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RESEARCH PAPER

Accessibility Requirements for External Environment, Internal Environment, Building Accessibility and Emergency Egress Specifically for PWDs

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ABSTRACT

The current study aims to determine if government organizations in two Baluchistan cities were constructed in accordance with the approved building accessibility code, 2006, given the dearth of research on building accessibility for persons with disabilities (PWDs). A significant percentage of the population is made up of people with impairments, which hinders their ability to move around and utilize their surroundings. Until these people are able to move around and use their surroundings, full participation and equality cannot be attained. The current study is objective and is based on positivism approach. Data for this quantitative study, data was gathered using physical observation chechlist from 53 government organizations. The data was collected between July 2024–March 2025. Data analysis was done using Excel software. People with disabilities (PWDs) can access only 31% of government organizations overall. Approximately two-thirds of public institutions are inaccessible to people with disabilities due to inadequate infrastructure and services. Funding for projects pertaining to accessibility should be increased by the federal and provincial governments. Additionally, teaching key institutions on universal design principles is crucial for successful implementation of accessibility code.

KEYWORDS Accessible Buildings, Accessibility Code of Pakistan 2006, PWDs. UNCRPD

Introduction

A sizeable portion of the population is persons with disabilities in some way, which makes it difficult for them to move around in their environment. The goal of full participation and equality cannot be achieved until these individuals are able to move around and use their surroundings. Previously, The Disabled Persons (Employment and Rehabilitation) Ordinance, 1981, was the sole significant piece of law in Pakistan that protected the legal rights of Persons with disabilities. According to the disabled persons Ordinance of 1981the term 'Disabled Person' has been defined as a person who, on account of injury, disease or congenital deformity, is handicapped for undertaking any gainful profession or employment in order to earn his livelihood and includes a person who is blind, deaf, physically, handicapped or mentally retarded. The disability has been classified into five types: (i) loss of hand and foot or loss of use of two or more limbs; (ii) total loss of eye sight; (iii) total loss of speech; (iv) total deafness both ears; (v) paraplegia or hemiplegia (UN Convention on the Rights of Persons with Disabilities, 2020)". Under this ordinance, the National Council and Provincial Council were established to formulate policies for the employment, rehabilitation, and welfare of persons with disabilities in Pakistan. Furthermore, a one per cent quota was allocated to the employment of Persons with disabilities in public and private organizations, which was then later increased to two per cent (Ayub, 2022; Disabled Persons, 1981).

In order to properly implement statutory regulations, a National Policy for PWDs was presented in 2002. Through inclusive mainstreaming and full government backing, the goal of this program was to create an environment by 2025 that would enable PWDs to reach their full potential. (Ahmed & Khan, 2011). Following that, the "National Plan of Action for Persons with Disabilities, 2006" established a number of short- and long-term goals that were to be accomplished by the end of June 2009 and July 2025, respectively (UN Convention on the Rights of Persons with Disabilities, 2020)

Alongside that Pakistan, on September 25, 2008, signed the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD), which it ratified on July 5, 2011 (UN Convention on the Rights of Persons with Disabilities, 2020). According to UNCRPD disability results from the interaction between persons with impairments and attitudinal and environmental barriers that hinders their full and effective participation in society on an equal basis with others- (UNCRPD). Since the ratification of UNCRPD by government of Pakistan in 2011, all provinces have created provincial disability acts in accordance with the UNCRPD's tenets to safeguard the rights of Persons with disabilities. These acts include: The Baluchistan persons with disability Act 2017, Sindh Empowerment of persons with disability Act 2018, KPK rights, rehabilitation, accessibility & empowerment of people with disabilities (Amendment) Bill 2012 was enacted in 2018, The Gilgit-Baltistan persons with disabilities Act 2019, The ICT rights of persons with disability Act 2020, Punjab empowerment of persons with disabilities Act, 2022 (Laws and Regulations, n.d.).

From a theoretical standpoint, education has been the focus of a significant amount of research, especially in Pakistan's Punjab area.A crucial component of the research has been largely overlooked that how accessible different public buildings are for persons with disabilities. A crucial first step in allowing PWDs to fully engage in educational and professional settings is making sure that buildings are physically accessible. Promoting the inclusion and enrolment of persons with disabilities in schools, colleges, universities and technical centers is difficult without this essential infrastructure modification. Accessibility is more than just compliance if we have to foster an inclusive society where everyone has an equal opportunity to learn, work, and thrive. As accessibility is a basic requirement for guaranteeing the full participation and integration of people with disabilities in all facets of life.

Literature Review

Accessibility can be described in accordance with the UNCRPD's definition of accessibility as “To enable persons with disabilities to live independently and participate fully in all aspects of life, States Parties shall take appropriate measures to ensure to persons with disabilities access, on an equal basis with others, to the physical environment, to transportation, to information and communications, including information and communications technologies and systems, and to other facilities and services open or provided to the public, both in urban and in rural areas. These measures, which shall include the identification and elimination of obstacles and barriers to accessibility, shall apply to, inter alia:

a) Buildings, roads, transportation and other indoor and outdoor facilities, including schools, housing, medical facilities and workplaces;

b) Information, communications and other services, including electronic services and emergency services.

States Parties shall also take appropriate measures:

c) To develop, promulgate and monitor the implementation of minimum standards and guidelines for the accessibility of facilities and services open or provided to the public;

d) To ensure that private entities that offer facilities and services which are open or provided to the public take into account all aspects of accessibility for persons with disabilities".

A survey of the literature indicates that a significant amount of study has been conducted on the subject of education. For instance, in 2020, Hussain et al. (2020) investigated the hurdles confronted by disabled learners at universities of Khyber Pakhtunkhwa (KP) Pakistan. Then, in 2021, a study on inclusive education was conducted, focusing on colleges in Punjab Ayub (2022). In 2021, schools in three Pakistani provinces aside from Baluchistan were the focus of another study on inclusive education (Upadhayay&Kakar, 2024). Then, in 2022, another study was conducted in rural schools in Punjab (Malik et al., 2022).In 2022, Hussain et al. (2022) study explored the accessibility hurdles in inclusive education of visually challenged students at university level in Lahore Pakistan and revealed the inaccessible campus buildings as one of the barrier in inclusive education. Then, in 2023, a further research was carried out that focused on the many programs and advantages provided to PWDs under the BISP (Khalıd &Yaseen, 2023). Similarly, in 2023, a further research was carried out that focused on issues related to children's education (Shaukat, 2023). Then, in 2023, a systematic review was carried out, and the results showed that 80% of the research is done in the setting of Punjab, which is the sole province in Pakistan. Very few researches are carried out in relation to other Pakistani provinces. The review makes it clear that three of the thirty chosen research studies or 10% of the total are carried out in the Karachi metropolitan area. Just one study or 3% of all studies is carried out in the context of Baluchistan and Khyber Pakhtunkhwa (Kamran &Bano, 2023).

In 2013, Ahmad (2013) conducted a research on accessibility of healthcare for PWDs southern Punjab and found the accessibility was poor. In 2022, Rehman et al, (2022) conducted study at 3 different government hospitals in Peshawar and concluded that there is no proper accessibility infrastructure for PWDs.

Given the paucity of research on building accessibility for persons with disabilities (PWDs), the current study intends to investigate whether government organizations in two cities of Baluchistan have been built in compliance with established building accessibility code, 2006.

Material and Methods

Nature

The current research is objective and is based on positivism approach. Additionally, it is a descriptive study since it focuses to examine the buildings' features in terms of accessibility for PWDs.

Population

The study's participants include the government organizations of Quetta and Lorail, two major cities of Baluchistan.

Sample Size and Technique

Participating in the study were fifty-three (53) governmental organizations (38 from Quetta and 15 from Loralai), which included teaching institutes, hospitals, various Public

facilitation offices, justice sector institutions, and media and communication offices. These institutions were carefully selected employing convenience sampling technique to ensure impartial representation of public service sectors.

Data Collection Method

A group of individuals with disabilities (PWDs) took an active role in the data collection process to guarantee that the evaluation of public institutions was comprehensive and based on real-life experiences. To guarantee ethical adherence and institutional collaboration, prior authorization for data collection was formally acquired from the appropriate authorities. The eight-months data gathering period, which ran from July 2024 to March 2025, gave ample opportunity to carry out in-depth evaluations across various geographical areas.

Leveraging their personal experiences, the assessors were particularly adept at recognizing a wide variety of barriers—some obvious, like the lack of ramps or elevators, and others less apparent, such as inadequate signage, cramped pathways, or insufficient customer support for individuals with sensory or cognitive disabilities. These are factors that evaluators without disabilities might easily miss or undervalue. Their direct experiences provided a much richer and more precise understanding of the actual difficulties encountered by PWDs in accessing public spaces.

In addition, engaging PWDs in this evaluation process promoted a sense of ownership and empowerment within the community. It affirmed their expertise and recognized their lived experiences as crucial sources of insight. This not only strengthened the validity and relevance of the findings but also fostered trust between the evaluation team and the communities under assessment.

Results and Discussion

Tables below shows the result of data collected form fifty three (53) governmental organizations categorized as teaching institutes, hospitals, public facilitation offices, justice sector institutions, and media and communication regarding accessibility of buildings for PWDs.

Table 1
Accessibility of Teaching Institutes for PWDs

	Criteria for assessing External Environment	**%**
Ex1	Ramped Approach	50
Ex2	Handrails	18
Ex3	Pedestrian Crossings	54
Ex4	Vehicular Parking	14
Ex5	Parking Space Dimensions	32
Ex6	Signage	7
	Average	**29**
	Criteria for assessing Internal Environment	
In1	Accessible Route	45
In2	Entrances to Buildings	70
In3	Vertical Movement	20
In4	Lighting and Illumination	61
In5	Signage	7
	Average	**41**
	Criteria for assessing Building Components	
Ab1	Toilet facilities	30
Ab2	Kitchen and Work Counters	17
Ab3	Assembly Seating	56
Ab4	Doors	86
Ab5	Handrails and Grab Bars	46
Ab6	Lifts	0

	Average	**39**
	Criteria for assessing Emergency Egress	
Em1	Alert Alarm	32
	Average	**32**
	Overall Accessibility of Teaching Institutes	**35**

Table above shows the result of data collected from teaching institutes regarding accessibility of buildings for PWDs.

Initially, the external environment was assessed, revealing that 50 % of the institutes have ramps, only 18% of them provide handrails, and 54 % have pedestrian crossing. Whereas 14% have designated parking, 32% adhere to accessibility standards, and 7% have signage for disabled individuals. Overall, only 29% of government buildings are considered accessible, emphasizing the need for improved accessibility infrastructure. These findings underscore the pressing need for educational institutions to enhance their external accessibility infrastructure.

Secondly, the research evaluated five accessibility components in the internal environment of educational institutions. It found that 45% of organizations provide accessible route, 70% offer accessible entrances, but only 20% allow vertical movement. Visibility has improved as 61% of the institutes have illumination featires, but only 7% feature suitable signage for disabled individuals. In summary, 41% of the educational institutions are accessible concerning the internal environment.

The third phase of the assessment revealed a somehow satisfactory findings in terms of building accessibility features, with 30% of organizations having toilet facilities for disabled individuals. 17% having kitchen facility, 56% offering accessible seating arrangements, 86% featuring better access doors, and 46% featuring handrails, however no organization provided lifts for vertical mobility. Overall, 39% teaching institutes are accessible in terms of building components environment.

The final part of the assessment focused on emergency egress through a single key indicator. The results revealed that only 32 percent of organizations had accessible emergency exits. This finding significantly raises concerns about the ability of most educational institutions to ensure safety and preparedness for individuals with disabilities during emergencies

Conclusively, at present, only 35% of educational institutions are accessible to accommodate persons with disabilities (PWDs). This figure highlights a significant absence of inclusive facilities within the education sector, making it challenging for individuals with disabilities to obtain quality education on par with their peers. In spite of multiple policy initiatives and legal frameworks designed to encourage inclusivity, a large number of educational establishments continue to fall short of essential accessibility standards, including ramps, accessible restrooms, elevators, and adaptive learning materials. This deficiency not only restricts educational prospects for PWDs but also impedes their complete involvement in both academic and professional spheres.

Table 2
Accessibility of Hospitals for PWDs

	Criteria for assessing External Environment	**%**
Ex1	Ramped Approach	81
Ex2	Handrails	44
Ex3	Pedestrian Crossings	56
Ex4	Vehicular Parking	13
Ex5	Parking Space Dimensions	31
Ex6	Signage	0
	Average	**38**
	Criteria for assessing Internal Environment	
In1	Accessible Route	59

In2	Entrances to Buildings	77
In3	Vertical Movement	40
In4	Lighting and Illumination	81
In5	Signage	13
	Average	**54**
	Criteria for assessing Building Components	
Ab1	Toilet facilities	16
Ab2	Kitchen and Work Counters	46
Ab3	Assembly Seating	78
Ab4	Doors	100
Ab5	Handrails and Grab Bars	38
Ab6	Lifts	38
	Average	**52**
	Criteria for assessing Emergency Egress	
Em1	Alert Alarm	38
	Average	**38**
	Overall Accessibility of Hospitals	**46**

Table above shows the result of data collected from hospitals regarding accessibility of buildings for PWDs.

Initially, an assessment of the external environment was conducted, showing that 81% of the hospitals feature ramps, 44% offer handrails, and 56% have pedestrian crossings. However, only 13% have designated parking, 31% comply with accessibility standards, and no hospital provides signage for individuals with disabilities. In total, merely 38% of hospitals can be classified as accessible, highlighting the urgent need for improvements in accessibility infrastructure. These results emphasize the critical necessity for hospitals to upgrade their external accessibility infrastructure (see Table 2).

Secondly, the research assessed five aspects of accessibility within hospital internal environment. It revealed that 59% of hospitals have accessible pathways, 77% provide accessible entryways, and 40% facilitate vertical mobility. While visibility has enhanced, with 81% of hospitals equipped with lighting features, merely 13% include appropriate signage for people with disabilities. In conclusion, 54% of the hospitals are accessible regarding the internal environment (see Table 2).

The third part of the evaluation highlighted the accessibility features of the buildings, indicating that 16% of hospitals provide toilet facilities for individuals with disabilities. Additionally, 46% have kitchen facilities, 78% offer accessible seating arrangements, and all hospitals have doors designed for better accessibility. Moreover, 38% include handrails and lift facilities to aid vertical mobility. Overall, 52% of hospitals are deemed accessible regarding the components of the building environment. The concluding section of the evaluation concentrated on emergency evacuation using a sole key metric. The findings indicated that merely 38 percent of the hospitals possessed emergency exits that were accessible. This outcome greatly heightens worries regarding the capacity of the majority of hospitals to guarantee safety and readiness for people with disabilities during emergencies. Currently, just 46% of hospitals are accessible for persons with disabilities (PWDs). This statistic highlights a major gap in the healthcare system, showing that over half of medical facilities are not adequately equipped to meet the needs of individuals with disabilities. The absence of inclusive design restricts access to vital health services for PWDs and raises significant issues regarding equity and the realization of fundamental human rights. Making hospitals entirely accessible is an essential measure toward creating a more equitable and inclusive healthcare system.

Table 3
Accessibility of Public Facilitation Offices for PWDs

	Criteria for assessing External Environment	**%**
Ex1	Ramped Approach	10
Ex2	Handrails	10
Ex3	Pedestrian Crossings	48

Ex4	Vehicular Parking	12
Ex5	Parking Space Dimensions	15
Ex6	Signage	3
	Average	**16**
	Criteria for assessing Internal Environment	
In1	Accessible Route	29
In2	Entrances to Buildings	52
In3	Vertical Movement	16
In4	Lighting and Illumination	53
In5	Signage	5
	Average	**31**
	Criteria for assessing Building Components	
Ab1	Toilet facilities	14
Ab2	Kitchen and Work Counters	33
Ab3	Assembly Seating	60
Ab4	Doors	67
Ab5	Handrails and Grab Bars	30
Ab6	Lifts	2
	Average	**34**
	Criteria for assessing Emergency Egress	
Em1	Alert Alarm	13
	Average	**13**
	Overall Accessibility of Public Facilitation Offices	**24**

Table above shows the result of data collected from public facilitation offices accessibility of buildings for PWDs.

Initially, an evaluation of the external environment revealed that only 10% of the offices include ramps and handrails, while 48% feature pedestrian crossings. Additionally, merely 12% have designated parking spaces, 15% meet accessibility standards, and just 3% of offices provide signage for individuals with disabilities. Overall, only 16% of public facilitation offices can be considered accessible, underscoring the urgent necessity for enhancements in accessibility infrastructure. These findings highlight the essential need for public facilitation offices to improve their external accessibility infrastructure (see Table 3).

The research also evaluated five dimensions of accessibility in the internal environment of public facilitation offices. It found that 29% of offices offer accessible pathways, 52% have accessible entrances, and 16% support vertical movement. Although visibility has improved, with 53% of public facilitation offices having appropriate lighting, only 5% feature signage suitable for individuals with disabilities. In summary, just 31% of the public facilitation offices are accessible concerning the internal environment (see Table 3).

The third part of the assessment underscored the accessibility features of the buildings, revealing that 14% of public facilitation offices offer toilet facilities for individuals with disabilities. Furthermore, 33% have kitchen amenities, 60% provide accessible seating options, and 67% of public facilitation offices feature doors designed to enhance accessibility. In addition, 30% include handrails and 34% are equipped with lift facilities to assist with vertical movement. Overall, 34% of public facilitation offices are considered accessible in terms of building environment components.

The final part of the evaluation focused on emergency evacuation, utilizing a single key measure. The results revealed that only 13 percent of public facilitation offices had accessible emergency exits. This result significantly amplifies concerns about the ability of most public facilitation offices to ensure safety and preparedness for individuals with disabilities in emergency situations.

People with disabilities (PWDs) can access only 24% of public facilitation offices overall. This figure reveals a significant disparity in the architecture of public services and government in terms of inclusion. Crucial accessibility facilities including ramps, elevators,

accessible restrooms, tactile signage, and personnel trained to help people with different disabilities are absent from more than half of these locations. Because of this, a lot of people with disabilities have a hard time getting basic public services, which might affect their capacity to get official documents, get social benefits, or fully engage in civic life. In order to guarantee equal rights, encourage independence, and preserve the values of inclusivity and nondiscrimination in public administration, these obstacles must be removed.

Table 4
Accessibility of Justice Sector Institutions for PWDs

	Criteria for assessing External Environment	**%**
Ex1	Ramped Approach	50
Ex2	Handrails	6
Ex3	Pedestrian Crossings	75
Ex4	Vehicular Parking	6
Ex5	Parking Space Dimensions	50
Ex6	Signage	0
	Average	**31**
	Criteria for assessing Internal Environment	
In1	Accessible Route	31
In2	Entrances to Buildings	79
In3	Vertical Movement	28
In4	Lighting and Illumination	100
In5	Signage	0
	Average	**47**
	Criteria for assessing Building Components	
Ab1	Toilet facilities	16
Ab2	Kitchen and Work Counters	34
Ab3	Assembly Seating	48
Ab4	Doors	61
Ab5	Handrails and Grab Bars	67
Ab6	Lifts	35
	Average	**42**
	Criteria for assessing Emergency Egress	
Em1	Alert Alarm	50
	Average	**50**
	Overall Accessibility of Justice Sector Institutions	**43**

Table above shows the result of data collected from justice sector institutions accessibility of buildings for PWDs.

According to the first part of assessment regarding external environment, 75% of the offices have pedestrian crossings, but only 50% have ramps and 6% have handrails. Furthermore, only 6% of parking spots are reserved, 50% of them adhere to accessibility guidelines, and no institution has signage for people with disabilities. The fact that only 31% of justice sector institutions are accessible ,highlights how crucial it is for organizations in the justice sector to upgrade their infrastructure for external accessibility.

Additionally, the study assessed five aspects of accessibility in the internal setting of organizations in the justice sector. According to the study, 31% provide accessible walkways , 79% have accessible entrances, and 28% of facilities in the justice sector facilitate vertical movement. Even while visibility has increased and all justice sector institutions have adequate lighting, none of them have signage that is accessible to people with impairments. In conclusion, 47% of the institutions in the judicial sector are reachable in terms of the internal environment.

According to the third phase of the study, which focused on the buildings' accessible characteristics, 16% of institutions in the justice system provide toilets for people with impairments. Additionally, 34% have kitchen services, 48% of institutions in the justice sector offer accessible seating alternatives, 61% have doors that improve accessibility. Furthermore, to help with vertical mobility, 35% have lift facilities and 67% have handrails.

In terms of built environment components, 42% of judicial sector facilities are deemed accessible overall.

Using a single key criterion, the evaluation's final section concentrated on emergency evacuation. According to the findings, accessible emergency exits were present in 50% of the institutions in the justice system. This finding greatly heightens worries regarding the majority of justice sector organizations' capacity to guarantee the security and readiness of people with disabilities in emergency scenarios.

In total, only 43% of institutions within the justice sector are accessible to individuals with disabilities (PWDs). This suggests that over half of the facilities in the justice system do not have the necessary infrastructure to support individuals with disabilities. These obstacles impede PWDs from obtaining legal assistance, taking part in legal processes, and pursuing justice on equal terms with others. Guaranteeing complete accessibility within the justice sector is not only a legal obligation but also a critical element in safeguarding human rights, ensuring equality before the law, and upholding the principle of justice for everyone.

Table 5
Accessibility of Media and Communication Organizations for PWDs

	Criteria for assessing External Environment	**%**
Ex1	Ramped Approach	0
Ex2	Handrails	0
Ex3	Pedestrian Crossings	33
Ex4	Vehicular Parking	0
Ex5	Parking Space Dimensions	0
Ex6	Signage	0
	Average	**6**
	Criteria for assessing Internal Environment	
In1	Accessible Route	17
In2	Entrances to Buildings	10
In3	Vertical Movement	0
In4	Lighting and Illumination	50
In5	Signage	0
	Average	**15**
	Criteria for assessing Building Components	
Ab1	Toilet facilities	0
Ab2	Kitchen and Work Counters	22
Ab3	Assembly Seating	33
Ab4	Doors	0
Ab5	Handrails and Grab Bars	0
Ab6	Lifts	0
	Average	**9**
	Criteria for assessing Emergency Egress	
Em1	Alert Alarm	0
	Average	**0**
	Overall Accessibility of Media and Communication Organizations	**8**

Table above shows the result of data collected from media and communication organizations accessibility of buildings for PWDs.

As per the initial evaluation of the external environment, only 33 percent of the organizations have pedestrian crossings. However, in the other five categories, no organization has an accessible external environment. Only 6% of media and communication companies are accessible, which emphasizes how important it is for media and communication organizations to update their infrastructure to be externally accessible.

The study also evaluated five accessibility factors in the internal environment of media and communication organizations. The analysis found that only 17% of places have accessible paths. Only 10% of media and communication organizations have accessible

entrances, while none of them have any amenities that would allow for vertical mobility. Despite the fact that visibility has improved and that 50% of the media and communication organizations have enough lighting, while none of them have signage that is accessible to those with disabilities. In summary, 15% of the organizations are accessible in terms of their internal environment.

The final section of the study, which examined the accessible features of the buildings, found that none of the communication and media organizations have toilets for individuals with disabilities. Furthermore, just 33% of the organizations provide accessible sitting options, and only 22% have cooking services. In contrast, none of the media and communication organization have handrails, lifts, facility for vertical mobility, and doors for PWDs. Merely 9% of the media and communication organizations are considered accessible overall in terms of built environment elements.

The final portion of the examination focused on emergency evacuation using a single important criterion. The results showed that none of the media and communication organizations had accessible emergency exits. This finding significantly increases concerns about the ability of most media and communication organizations to ensure the safety and preparedness of individuals with disabilities in emergency situations.

Just 8% of media and communication organizations are accessible to people with disabilities (PWDs) in general. This incredibly low degree of accessibility is a result of PWDs being mostly excluded from mainstream news, entertainment, and information sources. Because of this, the great majority of people with disabilities have difficulty getting timely information and actively engaging in public conversation. Improving the accessibility of the media is crucial for empowering people with disabilities, safeguarding their right to knowledge, and advancing a more representative and equitable society since it has a significant influence on opinion formation and inclusivity.

Table 6
Accessibility of fifty three (53) Government Organizations for PWDs

	Criteria for assessing External Environment	**%**
Ex1	Ramped Approach	38
Ex2	Handrails	16
Ex3	Pedestrian Crossings	53
Ex4	Vehicular Parking	9
Ex5	Parking Space Dimensions	26
Ex6	Signage	02
	Average	**24**
	Criteria for assessing Internal Environment	
In1	Accessible Route	36
In2	Entrances to Buildings	58
In3	Vertical Movement	21
In4	Lighting and Illumination	69
In5	Signage	5
	Average	**38**
	Criteria for assessing Building Components	
Ab1	Toilet facilities	15
Ab2	Kitchen and Work Counters	30
Ab3	Assembly Seating	55
Ab4	Doors	63
Ab5	Handrails and Grab Bars	36
Ab6	Lifts	15
	Average	**35**
	Criteria for assessing Emergency Egress	
Em1	Alert Alarm	27
	Average	**27**
	Overall Accessibility of fifty three (53) Government Organizations	**31**

Table above shows the result of data collected form fifty three (53) governmental organizations regarding accessibility of buildings for PWDs.

First, the external environment was examined, with a focus on six essential accessibility elements. The findings pointed to a number of issues. As 38% of the organizations have suitable ramp facilities, while only 16% of the organizations have handrails to assist people with mobility issues. Likewise, 53% of the organizations have pedestrian crossings, but only 9% of the sites have designated parking for people with impairments. Furthermore, just 26 percent of the organizations met the guidelines for accessible parking spot dimensions. Lastly, only 2% of the organizations have signage to help people with impairments, making it the least implemented feature. Overall, only 24% of the government buildings are accessible in terms of external environment.These results highlight the urgent need for public institutions to upgrade their external accessible infrastructure.

The second category of the study which focused on five accessibility elements of internal environment was accessed. The results revealed that 36% of organizations have accessible routes making it easier for people with impairments to move around. The prevalence of accessible entrances was higher, with 58% of the buildings having them. However, just 21% of the structures could enable vertical movement, like lifts, which indicates absence of multi-level access.Positively, visibility is improved by the fact that 69% of the organizations have properly implemented lighting and illumination standards. Despite these initiatives, just 5% of organizations have accessible and suitable signs for people with disabilities, indicating that signage implementation is still extremely low. Overall, 38% of the government buildings are accessible in terms of internal environment.

Thirdly, six essential components were used to evaluate accessible building components in the third phase of the assessment. The results showed a substantial gap in basic sanitary accessibility, with just 15% of the organizations having toilet facility designed for people with impairments. The inclusivity of shared work and service facilities is limited because only 30% of the organizations have accessible kitchens and work counters. Positively, 55% of the organizations provided accessible seating areas, 63% had doors that were designed to make access easier, and 36% of the facilities had handrails in areas that were relevant. However, lifts were still scarce, with only 15% of organizations offering this essential feature for vertical mobility. Overall, 35% government buildings are accessible in terms of building components environment.

The assessment's last component examined emergency egress using a single crucial indication. According to the findings, only 27 percent of the organizations had emergency exits that were accessible. The majority of public institutions' safety and readiness to accommodate people with disabilities in emergency situations are seriously called into question by this conclusion.

Among different types of organizations—such as educational institutions, healthcare facilities, justice system entities, public service offices, and media and communication organizations—hospitals were identified as the most accessible for persons with disabilities (PWDs), with 46% meeting fundamental accessibility criteria. Following hospitals, justice sector entities had 43% reported as accessible. In comparison, only 35% of educational institutions and 24% of public service offices were found to be accessible to PWDs. Media and communication organizations fared the worst, with only 8% of their facilities meeting accessibility standards. These statistics reveal considerable differences between sectors and underline the critical need for targeted efforts to enhance inclusivity and equal access, especially in public services and information sectors.

Overall, four main categories—the external environment, the interior environment, building components, and emergency egress—were used to evaluate the accessibility needs

across the 53 organizations. Based on the aggregated results, the responses to the research questions are as follows:

- 25% of government buildings are accessible in terms of external environment.
- 39% of government buildings are accessible in terms of internal environment.
- 38% of government buildings are accessible in terms of building components environment.
- 26% of government buildings are accessible in terms of emergency egress.
- Overall, 31% of government organizations are accessible to people with disabilities (PWDs).

Findings of Amjad (2024) also highlighted that the primary issue facing individuals with disabilities is their ability to move around independently as both public and private sector facilities are not designed according to the requirements of PWDs. The lack of designated ramps and toilets makes it extremely difficult for people to move around freely in parks, marketplaces, and both public and private organizations. These findings of current study that is conducted in Baluchistan are also aligned with the results of Ayub (2022) and Upadhayay and Kakar (2024) which was conducted in teaching institutes of Punjab.

Undoubtedly, the government of Pakistan has demonstrated its commitment to recognizing the rights of individuals with disabilities by implementing relevant legislation and acts, including the National Policy for PWDs, which was presented in 2002, the accessibility code 2006, the ratification of the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) in 2011, and numerous provincial and federal acts. However, these legal documents have relatively minimal impact on the construction of accessible buildings. As despite the existence of necessary Acts and Building Codes, the two biggest cities in Baluchistan, Quetta and Loralai, do not have a single public building that is completely accessible and usable by PWDs. In addition to violating PWDs' rights, this pervasive non-compliance makes it more difficult for them to freely get essential services including voting, healthcare, social protection, identity registration, and public information. Adopting and enforcing accessibility standards in physical infrastructure, conducting frequent accessibility audits, and involving people with disabilities in the planning and monitoring processes are all essential for a truly inclusive public service environment.

Conclusion

In all, just 31% of government organizations are accessible to people with disabilities (PWDs). Insufficient infrastructure and services make roughly two-thirds of public institutions inaccessible to those with disabilities. PWDs' ability to use government services, take part in public initiatives, and exercise their civic rights is severely limited by this accessibility issue. In order to promote equal participation, transparency, and social inclusion, as well as to uphold the universal design and non-discrimination principles specified in national policies and international human rights standards, it is imperative that government organizations be fully accessible.

Recommendations

Numerous policies and legislative frameworks exist on paper to support persons with disabilities, their impact remains limited due to weak implementation. As it’s not enough to pass the bill or act, the main issue is to make it practical or implement it as also highlighted by 6 although the policy’s aim of mainstreaming Persons with disabilities is significant, the lack of execution remains a major worry. It is essential to move beyond the

passage of bills and acts, and prioritize effective, on-ground execution to ensure these measures truly benefit the intended population.

The federal and provincial governments should increase funding for accessibility-related projects. Establish a Disability Inclusion Fund to support accessibility initiatives in public and private sectors.

Pakistan should effectively implement its commitments under the UN Convention on the Rights of Persons with Disabilities (CRPD) and align national policies with international standards.

For effective implementation, it is essential to provide training on universal design principles to key institutions. The Institute of Architects Pakistan (IAP), Pakistan Engineering Council (PEC), and universities offering programs in architecture and civil engineering should incorporate accessibility education into their curricula. Likewise, town planners, urban developers, and consultants should be required to attend compulsory workshops on accessibility standards.

To promote consistent application of infrastructure accessibility standards nationwide, federal and provincial governments should either mandate the use of the Accessibility Code of Pakistan or require the development and implementation of locally tailored accessibility standards within their respective jurisdictions.

The existing accessibility framework predominantly emphasizes physical infrastructure, offering only minimal attention to digital environments. To bridge this gap, federal and provincial bodies should require all government websites and digital public service platforms to fully comply with the Web Content Accessibility Guidelines (WCAG), ensuring inclusive access for persons with disabilities.

To ensure stronger adherence to accessibility standards, provincial legislatures should enhance the authority of existing institutional bodies established under disability rights laws. These bodies must be empowered to enforce compliance by requiring mandatory accessibility reports from building control authorities within their respective jurisdictions. The Provincial Council for the Rehabilitation of Disabled Persons, constituted under the Balochistan Persons with Disabilities Act, 2017, should be legally mandated to oversee implementation, conduct on-site inspections, and recommend appropriate penalties for any violations.

Accessibility Action Plan should be developed at the provincial level, complete with defined timelines and robust monitoring mechanisms. In parallel, local governments and urban development bodies such as Metropolitan Corporationshould appoint dedicated accessibility officers to ensure that public parks, markets, and other communal spaces meet accessibility standards.

Provincial institutions responsible for safeguarding the rights and entitlements of persons with disabilities should strengthen their coordination with municipal authorities and regulatory bodies to ensure more effective enforcement of accessibility standards in public infrastructure. The Provincial Council for the Rehabilitation of Disabled Persons, established under the Balochistan Persons with Disabilities Act, 2017, should take a proactive role in collaborating with the Pakistan Engineering Council (PEC) and the Council of Architects and Town Planners (CATP) to integrate international best practices on accessibility into building codes and planning guidelines. Furthermore, these institutions should engage closely with Pakistan Railways, the National Highway Authority (NHA), and provincial Planning & Development as well as Works & Services Departments to ensure road infrastructure is accessible. They should also partner with mass transit authorities in their

respective provinces to promote inclusive and accessible public transportation systems in urban areas.

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