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Building a Resilient Community for a Person with Disability through Integration of Accessibility Issues with DRR in Dhaka City

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INTRODUCTION & AIM

A PwD (Person with Disabilities) has the right to access any facility in society. Regrettably, they are overlooked in terms of access to infrastructure such as pedestrian pathways, vehicular circulation, and public buildings. As a disaster-prone country, Bangladesh frequently experiences natural and anthropogenic disasters. In Dhaka, disasters such as fires, earthquakes, waterlogging, and building collapses pose a significant threat to city residents. These events affect PwD much more adversely, and there is a significant barrier to the rescue, evacuation, and resettlement of PwD. Precedent research indicates that a disabled person has less priority in DRR because there is no integration between disability and disaster management issues, and there is no proper execution or monitoring of the existing legislation either. This study aims to explore the current situation of providing facilities for PwD during disasters, and how they should be provided with essential facilities to overcome the situation.

***Figure 1**: Towards inclusive disaster management for PwD in Dhaka*

METHOD

The methodology of this research includes these three core steps: a) analysis of the existing policy, rules, regulations, and guidelines regarding the accessibility of PwD in different infrastructures, b) analyzing the implementation of those policies and the present condition of PwD accessibility, especially in disaster events, and c) suggesting guidelines to include the issues of PwD in developing an efficient and inclusive disaster management policy in urban areas. By analyzing existing policies and good practices that consider disability in DRR, this research will provide firsthand evidence of the crucial role of PwD inclusion in holistic DRR interventions.

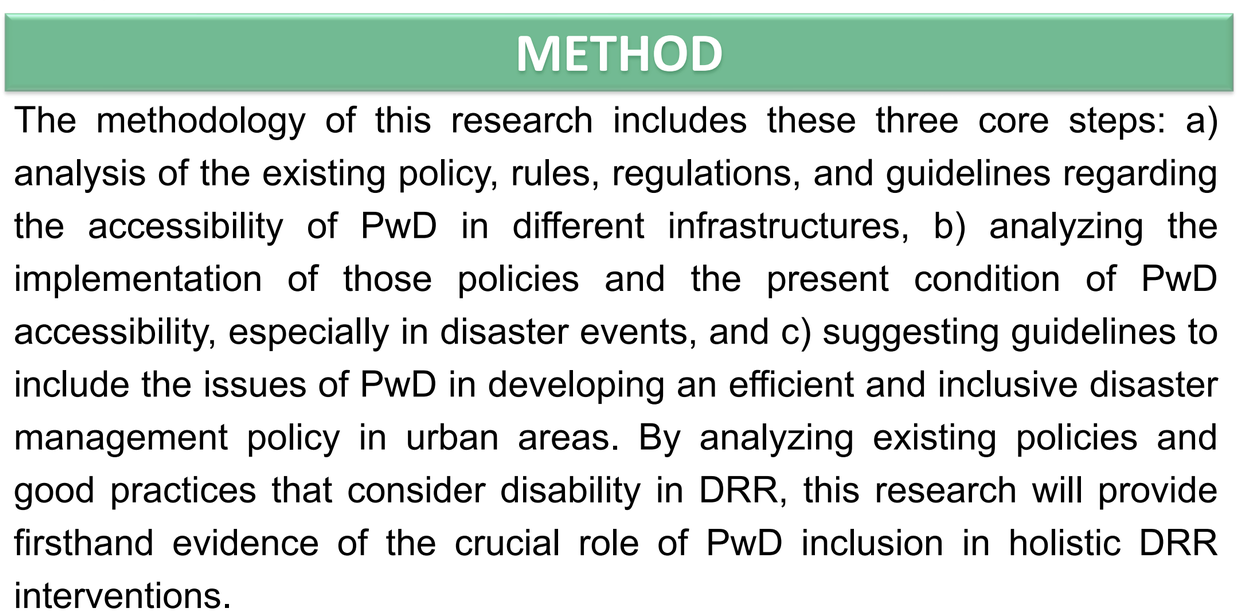

***Figure 2**: Sequential Research flow*

RESULTS & DISCUSSION

During an emergency, a continuous, unobstructed, and safe path is required through which occupants can safely exit from any point to a safe, open space. In Dhaka, most buildings don't provide the safe exit required for a PwD. The following table shows the findings from the physical survey and design analysis of buildings with different occupancies:

***Table 1:** Key factors & observations from physical survey*

Key Factors	Observations
Elevator	During disaster, passenger lift must be shut down, and people use stairs to escape, which a PwD cannot access because of their physical limitations. Only a few buildings have ramps. Few high-rise buildings have a fireman's lift that remains active during a fire hazard.
Visual Impairment	In most of the public buildings, there are no provisions for visually impaired persons to move independently.
Urban pedestrian layout	The pedestrians in Dhaka are not suitable for a PwD. The unevenly raised footpath with no slope and no curved ramp forms a barrier for PwD movement.

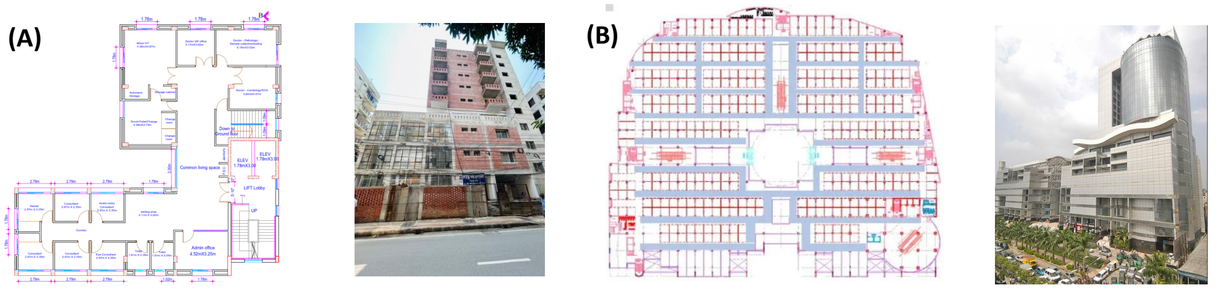

***Figure 3:** Gonoshasthaya Hospital (A) and Bashundhara Shopping Mall(B) with no provision of a safe exit in a disaster*

To improve accessibility for PwD, it is necessary to provide the components in the following table:

***Table 2:** Suggestions for improving accessibility for PwD*

Components	Description/Desired Standards
Safe exit system	1. Should be unobstructed for easy access by PwD 2. A properly designed ramp should be provided in all low-rise public buildings 3. A separate, isolated lift should be installed in a safe, accessible position - with alternate power supply.
Pedestrian	Well-accessible with proper slope and a curved ramp.
Building components	Textured floor & walls following proper standards so that a visually impaired person can move independently.

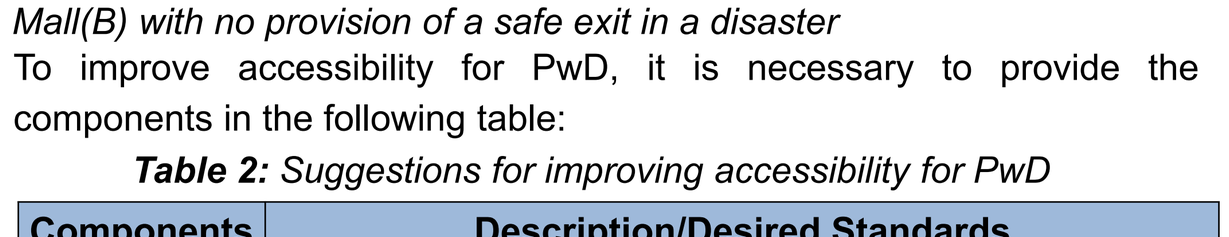

***Figure 4:** Good Practices: Ramp at Prism Shelter and a well-designed Pedestrian for PwD in Manhattan, NY.*

CONCLUSION

A 'Person with Disability' (PwD), as a part of our society, should be nurtured so they can be a resource. They should have the opportunity to move around safely. Accessibility in any public place is their right, not a favour. The government should have strong policies and implement it strictly to ensure accessibility for PwD. This research provides a strong evidential basis for future policy revision and inclusion of PwD considerations in Building Codes.

REFERENCES

Bangladesh National Building Code (BNBC),Imarat Nirman Bidhimala – 1996 & 2008, Pedestrian Ramps, Blended Transitions & Cut Throughs, https://www.nyc.gov/html/dot/html/home/home.shtml