, entrance, exit , stairs, toilets and parking
5.	Handrails on entrance	Height and availability of handrails
6.	Circulation space for wheelchair	Wide exterior and interior space for mobility Vertical circulation Flexible layout
7.	Accessible toilets	Separate restroom for disabled Accessible entrance through wheelchair Tactile flooring Grab bars Height of fixtures
8.	Emergency exit	Separate exit for emergency

Specific questions were formulated on the basis of the seven universal design principles for assessment of the restaurant's infrastructure (Table 4).

Table 4

Questionnaire for the restaurant's inclusivity assessment.

Sr no.	Design Attributes	Questionnaire
1.	Entrance and parking	<ul style="list-style-type: none"> Is the main café entrance accessible by wheel chair users? Do all inaccessible entrances have signs displaying the location to the closest accessible entrance? Are a suitable number of accessible parking spaces provided? Is the door handle accessible to the wheel chair user? Is there enough circulation space at the entrance for wheelchair users?
2.	Ramps	<ul style="list-style-type: none"> Are ramps and lifts also provided with stairs at the main entrance? Do all ramps have railings on both sides? Are ramps non-slip? Are the slopes of ramps below 1:12?
3.	Tactile	<ul style="list-style-type: none"> Is there tactile flooring present for the visually impaired at the entrance of the restaurant? Is tactile flooring present from entrance leading towards reception?
4.	Signage	<ul style="list-style-type: none"> Are pictograms or symbols used to identify entrance, ramps, reception, rest rooms and exits?
5.	Handrails	<ul style="list-style-type: none"> Do the ramps at entrances have handrails on both sides? Do the lavatories have handrails present for wheelchair users?
6.	Circulation space for wheelchair	<ul style="list-style-type: none"> Is the dining space easily accessible from the entrance?

		<ul style="list-style-type: none"> • Is there enough circulation space for the turning radius of a wheelchair? • Is there a minimum of 5 ft space towards the restroom?
7.	Accessible toilets	<ul style="list-style-type: none"> • Is a rest room available for the disabled? • Is there signage identifying rest rooms? • Do the doors have accessible handles? • Are the doors according to the standard width? • Does the entrance accommodate suitable turning space for a wheelchair user? • Do all fixtures have a 36-inch-wide path? • Are handrails present?
8.	Emergency exit	<ul style="list-style-type: none"> • Are there any emergency exits available? • Is the emergency exit accessible to the disabled? • Is there a ramp at the emergency exit?

Results

The assessment of restaurants was conducted based on a set of inclusivity design parameters and the questions formulated on the basis of UDP. Regrettably, the majority of the restaurants fell short of meeting the established inclusivity norms. Notably, variations were observed

among different locations regarding the presence and absence of specific parameters. This comprehensive evaluation serves as a foundation for identifying specific areas of improvement and tailoring recommendations to enhance the overall inclusivity of restaurants in the studied areas of DHA and Gulberg Lahore (Table 5).

Table 5

The table shows all the Assessed Restaurants and their Implementation of Inclusive Parameters

	Parking	Ramp	Tactile	Signage	Handrail on entrance	Circulation space for wheelchair	Accessible Toilets	Emergency Exit
McDonald's	N	N	N	Y	N	N	N	N
SECOND CUP	N	N	N	N	N	N	N	N

Gloria Jean's Coffees	N	N	N	N	N	N	N	N
Dogar Restaurant	N	N	N	N	N	N	N	N
14 TH STREET PIZZA	N	N	N	N	N	N	N	N
Veera 5	N	N	N	N	N	N	N	N
Jessie's Burger	N	N	N	N	N	N	N	N
CINNABON	N	N	N	N	N	N	N	N
Coco Cubano	N	N	N	Y	N	N	N	N
Lahore Chatkhara	N	N	N	N	N	N	N	N
JUNOON	N	N	N	N	N	N	N	N
THEATRE	N	N	N	N	N	N	N	N
opto	N	N	N	N	N	N	N	N
Gourment Grill	N	N	N	N	N	N	N	N
Butt Karahi	N	N	N	N	N	N	N	N
Pagla Bawarchi	N	N	N	N	N	N	N	N
Bundu Khan	N	N	N	N	N	N	N	N
Meet the Buns	N	N	N	N	N	N	N	N
Daily Deli Co.	N	N	N	N	N	N	N	N
Gloria jeans	N	N	N	N	N	N	N	N
RINA'S KITCHENETTE	N	N	N	N	N	N	N	N
COSA NOSTRA	N	N	N	N	N	N	N	N
DIP AND SIP	N	N	N	N	N	N	N	N
ICE FOOD	N	N	N	N	N	N	N	N
MANDARIN	N	N	N	N	N	N	N	N
BASKIN ROBINS	N	N	N	N	N	N	N	N
DUNKIN DONUTS	N	N	N	N	N	N	N	N
Mocca Coffee	N	N	N	N	N	N	N	N

Bon Vivant Palais	N	Y	N	Y	N	N	N	N
The Brasseries	N	Y	N	Y	N	N	N	N
Nando's	N	N	N	N	N	N	N	N
Nisa Sultan	N	N	N	N	N	N	N	N
Ox & Grill Steak House	N	N	N	N	N	N	N	N
The Pantry by Polo Lounge	N	N	N	N	N	N	N	N
MONAL	N	N	N	N	N	N	N	N
Lamour Cafe	Y	Y	N	Y	N	Y	Y	N
RARE	N	N	N	N	N	N	N	N
Jade Café & China	N	N	N	N	N	N	N	N
London Courtyard	N	N	N	N	N	N	N	N

Table 6

Restaurant Accessibility for Disabled People

	Parking	Ramp	Tactile	Signage	Handrail On Entrance	Circulation Space for Wheelchair	Toilets	Emergency Exit
HOWDY	N	N	N	N	N	N	N	N
KFC	N	N	N	N	N	N	N	N
CHAYE KHANA	N	N	N	N	N	N	N	N
SAKU KHANA	N	N	N	N	N	N	N	N
QZ'S	N	N	N	N	N	N	N	N
CAFÉ BEIRUT	N	N	N	N	N	N	N	N
SOUL KITCHEN AND CAFE	N	N	N	N	N	N	N	N
AMAVI	N	N	N	N	N	N	N	N
HARDEE'S	N	Y	N	N	N	N	N	N
GLORIA JEAN'S	N	Y	N	Y	N	N	N	N

BAR.B.Q TONIGHT	N	Y	N	N	N	N	N	N
NANDO	N	N	N	N	N	N	N	N
SECOND CUP	N	N	N	N	N	N	N	N
BAGH	N	N	N	N	N	N	N	N
SALT N PEPPER	N	N	N	N	N	N	N	N
JADE CAFE	N	N	N	N	N	N	N	N
FREDDY'S CAFE	N	N	N	N	N	N	N	N
BARANH	N	N	N	Y	N	Y	N	N
EGGSPECTION	N	N	N	Y	N	Y	N	N
URBAN KITCHEN	N	Y	N	N	N	N	N	N
BUTLERS CHOCOLATE CAFE	N	Y	N	N	N	N	N	N
JUICY CHUCK	N	N	N	Y	N	N	N	N
TUSCANY COURTYARD	N	N	N	N	N	N	N	N

Table 7

Restaurant Accessibility for Disabled People

	Parking	Ramp	Tactile	Signage	Handrail On Entrance	Circulation Space for Wheelchair	Toilets	Emergency Exit
FORKS N KNIVES	N	Y	N	Y	N	N	N	N
FUCHSIA KITCHEN	N	Y	N	N	N	N	N	N
PF CHANGS	N	Y	N	Y	N	N	N	N
CAFÉ AYLANTO	N	N	N	N	N	N	N	N
YUMS	N	Y	N	N	N	N	N	N
SICHUAN	N	Y	N	Y	N	N	N	N
EAST CHINESE	N	N	N	N	N	N	N	N
DOMINO'S	N	N	N	N	N	N	N	N
BASKIN ROBBINS	N	N	N	N	N	N	N	N
BOB'S	N	N	N	N	N	N	N	N
PAPA JOHN'S	N	N	N	N	N	N	N	N
PATAK BOTI	N	N	N	Y	N	N	N	Y
GO SUSHI	N	N	N	N	N	N	N	N
THE BURNING GIRAFFE	N	N	N	N	N	N	N	N
THE RICE BOWL	N	N	N	N	N	N	N	N

Entrance and Parking

The assessment results revealed that only one out of over 80 restaurants had both an allotted parking space and an approachable entrance for disabled individuals but with no designated signage given shows the lack of proper commitment to an inclusive design approach. The

findings underscore the absence of accessible parking spots and no designated accessible route that directly connects to the entrance. Most of the restaurants are at close proximity to the road and hence have a messy and congested entrance where it is difficult for disabled users to approach. Fig 1 (a), (b).

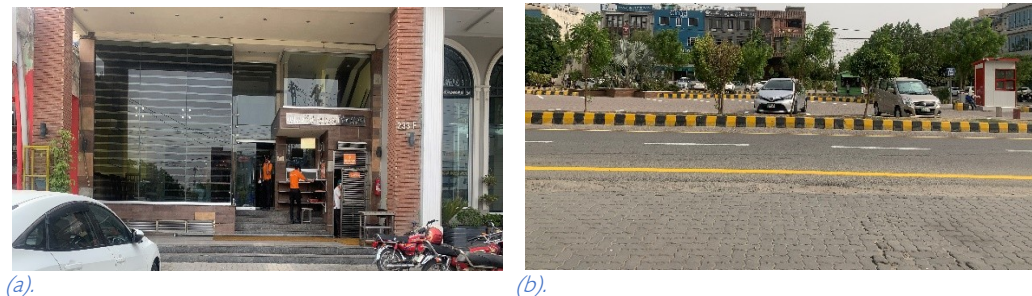
Figure 1 (a) (b)

Shows the only Restaurant (Tenerife café) that has an Allotted Parking as Well as an Accessible Entrance



Figure 2

Gourmet grill: (a) shows the Entrance to the Restaurant which is Raised above 5 steps from the Road Level. (b) shows the Parking Area for the Restaurant



The entrances to almost all the restaurants are inaccessible in terms of a direct route as all have raised floors with steps for entrance. Fig 2(a) Shows the entrance to the restaurant which is five steps above the road level and is completely inaccessible while showing that in Fig 2(b) the parking for the restaurant is on the opposite side of the service lane which makes it practically impossible for disabled users to utilize this space.

via stairs, underscores a widespread lack of inclusive design practices within the country.

Out of over 80 assessed restaurants, only thirteen had ramps while majority had no ramps at all reflecting an ample deficiency in design. There are narrow entrances, no parking spaces provided, and the entrance doors in most of these restaurants are not according to the standards, leading towards the absence of an inclusive design for all. Some examples of high-end restaurants with zero accessible entrance are as follows (Fig 3).

Ramps

The observation that most restaurants in Pakistan have entrances elevated above road level, primarily accessible

Figure 3

(a)Tuscany (b)Villa the grand buffet: shows raised floor with stairs making the entrance inaccessible for disabled as there are no ramps provided



(b).



(a).

Even the approach towards these restaurants is inaccessible as it is mostly being used for parking. The assessed restaurants present numerous instances where

ramps are constructed improperly, necessitating adjustments to enhance functionality. Some examples shown in figure 4.

Figure 4

Butler's Chocolate Café: (a) shows the exterior entrance of the café where a ramp is present, though without handrails and with a sharp turn. And (b) shows the interior entrance of the café which has no ramp



(b).

(a).

Figure 5

Urban Kitchen: (a) shows the presence of ramp and stairs at the façade. (b) shows the ineffective and disproportionate ramp design/ Obstructions



(a).



(b).

Figure 6

Café Aylanto: (a) shows ramp and stairs present at the façade. (b) Fuchsia Kitchen: shows raised floor with stairs but



(a).



(b).

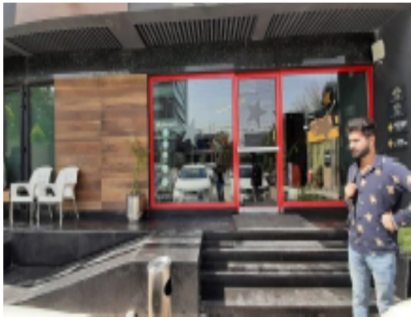
there is a ramp provided while the entrance is also wide enough

Even among the restaurants that have implemented ramps, there is a notable deficiency in the quality of construction, deviating from established standards. For example, in the butler's chocolate café (Fig 4.) there is a ramp present on the exterior entrance however, there is also an entrance into the dining space which has stairs yet no ramp, so in this case, the ramp present at the façade

comes into question as the purpose is not even being fulfilled within the functional space. Regrettably, these inadequately constructed ramps not only render the facilities inefficient but also designate them as wasted time, material and space. Instead, there is a pressing need for the installation of well-designed ramps at the entrances of every commercial building. An example is as follows:

Figure 7 (a) (b)

Hardee's: (a) shows narrow entrance of restaurant (b) shows the ramp for wheelchair without handrails and is too steep and the turn is sharp



(b).



(a).

Tactile

All of the selected restaurants that were assessed, there is zero use of tactile flooring in there internal context (Fig 8). Tactile flooring as a crucial aspect for disabled users

especially people with visual impairments for whom way finding is almost impossible without the use of it. This indicates the lack of association as well as discrimination against the disabled user making these spaces completely inaccessible for them.

Figure 8

(a) McDonald's (b) PF Chang's: shows the external context of the restaurants with no tactile flooring



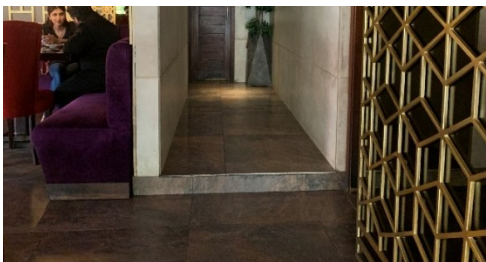
(a).



(b).

Figure 9

(a) Bundu Khan (b) Second cup: shows the Internal Environment of the Restaurants



(a).



(b).

The restaurants shown in Fig 9, Also indicates that there is no use of tactile flooring within the interior, instead

many of the restaurant have dining spaces that are above the ground level making those spaces dangerous for the use of disabled people.

Signage

Some of the restaurants have implemented a thoughtful signage system to enhance user experience and aid in way finding. Well-designed signage can significantly improve navigation within a space and contribute to a positive customer experience. Entrance signage outside the building communicates the identity of the restaurant and provides directional information guiding users towards the entrance. Internal signage within the building

guides users to important rooms and spaces such as toilets or emergency exits and assists in wayfinding within the restaurant. Ramp signage enhances inclusivity by providing clear information for individuals with different mobility needs. Emergency exit signage clearly indicates the location of emergency exits for safety purposes and ensures that users can quickly identify escape routes in case of an emergency. While toilet signage helps users to easily locate restroom facilities. By incorporating these elements, the restaurants are not only helping users navigate the space efficiently but also creating a safer and more inclusive environment. Some good examples of application of signage in the restaurants is as follows (Fig 10.):

Figure 10

Forks and Knives: Shows signage for Emergency exit as well as Toilet (b)Patakha boti: shows signage for emergency exit(c)PF Chang's: shows the signage for male and female toilets (d) Sichuan: shows signage for the entrance to the restaurant

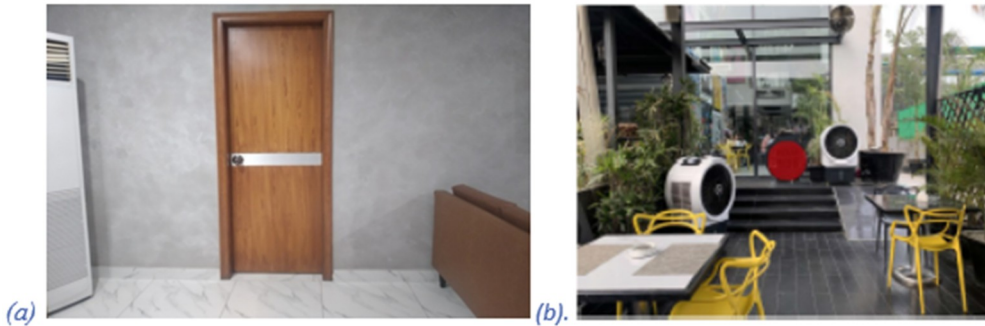


While there are good examples present in the use of signage, there are also many restaurants that lack this basic requirement as well, making wayfinding difficult for the users. And though signage is present yet unfortunately 0% of restaurants have any signage for ramps provided

within their settings. Fig 11. Shows multiple examples of absence of signage which is making it difficult to identify the space for example (a) is a toilet, while (b) is the entrance to the restaurant.

Figure 11

(a) Coffee planet (b)Urban kitchen: shows the internal environment of the restaurants



Handrails on Entrance

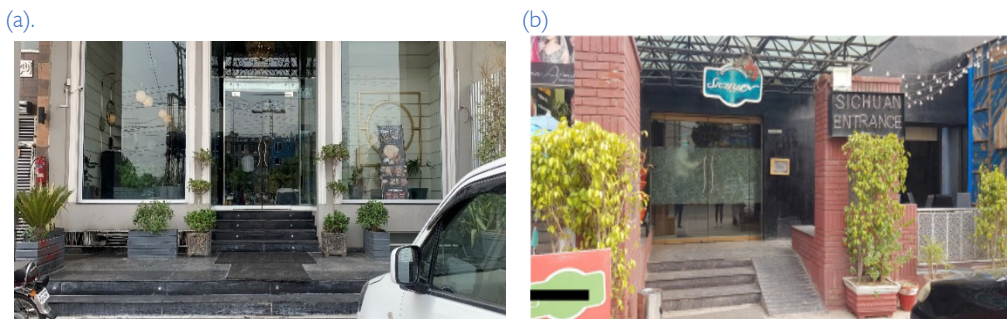
In the assessment of over 80 restaurants for inclusivity, it was found that the most fundamental accessibility feature ramp was absent Fig 12 (a). Even more disconcerting is the observation that among the restaurants that have taken the positive step of installing ramps, a portion of them has failed to include handrails Fig 12(b). This oversight renders the ramps impractical and, in some cases, poses a potential safety hazard. Handrails are essential components of an inclusive infrastructure, providing crucial support and stability for individuals with

varying mobility needs. The absence of either ramps or handrails in certain restaurants not only raises serious concerns about adherence to accessibility standards but also underscores the urgent need for a comprehensive reevaluation and improvement of these public spaces to ensure they are truly inclusive and accommodating for all people.

Fig 12. Shows several samples of restaurants that have not provided ramps or handrails. Without these essential accessibility features, the access of disabled persons to these spaces is compromised.

Figure 12

(a) Butt Karahi: shows the absence of ramp. (b) Sichuan: shows the absence of Handrails on the ramps at entrances.



Circulation Space for Wheelchair

The circulation space within the restaurant is the scope of study here. After the assessment it was concluded that out of all the restaurants that were studied, only 3 had an ample space provided within the dining setting for the swift movement of the wheelchair but still could not fulfill the purpose because of different levels subjected within

the space that makes the space inaccessible for disabled posing a threat to their safety and others are too congested with narrow pathways that lead to important functional spaces such as restroom which makes them inaccessible for wheelchair users as shown in (Fig 13 a, b).

Figure 13

(a) Yum Chinese and Thai (b) Amavi : shows the internal setting of the restaurant



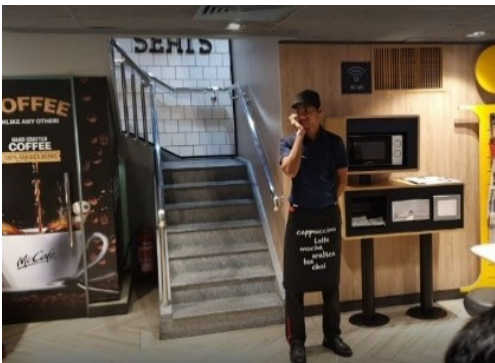
(a).



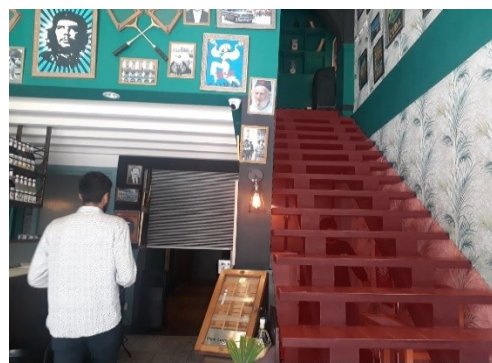
(b).

Figure 14

(a) Mcdonald's (b) Coco Cubano : shows the approach to dining spaces on 1st floor and absence of lifts



(a).



(b).

Addition to this predicament, there exists another category of restaurants that compounds the issue by entirely omitting dining facilities on the ground floor. The sole approach to these dining spaces is through staircases, and notably absent are provisions for lifts, thereby creating a complete segregation that disproportionately affects individuals with disabilities thus compromises the basic principle of universal accessibility for people with mobility challenges. (Fig 14).

Toilets

There are almost no restaurants that have dedicated accessible toilets. The absence of any designated toilets for disabled individuals within the assessed 80+ restaurants underscores a critical deficiency in the design policies of these commercial spaces. The absence of accessible restroom facilities perpetuates a form of

exclusion that hinders the fundamental right of individuals with disabilities to navigate public settings comfortably.

The lavatory arrangement at Gourmet grill is a step raised above the ground level making it inapproachable for wheelchair users to navigate. There isn't enough room between the entrance and the privacy wall making it difficult to enter and circulate within the space (Fig 15a). The sink present in the restroom is not suitable for a wheelchair user as it is higher than the standard dimensions allocated while the circulation space is also very congested (Fig 15b). The space between the sink and toilet is extremely narrow so there is no possibility for wheelchair user to utilise this space (Fig 15c). The entrance to the space is too narrow as the dimensions of the door are 2'6" which is not accessible by a wheelchair.(Fig 15 d).

Figure 15

(a) Salt and pepper village (b) Mcdonald's (c) Second Cup (d) 1st street pizza



(a).



(b).



(c).



(d).

There are also some cases in which the toilets are located on the 1st floor without any circulation provided through lifts, these spaces are not serviceable for people with disabilities and the elderly.

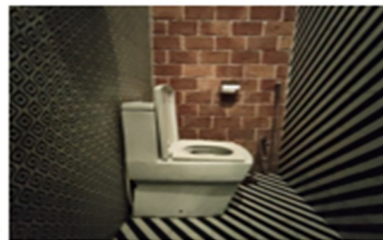
Despite the large sized restroom areas within the toilets there is still lack of provision of important fixtures example handrails are set with no proportionate height for use by all. (Fig 16 a,b) shows this restroom which is located on first floor that is only accessible by a narrow staircase and has a congested entrance and space.

Figure 16

(a) Urban Kitchen (b) the burning Giraffe: Toilets on 1st Floor



(a)



(b)

Emergency Exits

The assessment of all the restaurants reveals a critical safety concern, as only two restaurants have designated emergency exits. Even more alarming is the fact that these exits, while existing, present formidable obstacles for disabled individuals. The passageways leading to these emergency exits are noticeably narrow, creating a

significant impediment for those with mobility challenges. Furthermore, the emergency doors themselves are heavy and require a considerable amount of force to operate, posing a substantial difficulty for people with disabilities in the event of an evacuation. Fig. 17(a) and (b) shows the two restaurants that have provided emergency exits. The signage is provided to make wayfinding easier for all users.

Figure 17

(a) patakha boti (b) Forks and Knives: toilets on 1st floor



(a).



(b).

Overview of the Study

The results of the research show that the implementation of the inclusive design principles of each restaurant is extremely low. This raises serious concerns regarding the

built infrastructure of Lahore and the need for policies that can provide necessary provisions for disabled people within public settings. Out of 81 restaurants the total compliance of each of the attributes of the survey carried out is as follows:

Table 6

Total number of restaurants that implemented each of the design attributes

Design attributes	Parking	Ramps	Tactile	Signage	Handrails on entrance	Circulation space for wheelchair	Toilets	Emergency exit
No. of restaurants that implemented the attributes.								

Conclusion

The findings unambiguously demonstrate the dismal reality of a non-inclusive environment in Lahore

restaurants. The compliance results for the inclusivity evaluation tool demonstrate a notable lack of alignment with users' different demands, notably those of people

with disabilities (PWDs). None of the restaurants assessed lacked compliance with any local or international disability inclusion standards. A few restaurants have accessibility features but they are not sufficient and various other design components must be introduced or modified to make the spaces more inclusive.

Recommendations

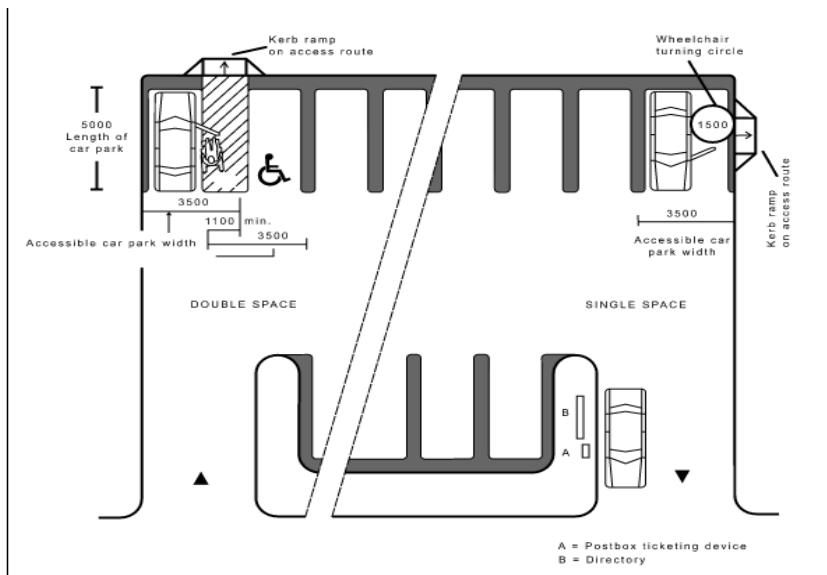
Based on the lacking's and findings drawn the following recommendations by *ADA (Standards for Accessible Design)* have been compiled in the form of graphical representations for future use in the context of inclusive design. (Fig: 10)

Parking

Parking spaces for people with disabilities must be positioned on an accessible approach to a building and as close as feasible to the accessible entrance or lift to the building or institution. Car parking spots at 90° to the walkway must be at least 3500 mm (11'-6") wide. The planned parking spot length must be at least 5000 mm (16'-6"). For vehicles that run a rear-mounted hoist, an additional 1000(3'-3") - 1300(4'-6") mm is needed. (Fig 18).

Figure 18

Accessible Parking Spot with Signage



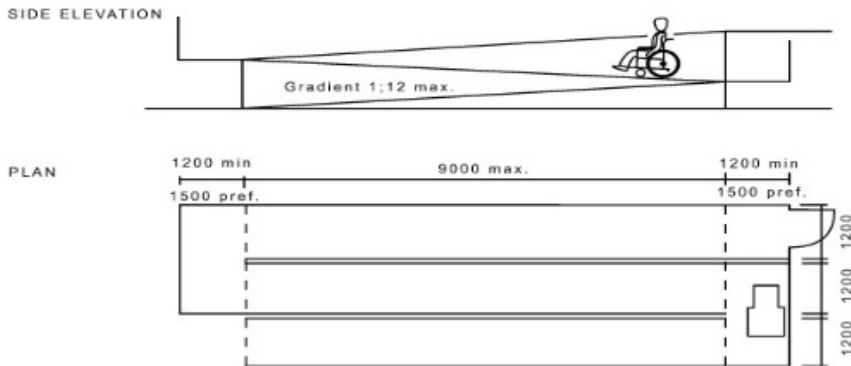
Ramps

The accessibility to a ramp must be level, with adequate visibility and wheelchair turning space. A ramp that is not a curb or step ramp has a maximum slope of 1 in 12.

Transitions from one slope to another, such as at the base and top of ramps, must be marked with visible, textural, and, ideally, aural contrast. The tread width of a ramp shall be not less than 1200 mm (3'-9") (Fig 19)

Figure 19

Plan and Side Elevation of Ramp



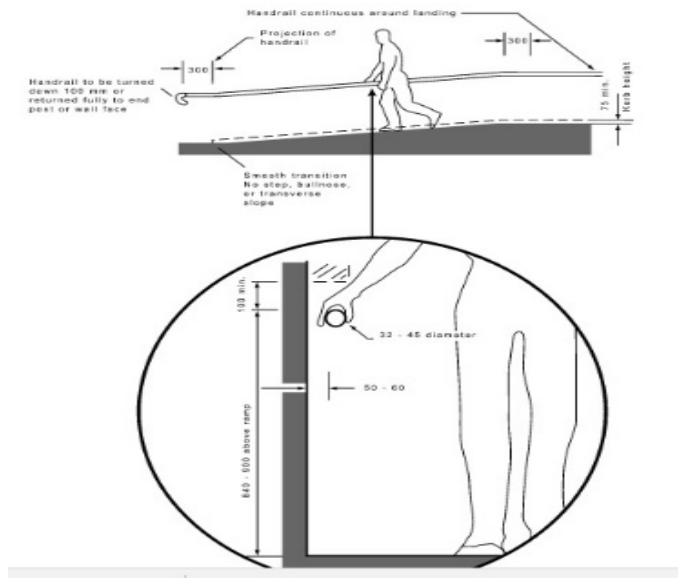
Handrails

Handrails at a height of 840 mm (2'-7")-900 mm (2'-9") must be installed on both sides of the ramp. Upstands or

edge rails may also be used. Additionally, a safety rail must be installed to prevent the user from falling under the railing. (Fig 20).

Figure 20

Handrail Dimensions



Toilet Handrails with Commode and WC Heights

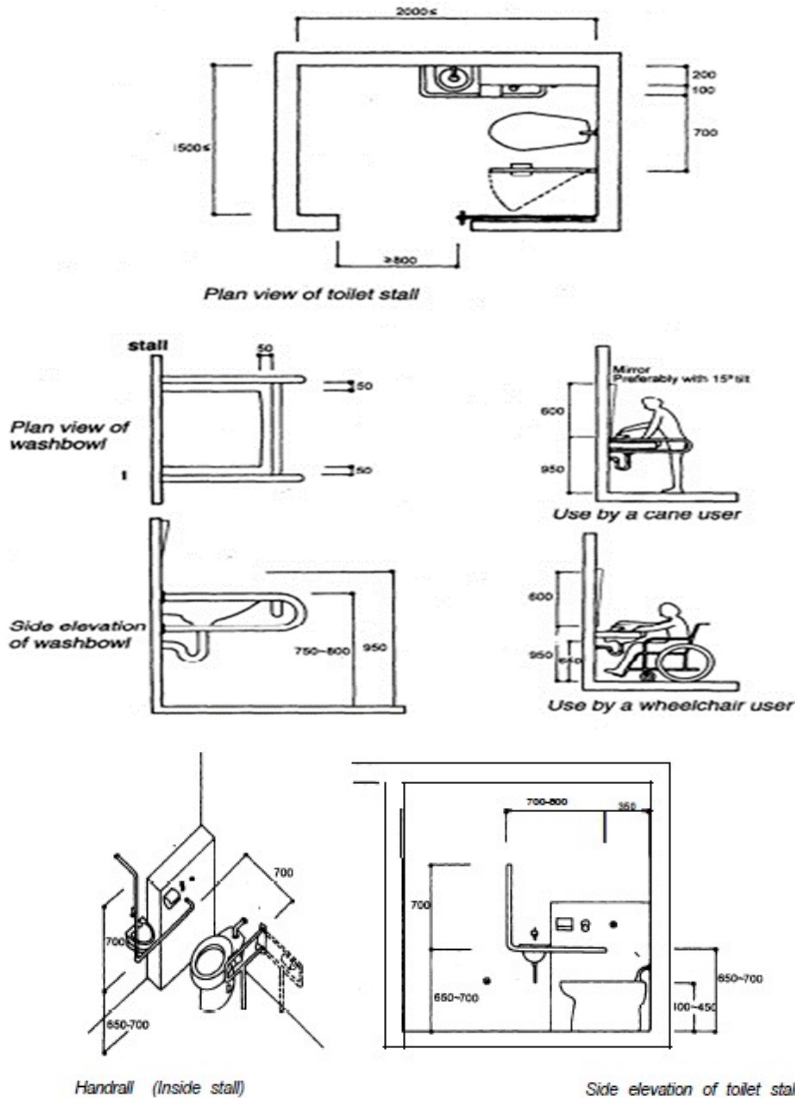
The minimum size shall be 4'9" x 5'7". The minimum clear opening for the door should be 2'9". and the door

will swing out. The toilet must have an appropriate configuration of vertical/horizontal handrails with a

clearance of 1.9" from the wall. The W.C. seat should be 1'6" above the floor. Fig 21(a), (b).

Figure 21 (a)(b)

Toilet Handrails with Commode and WC heights



**Wheelchair
Space Allowance and Turning Radius**

Dimensions for the space allowance shown in the

figure below are (1200mm = 4ft), (900mm = 3ft), (1600-2000mm = 5 to 6ft), (1300mm = 4.2ft), (380mm = 1.2ft). Fig 22.

Figure 22

Wheelchair Space Allowance and Turning Radius

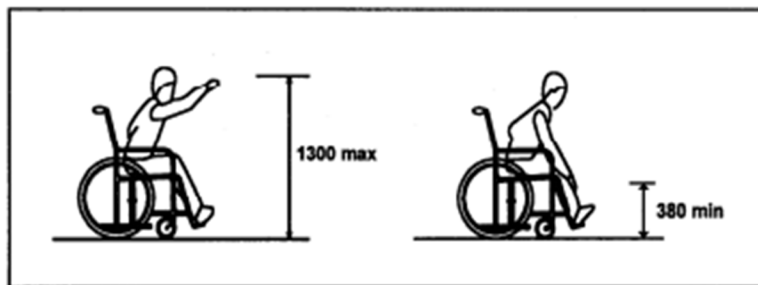
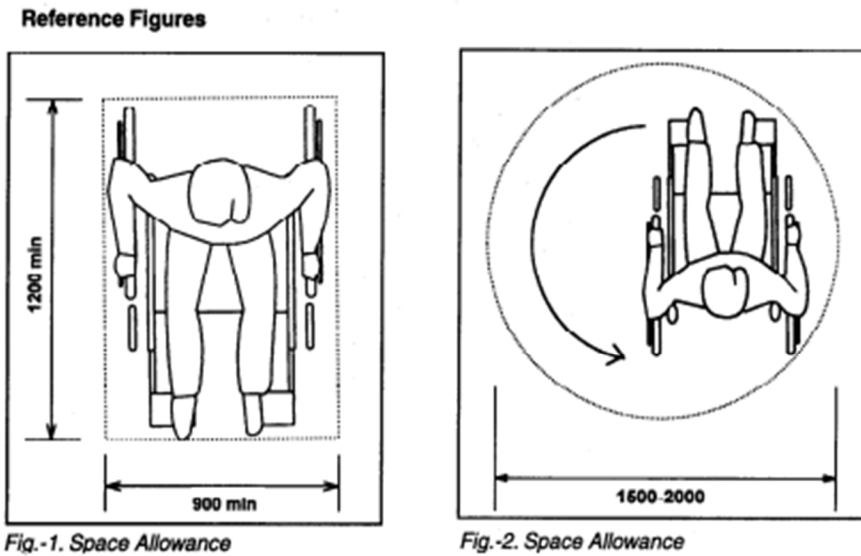


Fig.-3. Forward reach without obstruction

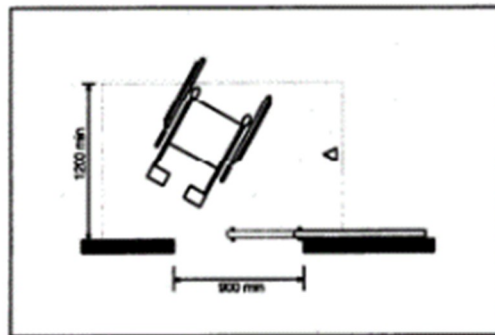
Entrance and Exit Door

Each entrance to a workplace should be accessible. Check if the dimension of the circulation pathways is

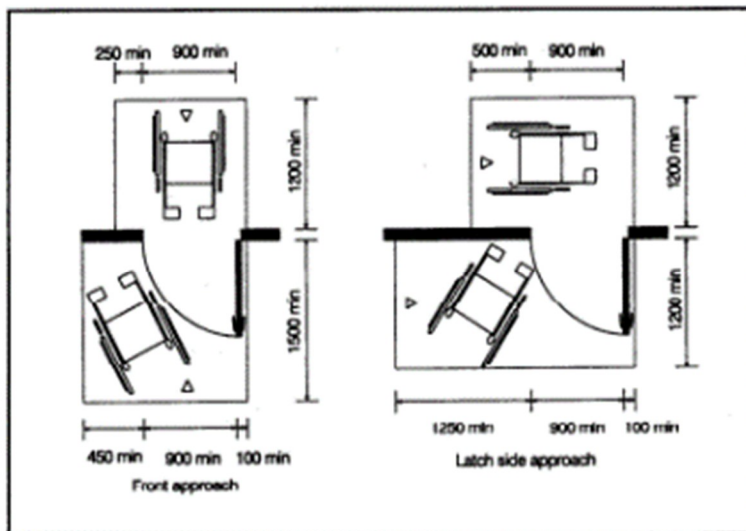
suitable. It should also guarantee that circulation pathways are clear of impediments, well-marked, and sufficiently secured. (Fig 23).

Figure 23

Sliding doors and doorways (1200mm = 4ft, 250mm = 0.82ft, 900mm = 3ft, 1500mm = 5ft, 450mm = 1.48ft, 100mm = 0.33ft, 500mm = 1.64ft)



Sliding door



Doorways

Signages

Every aspect of signages should be present in the internal and external environment of the building for improved way finding. Signs must be in contrasting colours and preferably engraved in prominent relief so that visually

impaired people may get the information they carry through touch for example, Green indicates safety or go; yellow or amber indicate risk or caution; while red indicates danger. Entrance should be clearly identified using international symbols of accessibility. (Fig 24).

Figure 24

Signage for Entrance and Parking



(a).



(b).

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