

# Enhancing Accessibility in India: A Roadmap for Inclusive Development

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## ABSTRACT

India has initiated some reforms for disabled persons but it lags behind international standards. Especially in sports, India has talented players but no support. A brief survey of para-athletes and women para-athletes show that the situation is dismal. This article propounds that subpar governance mechanisms and inadequate funding hinders basic infrastructure provisions to para-athletes. By clearly articulating the governance policies, structures, budgets and regular monitoring, the quality of services provided to disabled persons can be improved. Supportive infrastructure is essential to support women para-athletes who face social stigma and often, multiple marginalities due to intersections of gender, race and economic status with disability. While weaving accessibility in the built environment, transportation and information and communication technology is indispensable, India will have to work on changing public perception towards disabled individuals through innovative features, communication, awareness, training programs, and partnerships with private initiatives to improve the lived experiences of this community. Designing gender-inclusive infrastructure, adaptive sports equipment for women para-athletes, supplemented by comprehensive health, education and employment benefits will boost participation of women with disabilities in sports. As Indian para-sports picks speed as a result of supportive policies, governance and infrastructure, it can bring recognition and subsequent opportunities to the disabled community as a whole. This publication aims to inform policymakers, organizations, and the public about the impending progress yet to be made in accessibility and inspire efforts to create more inclusive and equitable environments for all individuals, regardless of their abilities.

## Introduction

As a signatory to the UN Convention on the Rights of Persons with Disabilities (UNRPD), India has committed to ensuring equal access to persons with disabilities (PwD) to all public services, in both rural and urban areas. This includes physical changes to provide access but also supportive measures to inculcate inclusivity by influencing public sentiments towards people with diverse needs.

To realize this responsibility, under the Ministry of Social Justice and Empowerment, the Indian government launched the Sugamya Bharat Abhiyan (Accessible India Campaign) in 2015 as a nation-wide campaign with the aim of achieving universal accessibility for Persons with Disabilities (PwDs). The Accessibility India Campaign was founded and built upon the Accessibility Act. This campaign's objective was to create barrier-free experiences across three core pillars of accessibility implementation - the built environment, transportation systems, and the Information & Communication Technology (ICT) ecosystem. The campaign mandates accessible infrastructure, indoor facilities, signage, and inclusive digital content, as well as the training of additional sign language interpreters and enhancing televised program accessibility (MSJE 2021).

The MSJE asserts that the Act's objectives align with the intent of the Incheon Strategy, yet, in my view it falls short of fully embodying its spirit as it solely focuses on the physical aspects but does not cover broader Incheon goals like poverty reduction, employment enhancement, social protection strengthening, and early education intervention (United Nations Economic and Social Commission for Asia and the Pacific 2020).

The cause for the differently-abled is gaining momentum the world over. Initiated by the WHO, WeThe15 was the largest ever human rights movement, which nurtured the biggest coalition of international organizations from sports, human rights, policy, communications, business, arts and entertainment (WeThe15 2020). Inaugurated at the Tokyo Olympics 2020, the primary aim was to bring global attention to Persons with Disabilities, who constitute 15% of the world population. As per the 2011 Census, PwDs form 2.2% of the total Indian population, which is about 27 million in absolute numbers (Office of the Registrar General & Census Commissioner, India, 2011). This segment of the population needs specific infrastructural support to foster inclusivity and enable them to tap into opportunities available to the rest of the population. While India is home to promising para-athletes like Deepa Malik and Bhavina Patel, who have bagged recognition in championships, the state of infrastructure doesn't match international standards. The paucity of data pertaining to persons with disabilities in India, infrastructure and their recorded experience is one of the primary motivations for this study. The aim of this paper is to check the vitals of the infrastructure available for para-athletes in India through a literature review and a primary survey, and make suggestions for improvement.

## Background

The Paralympic Games are an interesting example of comprehensive transformation that the differently-abled can achieve when they turn their abilities into strengths. The Paralympic Games all over the world has been a landmark initiative to implement inclusivity of persons with disabilities, offering them an avenue to channel their abilities and mental resolve. In China, the Paralympics has gained PwDs significant attention and respect. People in China have greater sensitivity to the differently-abled, and as a result, they have received better social status, social security, access to opportunities in employment, and education, among other benefits (Craven 2016). The 2012 Paralympic games in London and the 2014 games in Russia led to many positive outcomes for this community. At least one in three people in the UK developed a changed attitude towards the differently-abled (Craven 2016). Moreover, cities which host the games need to have satisfactorily met the benchmarks for accessible design before they bid to participate (International Paralympic Committee 2013). The Accessibility Guide elucidates specifications to guide development of infrastructure to ensure that travel, public buildings, etc. are extremely usable for persons with visual, physical, hearing, psychological and intellectual impairment. Therefore, the games not only encourage the differently-abled, but have also contributed to cities gradually meeting accessibility standards the world over.

However, the ground reality in India is that the level of provisions is far lower than other countries. The basic infrastructure provisions for PwDs, mandated by the Accessibility Act in India are not in place. The implementation of initiatives under the Act is far from being fully realized. As a result, para-athletes are stripped of provisions they need to live with dignity.

## Implementation status of the Accessibility Act

While the Accessibility India Campaign was rolled out as a pilot in 7 states (Assam, Delhi, Haryana, Gujarat, Maharashtra, Rajasthan and Tamil Nadu), it should be noted that most of the metropolitan tier 1 cities are located in these 7 states, raising an important question regarding the reach of this campaign to tier 2 and tier 3 cities. Thus, the entire population has not benefitted from the campaign's advantages yet. While the objectives were well-defined, and encapsulated many possible considerations in the sphere of promoting accessibility, this campaign has lacked in its implementation, reach and follow through. The COVID-19 pandemic has shed light on the inefficacy of the Accessibility India Campaign in the states where it was supposed to have been implemented (Pandey 2020). The differently-abled, including para-athletes have felt the effects of the COVID-19 pandemic disproportionately than the general population due to partial reach and implementation of the Act.

Madhu Singhal, Managing Trustee of Mitra Jyothi, an NGO that works with disabled people said that people with disabilities faced glaring challenges with access to medical care, exacerbated by a lack of infrastructure in place (quoted in Pandey 2020). Hospital workers were hesitant to assist disabled people due to the greater amount of assistance they needed fearing spread of infection through touch. Over and above this, there were no toilets available to them and a lack of accessible architecture. So, they were unable to help themselves to fulfil the most basic needs. People with disabilities faced difficulties in accessing medical attention, necessary information, and essential services during the pandemic.

In 2021, 6 years after the Accessibility India Campaign was launched, a parliamentary standing committee stated that progress had been “rather slow” (Excelsior 2021). Initial targets of 2016 were delayed by 4 years, and yet, only 29.7% of intended buildings (492 of 1,662) had been made accessible. Approximately 64.6% websites were made accessible since the inception of the program. Progress on the railways and airports was also rather discouraging, with reports of partial efforts on both fronts (Excelsior 2021). This indicates a deprioritized prerogative towards the Accessibility India campaign, lacking the fierce rigor that it demands.

## **Comparing governance mechanisms in India with other countries**

Responsible for governance related to para-athletes, the Paralympic Committee of India (PCI) is supposed to undergo regular audits to ensure effective governance and adequate funding. Previously unnoticed, the Indian Paralympics movement gained unprecedented attention through Girisha Nagarajegowda's silver win in the F42 high jump at the London 2012 games (Chennapragada & Jain 2020). While a Reuters photo focused the spotlight on the glorious win, it also revealed the poor athletic gear worn by the athlete. Subsequently, an RTI application to the Sports Authority of India (SAI) further exposed questionable government funding practices in Indian Paralympics. Dilip Kumar Singh, a lone government officer, oversaw funding and program approvals for the PCI, which conflicted with the National Sports Development Code of India (NSDCI) 2011 guidelines (Chennapragada & Jain, 2020).

It is likely that the negligible importance given to fund management for Paralympic sports led to subsequent shortage. Moreover, the failure to conduct state championships as mandated by the NSDCI coupled with incomplete nationwide representation in PCI's membership exemplifies the governance challenges that have led to India's current Paralympic predicament. Hence, prioritizing governance and thorough audits is essential. While funding is vital, judicious allocation to tangible enhancements like athlete training, facility upgrades, state championships, and equipment is the key. The success of the United Kingdom's para-athletes at the Tokyo games exemplifies the impact of strong governance. Allocating an additional 4 million pounds alongside the existing 65 million for training and participation in competitions preceding the Paris Paralympics highlights the UK's governance-driven financial commitment (UK sport 2023).

A step ahead, Canada's comprehensive approach to support para-athletes extends beyond mere financial contributions. Canada has designed a holistic five-partite structure encompassing governance and policy, attitudes, programs/services, communication/portrayal, and accountability; each prioritized. Their governance and policy facet features exhaustive guidelines for nurturing secure and inclusive environments, embracing secure sports practices, anti-harassment measures, and diversity and inclusion training. These policies underpin robust conflict resolution mechanisms and educational interventions to address systemic barriers and encourage adaptation of existing governance policies to meet its goals (Canadian Paralympic Committee, 2023).

Gleaning inspiration from Canada's model and adeptly tailoring it to transform Indian policy would lead to comprehensive guidelines, conflict resolution protocols, and will facilitate periodic assessments, potentially revolutionizing the para-athlete support landscape. Within India, engendering awareness, reshaping public attitudes and boosting acceptance of PwDs in the society is important alongside constructing physical infrastructure. Integrating cues from Canada's strategy, India can amplify both structural improvements, such as accessible amenities, and transformative shifts in attitudes, encompassing enhanced job prospects and improved public transportation access.

## Steps India can take to create accessibility in infrastructure

### Survey description and data collection methods

To base recommendations upon ground experiences, this study involves a primary survey conducted among para-athletes for a first-hand assessment of the situation. This covers a cross-section of sportspersons who have worked to refine their faculties despite dealing with a disability. The field work of this survey was conducted at the 20th National Para-Athletics Championships 2021. This championship was organised by the Para Sports Association of Odisha (under the aegis of Paralympic Committee of India) from 28th March 2022 to 31st March 2022 at Kalinga Stadium, Bhubaneswar, Odisha.

The survey consisted of a set of unbiased objective questions to gather demographic and specific details to understand the level of discomfort or support that para-athletes feel in their use of public infrastructure and facilities in a tier 2 city. Out of the 1200 participants, 803 people responded to the survey. The survey population consisted of para-athletes, their families, friends, or caregivers, and volunteers and employees of Para Sports Association of Odisha. The aim was to assess the inclusivity and accessibility of public infrastructure for individuals with disabilities, gauging the impact of the Accessibility India Campaign on their daily lives. This evaluation offers insights into the vitals of infrastructure through the lived experiences of para-athletes.

### Integrating technology innovations in sports

The Indian government has taken some steps to advance technology and enhance the skills and potential of individuals with disabilities in sports, following the mandate of the Rights of Persons with Disabilities (RPWD) Act 2016 (The Bridge Desk 2022). The Tokyo 2020 Paralympics showcased a pioneering integration of advanced technology in sports, featuring personalized 3D-printed gloves for wheelchair users and AI-powered tapping devices assisting visually impaired swimmers with turn timing and distance calculations. Supported by appropriate protocols, these advancements could transform the experiences of Indian para-athletes.

In the Indian context, while progress has been made in enhancing physical accessibility, there's room to learn from broader global practices. Beyond architectural modifications, a comprehensive approach that caters to various disabilities is crucial for fostering inclusivity. Implementing chip cards or digital solutions to access metro and train services, to emulate Rotterdam's efforts as mentioned in the Committee of Experts on Universal Design (2009), could make public transportation seamless and ensure that individuals with disabilities can access services independently.

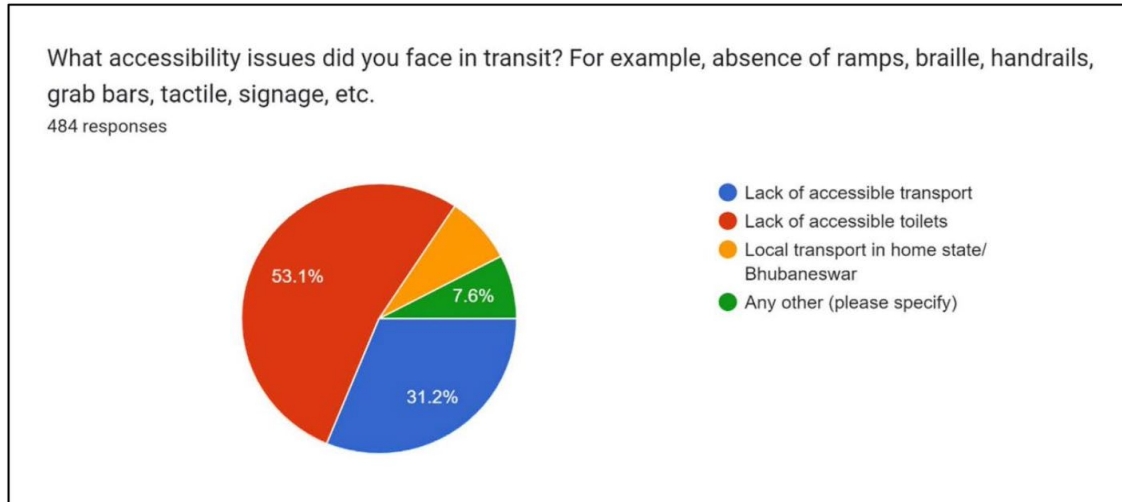
Furthering the Indian government's initiatives to incorporate features like screen-readers on official websites would empower people with visual or learning disabilities to access information effectively, aligning with the global trend of prioritizing digital accessibility (Committee of Experts on Universal Design & Ginnerup 2009). This would remarkably contribute to the ICT ecosystem.

### Sports infrastructure

Sports infrastructure includes not just accessibility of the built environment, but also ensuring that sports facilities are highly usable for para-athletes. With respect to availability of basic provisions, some facilities have inclusive toilets, ramps, pathways in place. One example is in Gandhinagar, wherein a specialized facility has been instituted within the framework of the National Centre of Excellence (NCOE) initiative at the SAI Regional Centre. This centre is supposed to exclusively cater to Para Sports encompassing athletics, badminton, fencing, swimming, power-lifting, and table tennis.

Despite mandates that intend inclusive infrastructure and protocols, specific instances have reported the absence of inclusivity. The presence of a signboard at Delhi's Palam Air Force Station Sports Complex prohibiting the entry of wheelchairs, prams, and pets to the cricket ground has evoked strong criticism from disability rights activ-

ists (Kuntamalla 2023). Dr. Satender Singh, a member of the advisory board for persons with disabilities, conveyed his distress regarding the discriminatory hoarding in a letter to the state Commissioner. He emphasized that the restrictions not only contravene the 2016 Rights of Persons with Disabilities Act but also underscore a broader issue of non-inclusivity within sports facilities, impeding the participation and access of individuals with disabilities (Kuntamalla, 2023).



**Figure 1.** Accessibility issues faced in transit

## Evaluation of public infrastructure provisions

The basic premise and provision of inclusivity are rooted in making public infrastructure usable for the differently abled. As depicted in Figure 1, the two most common issues that Para-athletes who competed in the Championship faced are lack of accessible toilets (53.1%) and accessible transport (31.2%). Absence of ramps, handrails, grab bar, tactile signage, braille, etc. can be huge barriers to fostering empowerment among persons with disabilities.

A Disability Rights Initiative survey found that 95% of public toilets in India lack accessibility for individuals with disabilities (Sharma 2016). India can take cues from Japan, which has made significant progress in constructing spacious and universally designed public toilets, equipped with motion detection features and located strategically, even present on bullet trains (Accessible Japan 2015). These inclusive facilities, designed with low-height fixtures and ample space, cater not only to people with disabilities but also to elders and babies.

Constant innovation in accessible buildings goes beyond basic provisions like ramps and toilets, embracing the comfort and luxury of individuals with disabilities. Monica Ponce de Leon, Dean of Architecture at the University of Michigan, advocates "universal design," prioritizing usability of everything, including products and the built environment, by people of all ages, abilities, and statuses (Architecture for All - Architizer Journal 2019).

## Public transportation systems

Figure 2 (below) shows that visiting public places, government buildings, or using buses and trains is a daily routine for 83% of respondents, highlighting the on-going challenge of accessibility for Para-athletes. Buses are the most common mode of transport (58.2%), yet their affordability often comes at the expense of quality (Figure 3). According to the survey participants, Figure 4 demonstrates that the top five facilities needing improvement include public toilets (78.2%), bus stops (75.6%), sports facilities (74.1%), railway stations (64.4%), and office buildings (52.3%).

Public transport systems are overburdened owing to high population density in the cities. Inconsistent stop times at bus stops and metro platforms make it a struggle for differently-abled people to board the carriers in time.

Survey respondents reported that climbing onto a train or bus is difficult since the base level is higher than where a person's feet or the assistive device(s) is supposed to touch. Combined with inconsistent stop-times and many people boarding a bus simultaneously, public transport is daunting, and often dangerous for the differently-abled. The Bangalore Metropolitan Transport Commission (BMTC) had taken the first-ever step towards this in 2022 by inaugurating 300 wheelchair-friendly buses (Kidiyoor 2022). However, this should be a blanket initiative across all carriers and cities. Further, standardized wait-times on stops and enforcing strict protocols of separate lines for differently-abled can increase utilization, thereby enhancing their trust in using public transport.

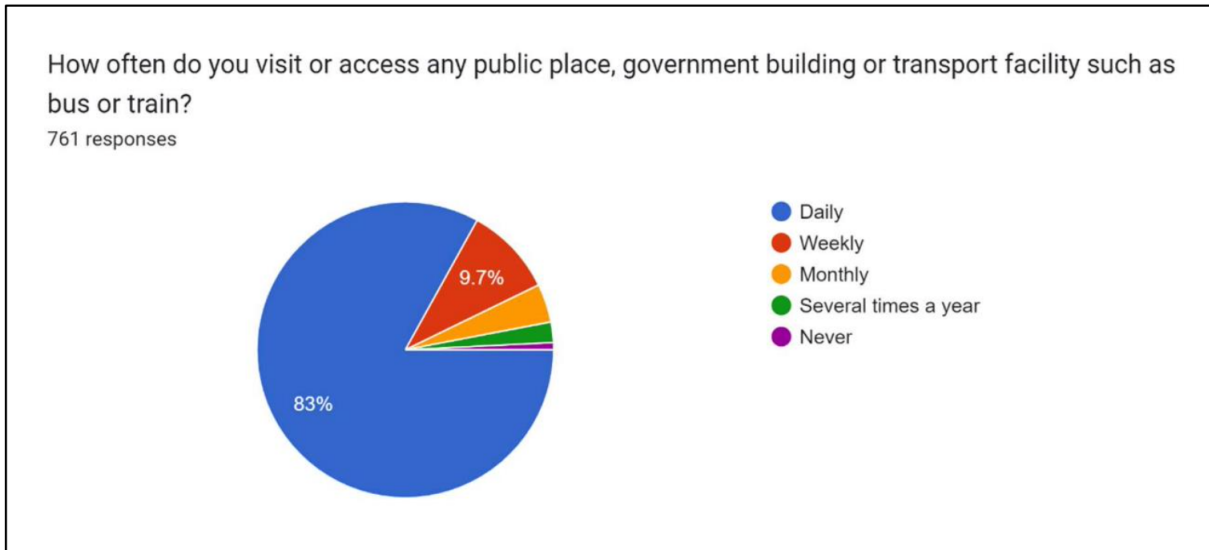


Figure 2. Frequency of accessing public places or transport facilities like buses or trains

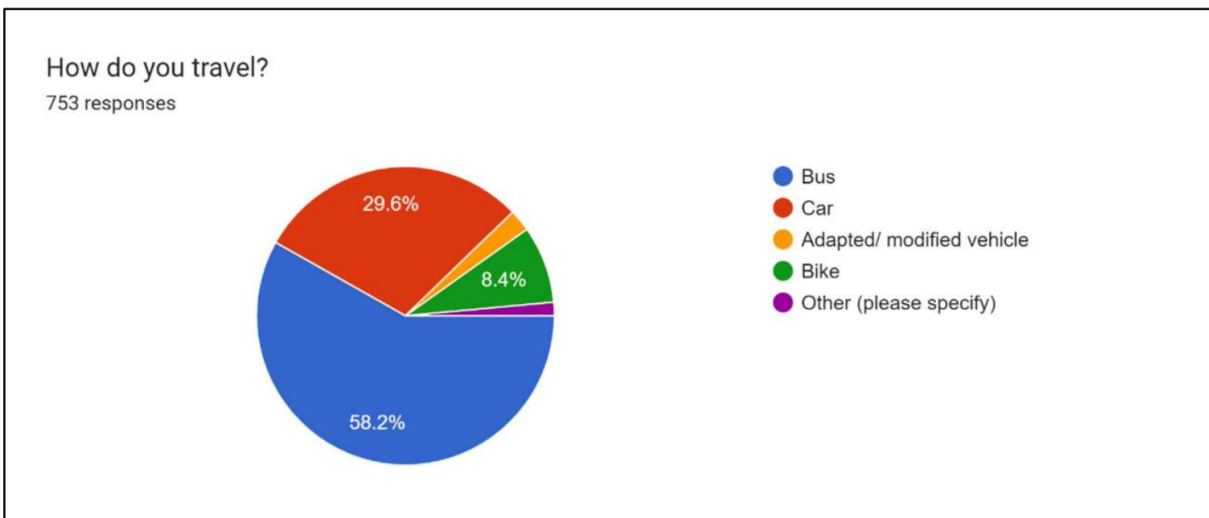
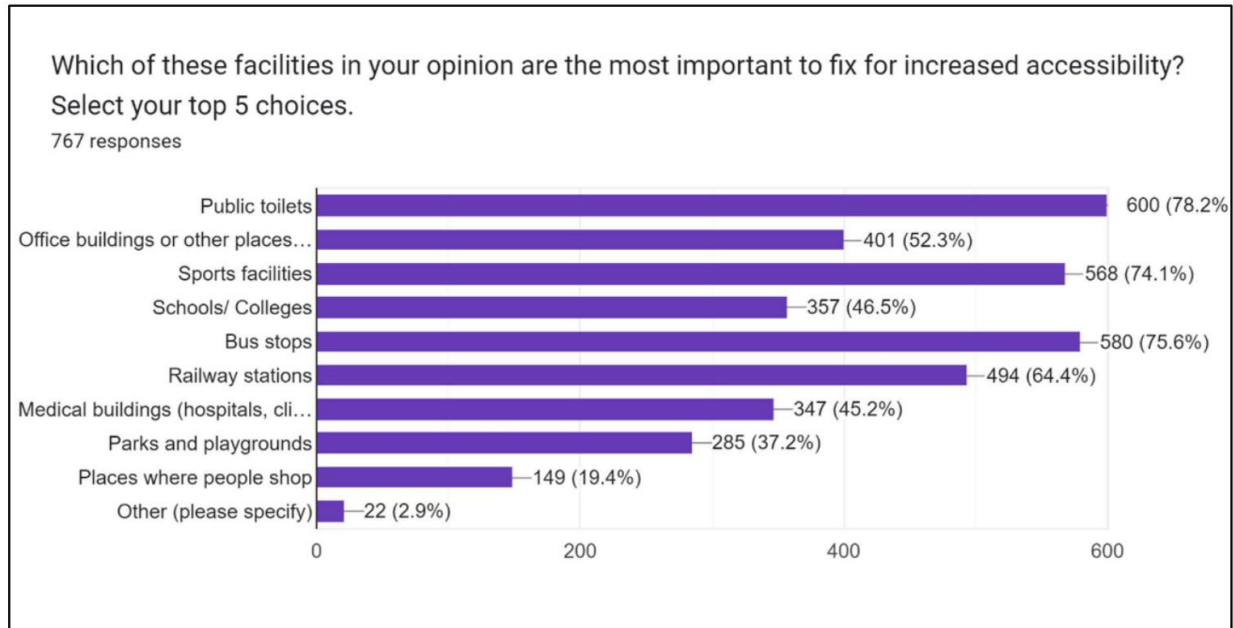
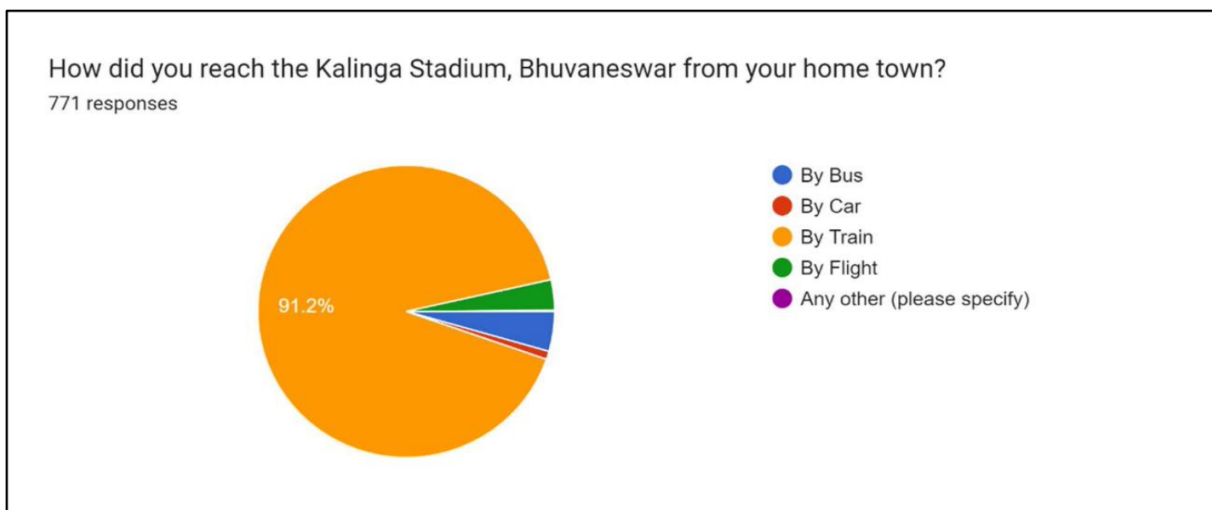


Figure 3. Mode of transport used in regular life



**Figure 4.** Facilities which are most important to fix for increased accessibility

Figure 5 (below) shows that 91.2% of respondents reached Kalinga Stadium by train which was the most comfortable and convenient mode of transport. However, accessibility standards for Indian railway stations remain inadequate, despite some efforts by the Ministry of Railways to install ramps and lifts. Lifts often don't function or lack proper design for wheelchair users.



**Figure 5.** Mode of transport used by para-athletes in reaching Kalinga stadium, Bhubaneswar from home town

### Recommendations for improving accessibility in public transport

Taking the Bangalore Metropolitan Transport Commission's (BMTC) pilot initiative forward by introducing wheelchair-friendly carriers across Indian states will be a novel feat (Kidiyoor 2022). Transport protocols in the form of

standardized wait-times on stops and stringent protocols of separate lines for differently-abled are essential to build trust and increase utilization.

London's tube system has made significant strides in becoming more inclusive. Transport for London is a body of the Government of UK which confirms that all tube stations have step-free access and are equipped with ramps, lifts and accessible toilets. According to Transport for London, buses and trains in London provide real-time information through audio and visual announcements to reach passengers who might have visual or hearing impairments. The London tube also has priority seating areas for persons with disabilities, and strict enforcement of it. The Delhi metro also has a few designated seats for differently-abled persons, mothers and the elderly. This can be rolled out across different modalities of public transport, including railways, and buses. Supportive tools highlighted by Transport for London, like 'Travel mentoring', 'Planning an accessible journey', 'Booking an Elizabeth line' and 'Accessibility maps and guides' empower the differently-abled to actively use public transport systems with confidence.

Curitiba's Bus Rapid Transit (BRT) system is lauded for accessibility measures like low-floor buses, priority boarding and seating for persons with disabilities and information in braille signage on bus routes and stops for visually impaired passengers (Rickert 2011). As of 2013, 21,000 disabled people took daily trips using Curitiba's public transport, out of which 1,000 were made by wheelchair users (King 2013). It is evident through this example that acceptance and usage of public transport by PwDs increases exponentially once transport vehicles and stations are made accessible.

Beyond tangible infrastructure provisions, India can take inspiration from these sophisticated transportation systems and adopt practices or protocols that work, and improve them based on feedback. Braille signage and audio-visual announcements would be great steps to make infrastructure more inclusive for persons with disabilities aside from mobility limitations. Combined with strict protocols like separate lines and standard wait times, public transport usage by the differently-abled could actually increase. Assistance in the form of resources, plan-my-journey tools and accessibility maps could be the final leap that helps increase utilization drastically.

## Social services: Integrated identification reforms to promote ease of availing services

Social services like identity verification can be strong enablers if done right, or significant disablers if missing. In India, the Ministry of Social Justice and Empowerment has introduced the Disability Certificate scheme, aimed at enabling persons with disabilities to access specialized programs. The fact that 95.7% of athletes who responded to the survey possess this certificate signifies the Ministry's successful efforts in fulfilling their intended role. However, it is crucial to acknowledge that obtaining the certificate can be a painful and arduous process, as indicated by the 5% of athletes who do not possess it. This difficulty is further compounded by ableist attitudes displayed by officials, who often exclusively engage with the family members of persons with disabilities and assess the disability solely through a medical lens, relying on medical examinations as part of the certification process.

The European Union (EU) launched the EU disability card, which will allow disabled persons free access to culture, leisure, sport and transport facilities across the member countries of the EU. The card is immediate and credible proof of disability, even if a person has an invisible disability, granting automatic access to benefits across the member countries. For instance, in Belgium, different partners and facilities offer personalized assistance, reserved seating, reserved parking spots, accessible swimming pools, hearing aids for those with hearing impairments, and even emergency medical care facilities (EU Disability Card 2023). In India, the Indira Gandhi Disability Pension Scheme provides a monthly amount to persons with above 80% disability and who are below the poverty line (Ministry of Rural Development 2023). Under the scheme's umbrella, the government can potentially initiate tie-ups with organisations like the Association of People with Disability (APD) offering rehabilitation services, education intervention for children with disabilities and livelihood programs. Their rehabilitation program covers 23 out of 25 components of WHO's CBR matrix that prescribes what needs to be done for a person with disability to be completely rehabilitated (Rehabilitating People With Disability for Greater Inclusion 2023). Through targeted inter-



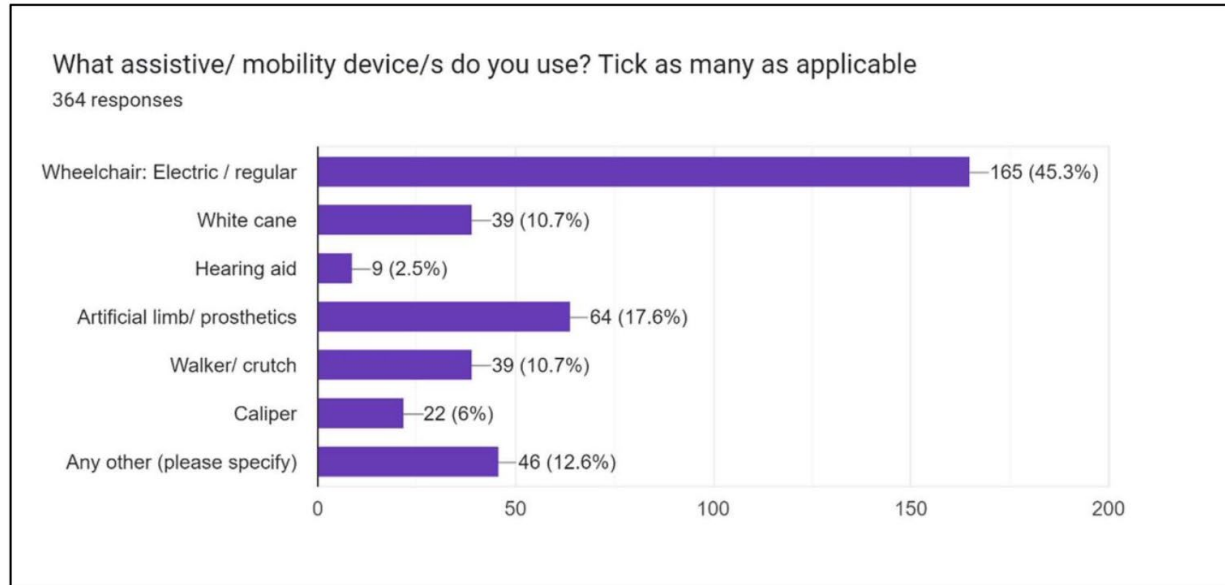
ventions like the ones by APD, PwDs could be in a favourable position to better utilize disability-based reservations in jobs and education. Hopefully, the Disability Pension Scheme along with comprehensive benefits like rehabilitation can extend to all PwDs, once those below the poverty line, who run the most economic disadvantage, are comfortably and effectively covered.

The current Disability certificate in India primarily serves as identification, lacking the benefits of the EU Disability card, which offers comprehensive advantages like Belgium's model. Once basic infrastructure policies are established, India could create a unified repository of services tied to a disability card, recognizing developed protocols and promoting accountability. This system would inform disabled individuals about benefits across states and encourage accessibility. Instead of separate certificates, integrating disability status into the Aadhar card could simplify the process, leveraging trained Aadhar officials for sensitive verification. This move respects disabled persons' identity, promotes inclusivity, and fosters a more accessible environment.

Although targeted measures to enhance infrastructure, integrating technological innovations into sports equipment, and supportive social services will give para-athletes much needed enabling support, changing public perceptions about disabilities is crucial to promote inclusion. In doing so, Canada's comprehensive framework can inspire change.

## **Tackling intersectionality among disabled individuals**

Based on the state-wise enrolment data of the Paralympic Committee of India, it is evident that among the participants, 763 had physical disabilities, 153 were visually impaired, 44 athletes had cerebral palsy, 7 were dealing with intellectual disabilities and 20 were short-stature athletes. Notably, 18 per cent of the championship participants required wheelchair assistance. In the context of disabilities in India, those with reduced mobility or physical impairments are more prominently represented, compared to those with hearing impairments, mental illness, or other visually unperceivable disabilities. However, most of the infrastructure design is limited to catering to persons with limited locomotive abilities, overlooking varying disabilities. Illustrated in Figure 6 (below), the majority (88.8%) of survey respondents are para-athletes, predominantly wheelchair users (45.3%) followed by users of artificial limbs (17.6%), white canes, walkers, or crutches (10.7%), and those relying on hearing aids, calipers, or other assistive devices (2.5%, 6%, and 12.6% respectively). While public infrastructure should account for the varied needs of people who face locomotive restrictions, a critical analysis is required to address disabilities beyond physical mobility. Comprehensive solutions need to be designed for 22.7% of the survey population, and the larger community who deal with diverse kinds of disabilities. People who are visually impaired or those who deal with cognitive disabilities of various kinds can be equally supported by including braille and audio announcements in vending machines, grocery stores, and metro stations. This can guide persons with disabilities and induce positive behaviour change in fellow passengers.



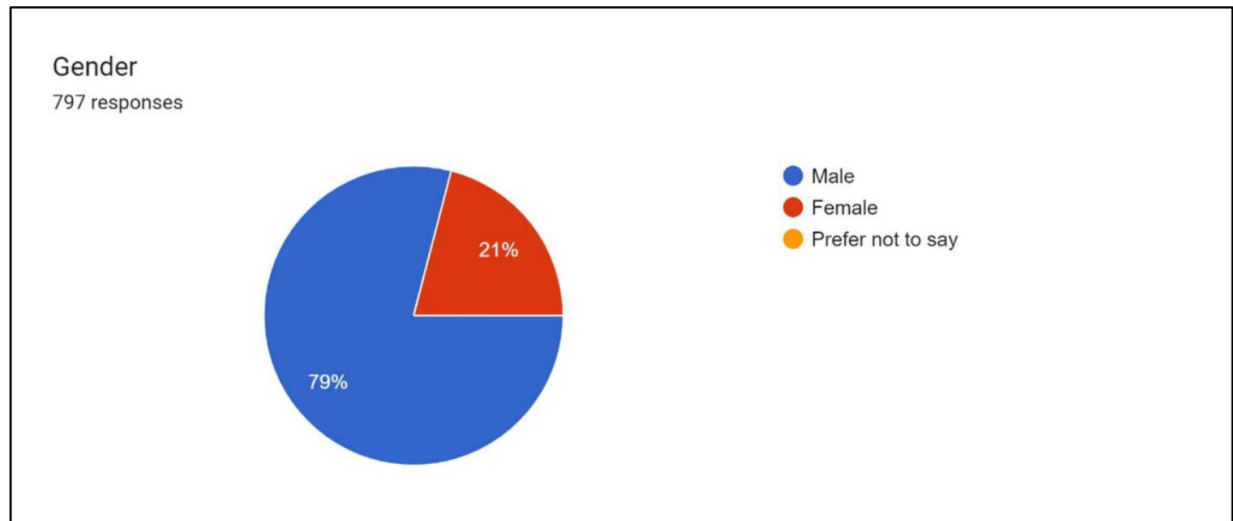
**Figure 6.** Assistive devices used by para-athletes

In addition to an array of disabilities, gender and caste-based discrimination is widespread and pervading in India. Currently, disabled individuals facing intersectional marginalities, such as caste and gender, often experience compounded discrimination. For instance, Dalit women with disabilities in India face severe inequalities, encounter exclusion from social and economic opportunities, limited access to healthcare and education, and increased vulnerability to violence (Kothari et al. 2020). Studying disability in India needs to be looked at in the framework of other marginalities to contextualise solutions for sub-groups whose marginalities play into access. This will help systems to be nimble to the specific injustices faced by those groups.

### Why addressing the problems of Women with Disabilities is important

While disability sport has grown at an unprecedented speed, representation of women with disabilities in sport continues to be modest. Since India's debut at the 1968 Tel Aviv Paralympic games, only 12 women have represented India in over three decades, as opposed to the 83 male Paralympic athletes (Chennapragada & Jain 2020). Poor representation is telling of the discrimination that is faced by women para-athletes.

As the first woman para-athlete to win a medal in the Paralympics, Deepa Malik acknowledges the social stigma around participation of women in para sports and the lack of precedents to look up to (Naseem 2020). To counter the social stigma around female participation of para athletes in sports, India can take cues from Canada's "Women in Sport" initiative that emphasizes gender equality in sports infrastructure. Inclusive facility designs include gender-specific locker rooms equipped with accessible features, such as ramps, changing areas, and showers that cater to the diverse needs of women with disabilities. Pervading social stigma against the participation of women para-athletes in sport will have to be slowly changed with awareness, training for administrators and coaches as well as gender-inclusive facilities and equipment.



**Figure 7.** Gender composition of para-athletes at the Kalinga stadium

### Primary data that demonstrates discrimination against WWD- problems faced

Figure 7 provides clear evidence of a significant gender disparity among para-athletes who participated in the championship at Bhubaneswar’s Kalinga Stadium. It reveals that a staggering 79% of the participants were male, while only 21% were female. This stark contrast highlights the overwhelming dominance of men in the para-athlete community. It must be noted that women with disabilities, especially those who are also economically disadvantaged, face triple discrimination at the societal level. This might make it harder for women to grab opportunities to compete and the subsequent upward mobility associated with those opportunities. This discrimination might also be closely tied to the bias against women with disabilities, which becomes clear through the meagre extent to which women’s needs are incorporated into designing solutions for persons with disabilities.

For example, existing mobility aids like wheelchairs, tricycles, and crutches lack tailored specifications for WWDs (Addlakha 2022). The government’s Aids and Appliances scheme lacks customized options, contributing to a gender gap in access to assistive technology. This is evident in the male-to-female beneficiary ratio of at least 2 to 1 reported by the Artificial Limbs Manufacturing Corporation of India (Addlakha 2022). In low- and middle-income countries, women with physical disabilities account for three-fourths of the disabled population (WHO 2011). However, there is a dearth of support services specifically designed for women with disabilities in these countries. Furthermore, mainstream services often lack appropriate knowledge about disabilities in general, which makes availability of specialized services more inaccessible.

### **Proposed measures for the government to uplift WWD**

Developing sensitivity within disability discourse is paramount. Women With Disabilities (WWD), facing dual discrimination, as ‘women’ and ‘disability’ are both categories that are widely discriminated in sports.

### Importance of support through caregivers and psychological counseling

Out of 803 survey respondents, 88.8% were para-athletes, 9.4% represented athletes’ associates, and a mere 1% were professionals from organizations supporting disabled individuals. India’s supportive care sector lacks adequate solu-

tions for this demographic, highlighting the absence of requisite familial, social, and emotional support. This deficiency can significantly impact para-athletes, particularly those facing multiple marginalities.

Indian para-athletes, especially women, grapple not only with performance pressures but also with inadequate infrastructure and social inclusivity. While therapy gains traction in mainstream sports, extending such services to para-athletes is pivotal. Discrimination and the absence of support exacerbate mental health challenges, undermining both performance and emotional well-being. Stressors like discrimination, logistical hurdles, and high equipment costs for their impairments worsen mental health (Olive et al. 2021). Following the South Korean Paralympic Committee's Mental Training Program, India's Paralympic Committee can institute tailored initiatives to enhance para-athletes' psychological skills. Workshops, seminars, and individual counseling sessions can foster mental resilience and coping strategies, challenging the stigma around seeking psychological assistance.

## Gender-inclusive infrastructure and protocols

Creating gender-friendly infrastructure for women with disabilities necessitates a comprehensive approach to address their specific needs and challenges. Accessible pathways, entrances, and restrooms equipped with changing facilities and sanitary disposal units should be provided. Private spaces for medical consultations and personal care—such as lactation areas along with slip-resistant flooring and proper lighting will ensure safety and dignity. Incorporating the feedback of WWD in inclusive design is the crucial pre-requisite that will ensure that their needs are accurately addressed in infrastructure.

Enabling healthcare accessibility for women with disabilities (WWD) necessitates comprehensive action. Disability-friendly amenities, equipment, and information distribution, accessible bathrooms and routine facility assessments are vital for specialized care, particularly reproductive health.

Addressing the societal isolation and stigma faced by WWD necessitates legal reinforcement against their heightened vulnerability to violence. Further, grievance redressal mechanisms for WWD in their usage of public infrastructure can be put in place. For instance, conflict resolution personnel positioned at metro and railway stations, and airports, wherein WWD can put in requests for assistance through a helpline or an application, and get immediate assistance, could drastically increase their independence to travel safely and help tackle gender-based violence in WWD.

Inclusive policies should integrate WWD into gender and disability frameworks, reversing their exclusion from reproductive health programs, education, and employment opportunities (Addlakha 2022). Making deliberate efforts to overturn their lack of inclusion in reproductive health programs, Right to Education and National Rural Employment Guarantee, where WWD are currently excluded, is another policy step the government can take towards fostering genuine inclusion (Addlakha 2022).

## Staff training, education and awareness through ICT

Hiring and training personnel with disability-friendly knowledge and skills can be the bridge that connects physical infrastructure to the disabled persons and offer support. Crucially, training healthcare professionals to merge gender and disability awareness ensures sensitive treatments for women with physical and mental disabilities, fostering a secure and comfortable patient-journey. Trained personnel create acceptance and inclusion, facilitating societal integration. Governments can incentivise disability-inclusive training for those training to work in social service organizations, as nurses, medical students and maybe even teachers. Empowering caregivers can be accomplished through healthcare counseling and cost concessions. Essential training for healthcare workers should integrate women's feedback, outlining protocols, best practices, and sensitivity to their unique challenges. A transformative step involves empowering WWD to make their own health decisions, eradicating coercion and violence.

Similar to the WeThe15 initiative, the government could run National campaigns at the scale of the previous 'Educate the girl child' campaign, to sensitize people to the needs of the differently-abled, educate them about

existing schemes available to them and also promote inclusivity through this initiative. Further, expanding accessibility guidelines to ICT platforms and advocating inclusive digital channels facilitates broad outreach. Communication efficacy involves WWD representation in materials for education, benefiting both them and caregivers. The intentional representation of WWD in healthcare spaces, both through personnel and visual materials, enhances inclusion. Widespread utilization of captioning and sign language through creative advertisements featuring disabled individuals or celebrities can stimulate conversations and foster inclusion, normalizing their presence and encouraging active participation.

### Audits and inspections as a policy prerogative

In order to ensure actual implementation of suggested measures, the government currently recommends an active prerogative towards monitoring through audits and inspections. For instance, the Accessibility Act mandates annual inspection of buildings only until a building is deemed accessible, post which audits are not necessary (Ministry of Social Justice and Empowerment 2021). This should be changed to include randomized quality audits of the built environment, inclusivity infrastructure at sports facilities and protocols, to ensure upkeep of standards. Imposing hefty fines upon repeated non-adherence would prevent laxity, until inclusivity becomes the norm. This is imperative to ensure that there isn't a repeat incident of Delhi's Palam Air Force Station Sports Complex, where sports facilities restrict access to para-athletes.

Rigorous guidelines and on-going assessments are imperative for diverse public domains, such as sports facilities, buildings, stadiums, and transportation systems. Drawing inspiration from effective international practices, robust auditing ensures that spaces accommodate individuals with disabilities. For instance, Canada's National Building Code integrates barrier-free design standards that encompass detailed specifications for ramps, doors, elevators, and signage (National Building Code of Canada 2020). India could consider adopting stringent audit protocols, potentially involving neutral third-party bodies to enhance accountability and inclusivity.

### Concluding remarks and future directions

In conclusion, the ground situation of para-athletes in India is dismal. The lack of basic infrastructure in buildings, transport, ICT restricts them from participating in society with ease. Non-inclusive public transport and inaccessible toilets are some of the main challenges which prove to be major obstacles as they are indispensable. To begin addressing these challenges through urgent intervention, proper governance mechanisms will prove to be most effective, as the governing body can define guidelines that incorporate universal design principles and inclusive protocols, allocate budgets, institute proper monitoring through regular controlled audits, and resolve conflicts. Further, groups facing multiple marginalities such as WWD require solutions to be sensitive to their problems. Sports equipment should take account of the differences in physical stature for women. Reproductive, orthopaedic and mental healthcare should be sensitive to needs of WWD. PwDs often encounter lack of inclusivity in sports infrastructure and equipment. Technology can be leveraged to counter this discrimination and design innovative solutions. In addition, enabling architecture in terms of trained caregivers in healthcare, partnerships with private disability services, and awareness campaigns through ICT will contribute to changing public perceptions—which is essential to fostering sustainable inclusion.

Improved accessibility can empower persons with disabilities to take charge of their lives. Financial independence and their ability to take care of themselves, supported by inclusive infrastructure can overturn their status as helpless dependents into active harbingers of transformation. The long-term vision for inclusive development in tier 2 and 3 cities will start with public infrastructure. However, it would also have to take responsibility for education, health and social parameters. De-stigmatizing disability should be an active part of the prerogative. Only then

can we witness a landmark transformation of this segment, despite pervading social obstacles and increased vulnerability to poverty, lack of opportunities and reduced autonomy.

While this study contributes some insights, it operates within certain limitations warranting consideration. Firstly, focusing on para-athletes, a subset of the broader disabled population, might not offer a fully representative perspective. Further, characteristically, this subset would comprise of people who are more driven or wired to overcome their difficulty by improving and leveraging capability in another faculty, which might differ from the larger disabled community. Moreover, the relatively secure economic position of para-athletes, stemming from their successes and increased socio-economic interest, contrasts with the financial challenges often faced by other disabled individuals. The growing recognition and support for para-athletes, exemplified by Muralikant Petkar's gold despite a bullet lodged in his spine (Sawai 2023) and India's triumphs in the Tokyo Paralympics 2020, can influence their economic status through financial support from the government, celebrities, and corporate initiatives of companies like IndusInd Bank (owing to the CSR mandate of 2012). As this support raises para-athletes' economic standing, future studies should explore the potential implications of this elevated support landscape on their experiences, opportunities, and inclusion, in comparison with other sub-groups within the disabled community. Examining a more diverse range of disabled individuals and investigating the broader socio-economic dynamics surrounding disability could enrich our understanding of the complexities involved and pave the way for more comprehensive inclusion strategies.

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