

Role of Assistive Technology in Empowering Persons with Disabilities: A Study of Kashmir Region

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Abstract

Assistive Technology has become one of the important innovations in Information Communication Technology (ICT) empowering lives of many persons with disabilities. The paper examines how assistive technology has been a hope of transforming the perception of persons with disabilities from being viewed as objects of charity to subjects of human rights. This paper further explores the impact of assistive technology on the lives of persons with disabilities in the Kashmir region of India. The study is qualitative in nature, relying on primary data collected through semi-structured interviews in Kashmir region. The paper offers an in-depth analysis of the role of assistive technology in promoting social inclusion and provides practical recommendations for achieving the goal of inclusion for persons with disabilities, in Kashmir in particular and India in general. It aims to demonstrate how these assistive technologies significantly contribute to enhancing social inclusion and improving the quality of life for persons with disabilities in the region. The findings suggest that assistive technologies have significantly enhanced social participation of persons with disabilities and improved their overall well-being in Kashmir.

Keywords: disability, social inclusion, empowerment, assistive technology, rights, India

INTRODUCTION

Disability is a global concern, impacting individuals across all regions and societies. According to the World Health Organization (WHO, 2011), approximately 16% of the world's population consists of persons with disabilities, with 80% of these individuals residing in the Global South (United Nations Development Programme [UNDP], 2016). Historically, disability has been understood primarily through the medical model, which emphasizes individual impairments and bodily conditions, treating disability as a medical issue to be addressed through intervention (Narayana, 1996). However, a significant shift occurred with the 1975 United Nations Declaration on the Rights of Disabled Persons, often referred to as the "Magna Carta of Disability Rights," which marked a pivotal moment in changing perceptions of disability (Narayana, 1996).

This Declaration catalysed a transition from the medical model to the social model of disability, as articulated by Oliver (1996). The social model reframes disability as a societal issue rather than merely an individual concern, emphasizing that environmental and societal structures contribute to the disabling experience. Over the past two decades, there has been a paradigmatic shift in understanding disability, moving from a charity-oriented approach to a rights-based perspective. This human rights model positions persons with disabilities as subjects of rights rather than mere recipients of charity or pity (Oliver, 1996).

The human rights model is encapsulated in key international frameworks, notably the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD2006) (Degener, 2017), which focuses on the rights and social inclusion of persons with disabilities. Despite concerted global efforts by disability rights activists, NGOs, scholars, and the United Nations, social inclusion remains a persistent challenge. However, the transformative power of technology is undeniable. As Mary Pat Radabaugh noted, "For most people, technology makes things easier. For people with disabilities, technology makes things possible" (UNICEF & WHO, 2015).

In this context, assistive technology emerges as a critical enabler for the empowerment and inclusion of persons with disabilities. This term encompasses both assistive products and related services designed to enhance the functioning and quality of life of individuals with disabilities (UNICEF & WHO, 2015). The International Classification of Functioning, Disability, and Health (World Health Organization [WHO], 2001) defines assistive products and technology as tools that improve the functional capabilities of persons with disabilities.

The UNCRPD explicitly recognizes the vital role of assistive technology in empowering and including persons with disabilities. For instance, Article 4(g) obligates state parties to promote the availability and affordability of assistive technologies, focusing on developing and utilizing new technologies, including mobility aids, to enhance the lives of individuals with disabilities. Furthermore, Article 4(h) mandates that states provide accessible information about these technologies, raising awareness and encouraging their use.

Assistive technology also plays a fundamental role in promoting personal mobility, a key aspect of independence for persons with disabilities. Article 20 of the UNCRPD requires states to ensure access to affordable mobility aids, devices, and technologies. Article 21 emphasizes the importance of freedom of expression and access to information, mandating that information be provided in accessible formats, such as sign language and Braille, to ensure full participation in society for persons with disabilities.

As a signatory to the UNCRPD, India has implemented various legal and institutional measures to improve the conditions of its disabled community. The Rights of Persons with Disabilities (RPWD) Act of 2016 emphasizes the availability, affordability, and awareness of assistive technology, further contributing to the empowerment of persons with disabilities in India.

This paper investigates the role of assistive technology in empowering persons with disabilities in the Kashmir region, an area often overlooked in discussions about disability and technology. Through qualitative methods, the study seeks to explore how assistive technology has transformed the lives of individuals with disabilities in Kashmir, particularly in terms of their social inclusion and independence. In-depth interviews with participants from diverse backgrounds will form the core of the primary data, offering personal insights into the profound impact of assistive technology on their daily lives.

Literature Review

Historical and Theoretical prospective

Historically, disability has been understood primarily through the lens of the medical model, which focused on the impairment itself as a defect requiring medical intervention. This view perpetuated the notion that persons with disabilities (PWDs) were objects of charity rather than individuals with rights (Zaks, 2023). The medical model, often referred to as the tragedy or charity model (Cologon, 2016), dominated for centuries, framing disability as a personal tragedy that required correction or support through acts of charity. However, this perspective has gradually shifted due to the advocacy efforts of

disability rights activists, organizations, and scholars.

Mike Oliver (1996) articulated the social model of disability, which marked a significant departure from the medical model. Instead of focusing on bodily limitations, the social model emphasized the barriers created by society—such as inaccessible environments and discriminatory attitudes—as the main challenges faced by PWDs. The social model gained momentum, thanks largely to global efforts, particularly by the United Nations (UN), and culminated in the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) in 2006, which embraced the human rights model (Degener, 2017). The human rights model recognized that persons with disabilities are entitled to the same rights as others and that it is the responsibility of society to remove obstacles preventing their full participation.

In this context, assistive technology has emerged as a critical tool for the empowerment and inclusion of PWDs. As Mary Pat Radabaugh succinctly stated, "For most people, technology makes things easier. For people with disabilities, technology makes things possible." This sentiment captures the transformative power of assistive technology, which allows PWDs to overcome barriers to participation and independence. The UNCRPD enshrined this view, notably in Article 9, which emphasizes the importance of accessibility, including the use of assistive technologies to ensure that PWDs can access physical environments, transportation, and communication technologies on an equal footing with others (UN, 2006).

Assistive Technology: A Global Perspective

The UNCRPD not only elevated the role of assistive technology to a human right but also mandated that State Parties take effective measures to ensure its availability, accessibility, and affordability. Article 4(g) of the Convention calls on States to promote the development and dissemination of assistive technologies, particularly in the areas of mobility and communication, and to make these technologies available at an affordable cost (UN, 2006). This is a crucial step in ensuring that PWDs, regardless of their economic status, can access the tools necessary for independence.

Additionally, Article 4(h) obligates States to provide accessible information about assistive technologies so that PWDs are well-informed about the resources available to them. The Convention further stresses the need for affordable mobility aids and personal training in Article 20, recognizing that enhancing personal mobility leads to greater independence and social participation for PWDs (UN, 2006). This is complemented by Article 21, which ensures freedom of expression and access to information through alternative communication methods, such as Braille, sign language, and accessible digital formats, further enhancing the role of assistive technology in ensuring inclusion (UN, 2006).

Assistive Technology in India: Policy and Gaps

India, as a signatory to the UNCRPD, reflects its provisions in the Rights of Persons with Disabilities (RPWD) Act of 2016. The Act aligns closely with the Convention, particularly in its emphasis on accessibility and assistive technology. Section 40 of the RPWD Act mandates that the Indian government take steps to ensure access to information, communication, and technology for PWDs. Various initiatives have been introduced to implement these provisions, focusing on improving accessibility in public spaces, transport, and communication platforms.

Despite these legal frameworks, several studies, such as Karki, Rushton, Bhattarai, and De Witte (2021), highlight significant implementation gaps. While the RPWD Act and the UNCRPD outline strong commitments, the real challenge lies in translating these policies into tangible benefits for PWDs across India. For example, issues of affordability, availability, and awareness of assistive technology remain significant obstacles. These challenges are further compounded in rural and remote areas, where access to

even basic assistive devices is often limited.

The Research Gap: Focus on Kashmir

While there is a growing body of literature examining the role of assistive technology in the empowerment of PWDs, academic work on this subject in the context of Kashmir is notably lacking. This gap is particularly significant given the unique socio-economic and geographical challenges faced by persons with disabilities in this region. Kashmir's challenging terrain, coupled with its socio-political complexities, makes the availability and accessibility of assistive technologies even more critical.

Studying the impact of assistive technology in the empowerment of PWDs in Kashmir will not only contribute to the academic discourse but also offer practical insights that can inform policymaking and implementation. Such research will provide evidence-based recommendations to governmental and non-governmental organizations, helping them address the specific needs of PWDs in Kashmir. Moreover, it will raise awareness about the role of assistive technologies in transforming the lives of PWDs from dependence to independence and from social exclusion to social inclusion, contributing to their overall empowerment.

By addressing this gap, the current study will not only fill a significant void in the academic literature but also provide a roadmap for future research and policy interventions aimed at ensuring that PWDs in Kashmir have access to the technologies they need to lead empowered, autonomous lives.

Research Methodology

This study employs a qualitative research design to explore the role of assistive technology in the empowerment of persons with disabilities in Kashmir. The qualitative approach allows for an in-depth investigation of the lived experiences of individuals with disabilities, providing rich insights into the ways assistive technologies have influenced their daily lives and social inclusion. Through primary data collection, this study focuses on capturing the subjective realities of participants, thereby offering a nuanced understanding of how assistive technology fosters empowerment.

Study Context And Participant Selection

The study was conducted in Kashmir region A total of 12 participants were recruited for this study, each of whom has direct experience with assistive technologies. These participants were selected to represent a diverse cross-section of individuals, accounting for factors such as geographic location, socio-economic background, gender, and employment status. The objective was to ensure that the study provides a holistic view of how assistive technology impacts individuals from various walks of life.

Sampling Strategy

Participants were selected using a non-probability snowball sampling method. Snowball sampling was considered appropriate due to its effectiveness in reaching marginalized populations, such as persons with disabilities in rural or geographically remote areas. This method proved essential in identifying participants who use assistive technologies but may not have been easily accessible through conventional sampling strategies.

The initial participants were located through personal contacts, social media outreach, and collaborations with local disability rights organizations. For example, Hilal Ahmed Dar from Pulwama, a visually impaired student, was identified through social networks. Syeda Haqmit Yaseen from Anantnag and Nayeema from Budgam were also located via referrals from disability-focused groups. Their stories offer

invaluable insights into how individuals from both urban and rural areas access and utilize assistive technologies to overcome various barriers. The geographic representation included participants from north, central, and south Kashmir, ensuring a broad spectrum of regional variations in the experiences of persons with disabilities.

Data Collection

The primary data collection method was semi-structured interviews. This approach allowed participants to express their experiences in their own words, offering detailed personal narratives about the impact of assistive technology on their lives. Semi-structured interviews were well-suited for this research, as they provided the flexibility to explore specific themes related to empowerment while also allowing participants the freedom to introduce topics they deemed important.

Before conducting the interviews, all participants were fully informed about the study's objectives, and informed consent was obtained for both participation and the recording of interviews. Participants were assured that their identities would remain confidential, except where they explicitly gave permission to use their names in the analysis and final paper. Each interview lasted between 30 to 60 minutes and was recorded with the participants' consent to ensure accurate transcription and analysis.

Data Analysis

The recorded interviews were transcribed verbatim, and the data was analysed using thematic analysis. Thematic analysis was chosen due to its capacity to systematically identify, organize, and interpret patterns across the dataset. The process involved multiple stages, beginning with familiarization with the data, followed by coding and theme identification, and ending with theme refinement and interpretation.

During the analysis, several themes emerged, which were directly linked to the experiences of the participants. Key themes included “From Dependence to Independence,” as highlighted by participants such as Imran Nabi from Baramulla, who discussed how assistive technologies like the smart cane and mobile phone enabled him to achieve personal autonomy. Another important theme, “From Social Exclusion to Social Inclusion,” was illustrated by Nayeema from Budgam, who emphasized how assistive technology allowed her to engage in social and educational activities despite societal barriers. Additionally, financial barriers and affordability issues were commonly cited by participants such as Syeda Haqmit Yaseen, who stressed the need for government support in providing high-priced assistive devices. Themes were then situated within the broader theoretical framework of the social model of disability, which emphasizes societal barriers rather than individual impairments. This framework was instrumental in linking the participants’ experiences with broader social, economic, and cultural factors that shape the accessibility and utilization of assistive technologies in Kashmir.

Ethical Considerations

Ethical considerations were paramount throughout this study. Participants’ privacy and confidentiality were safeguarded by assigning pseudonyms in all cases where consent to use real names was not provided. Furthermore, participants were informed of their right to withdraw from the study at any point. All interviews were conducted in a manner that respected the participants' dignity and comfort, ensuring that they could freely express their experiences without feeling vulnerable or coerced.

Given the sensitivity of the topic, especially considering the marginalized status of persons with disabilities, the researcher took extra care to create a supportive and respectful environment during the

interviews. The data collected was used solely for academic purposes, with the aim of contributing to policy discussions and practices that promote the empowerment and inclusion of persons with disabilities.

Limitations

While the study provides valuable insights into the role of assistive technology in empowering persons with disabilities, certain limitations must be acknowledged. The sample size of 12 participants, though suitable for qualitative research, may not fully capture the diversity of experiences across all persons with disabilities in Kashmir. Consequently, the findings may not be broadly generalizable. Moreover, the use of snowball sampling, while effective in reaching a dispersed population, may introduce sampling bias as participants referred by others might share similar experiences or characteristics.

Additionally, the reliance on self-reported data through interviews means that the findings are shaped by participants' perceptions and memories. While efforts were made to probe participants' answers thoroughly, the data still reflects individual interpretations of their experiences.

The research methodology utilized in this study, based on semi-structured interviews and thematic analysis, offers a rigorous and nuanced exploration of the role of assistive technology in the empowerment of persons with disabilities in Kashmir. By selecting a diverse group of participants and employing ethical research practices, this study presents a comprehensive understanding of how assistive technologies facilitate both personal and social empowerment. The findings contribute to the broader academic discourse on disability and technology, while also offering practical recommendations for improving access to assistive devices in Kashmir.

Results and Discussion

Description Of Participants

A total of 12 participants were included in this study, representing a diverse demographic profile. Of these, 8 participants were male, and 4 were female. The participants were geographically distributed across different regions of Kashmir, with 5 participants from north Kashmir, 3 from central Kashmir, and 4 from south Kashmir. This regional variation allowed for a comprehensive understanding of the role of assistive technology in different parts of the region.

The participants also came from various socio-economic and occupational backgrounds, including students, unemployed persons with disabilities, and employed persons with disabilities. The age distribution showed that 3 participants were between 18 to 24 years old, while 9 participants were aged 24 to 40 years. In terms of residence, 5 participants were from urban areas, while 7 participants were from rural areas, ensuring a balanced representation of both urban and rural experiences.

Based on the data gathered from these participants, the following relevant themes emerged in relation to the role of assistive technology in their empowerment:

From Dependence To Independence

The perception that persons with disabilities are dependent on others has been historically reinforced by church and societal norms. Glendinning (2005) highlights this belief, which, although pervasive, was echoed by the participants in this study. Notably, 80% of the respondents acknowledged that before utilizing assistive technology, they relied heavily on others for daily activities. However, a critical shift in their lives occurred with the adoption of assistive devices, leading to an enhanced sense of autonomy and independence. This transformation aligns with the research objective of exploring how assistive technology empowers persons with disabilities, particularly in the context of Kashmir.

Imran Nabi, a visually impaired student from Baramulla, North Kashmir, exemplifies this transition. After losing his vision due to an accident, Imran initially found himself entirely dependent on others for mobility and academic pursuits. Reflecting on his experience, he stated, "I was totally dependent on others, but that changed once I started using assistive technology. With a smart cane, I can travel independently from my home to any location. In addition, my mobile phone and computer have made me independent in my educational pursuits." His testimony underscores the transformative impact of assistive technology in reducing dependency and fostering autonomy, particularly within educational settings.

Similarly, Firdous Ahmed, from Kupwara, North Kashmir, recounted his early years, during which he was entirely reliant on his family for mobility, often being carried to school by his parents. As he advanced in age, logistical challenges hindered his regular school attendance, further entrenching his dependence. The introduction of a tricycle marked a turning point in his life. According to Firdous, "When I began using the tricycle, I felt like I could finally live more independently." This sense of autonomy was further enhanced when he received a motorized scooter from the social welfare department, enabling him to navigate freely, as he expressed, "The scooter helps me a lot now; I can go anywhere I want." Firdous' account illustrates the critical role of mobility aids in enhancing personal autonomy.

These personal narratives vividly demonstrate the essential role of assistive technology in facilitating the transition from dependence to independence for persons with disabilities. Across all interviews, participants consistently highlighted those devices such as smart canes, mobile phones, computers, wheelchairs, tricycles, and motorized scooters significantly enhanced their ability to perform tasks independently, both in personal life and in educational and social contexts.

This theme also emphasizes the broader implications of assistive technology, not only in mitigating physical barriers but also in reframing the concept of disability. As the research findings suggest, assistive technology is integral to shifting the narrative from one of dependency to one of empowerment and self-reliance. This shift has profound implications for social inclusion, as individuals who once relied on others for basic needs are now actively participating in various aspects of life with increased independence.

Furthermore, the participants' testimonies reflect that assistive technologies bridge the gap between dependence and independence, fostering both practical and psychological empowerment. Considering this, the study underscores the importance of enhancing access to assistive technologies, as they play a pivotal role in improving the quality of life for persons with disabilities, enabling them to overcome limitations and engage more fully with society.

From Social Exclusion To Social Inclusion

Historically, persons with disabilities have been viewed predominantly through a charity-based lens, (Cologon, 2016), a perception that has significantly contributed to their social marginalization. This outdated narrative positioned individuals with disabilities as passive recipients of aid rather than as active agents with inherent rights. The emergence of assistive technologies, however, has been instrumental in dismantling this paradigm. As illustrated by the experiences of participants in this study, these technologies have facilitated a shift from exclusion to inclusion, enabling persons with disabilities to participate meaningfully in social, cultural, and political spheres.

Participants across different regions of Kashmir highlighted the profound impact of assistive technologies in addressing their social isolation. The exclusion they faced was not solely a consequence of their impairments but was compounded by societal barriers, aligning with the principles of the social model of disability, as articulated by Mike Oliver. This model underscores that disability is as much a social construct as it is an individual condition, suggesting that societal changes, including technological

interventions, are necessary to foster inclusion.

An illustrative example is the case of Rukaya Akbar from rural Baramulla, who became disabled at the age of four. Prior to acquiring assistive devices such as a tricycle and motorized scooter, she experienced significant barriers to participation in daily life, including social gatherings and community events. The introduction of these technologies marked a critical turning point, enabling her to engage independently in both social and political activities. While infrastructural limitations persist, Rukaya's experience demonstrates the essential role of assistive technology in facilitating social inclusion.

Similarly, Hilal Ahmed from Pulwama described the transformative effect of assistive technologies, particularly social media, on his ability to connect with his community. Despite his blindness, access to digital platforms has enabled Hilal to express his thoughts, maintain relationships, and foster a sense of belonging opportunities that were previously inaccessible to him. His experience underscores the importance of digital inclusion in promoting social engagement for persons with disabilities.

In the case of Abass from Kupwara, limited awareness of assistive technologies presented a significant barrier to his inclusion. Despite some gains in independence through basic mobile phone use, Abass emphasized that a more profound transformation in his social participation could occur if there were greater access to and awareness of advanced assistive devices in his remote, hilly region. His testimony highlights the critical need for targeted awareness campaigns and government interventions to bridge the gap in technological accessibility, particularly in underdeveloped areas.

Shareez Ahmed from Srinagar also shared how the early years of his life were marked by isolation, even within his own family. With the help of assistive technologies like a smart cane and computer, however, he was able to regain independence and social confidence. Now, Shareez participates in social programs and events, illustrating the transformative shift from social exclusion to active engagement facilitated by assistive technology.

Similarly, Nayeema from Budgam, Central Kashmir, credited assistive technology for enhancing her social participation. As a YouTuber who creates content on social and cultural issues, her use of digital platforms has allowed her to overcome physical barriers and engage with a wider audience, showcasing how assistive technologies can foster not only physical mobility but also digital inclusion.

These case studies collectively underscore the profound role of assistive technology in bridging the gap between social exclusion and inclusion. Participants uniformly reported that access to assistive technologies enhanced their autonomy and allowed them to engage with society more fully. This inclusion is both physical, through increased mobility, and digital, through new avenues for social interaction and participation.

Theoretical implications. The lived experiences of the participants resonate with the social model of disability, which posits that societal barriers rather than impairments themselves are often the root cause of exclusion. In this framework, assistive technologies serve as crucial tools to dismantle these barriers by offering reasonable accommodations that enable persons with disabilities to participate in society on equal footing. As Mike Oliver's model suggests, disabilities can be mitigated, or even nullified, through proper social support, infrastructure, and technological interventions.

Moreover, these narratives affirm the need to shift from a charity-based approach to a rights-based framework for disability inclusion. Assistive technology enables individuals to assert their rights to full participation in society, rather than remaining dependent on acts of charity. This shift is essential for fostering long-term inclusion and equity.

Practical Implications and recommendations. The findings from this theme emphasize the need for enhanced investment in assistive technologies and supportive infrastructure, especially in rural and remote regions. The lack of awareness and access to assistive technologies, as articulated by participants like Abass, reveals a critical gap in both policy implementation and outreach efforts. To address this, government initiatives should prioritize raising awareness about available assistive devices and providing financial assistance to make these technologies accessible, particularly to economically disadvantaged individuals.

In addition, participants like Hilal and Nayeema illustrate the transformative potential of digital platforms in fostering social inclusion. Consequently, there is a need to promote digital literacy among persons with disabilities and ensure that online platforms are accessible and inclusive. This would enable individuals to harness the full potential of digital technology for social, educational, and political participation.

The theme of "From Social Exclusion to Social Inclusion" highlights the significant role of assistive technologies in transforming the lives of persons with disabilities. These technologies bridge the gap between isolation and participation, reshaping societal interactions and fostering greater social equity. Going forward, there is an urgent need for continued advocacy, policy reforms, and infrastructural improvements to ensure that all persons with disabilities have access to the tools necessary for their full inclusion in society.

Role Of Assistive Technology In The Education Of Persons With Disabilities In Kashmir

The impact of technology on education has been transformative, particularly for students with disabilities. Assistive technology has significantly reshaped the educational landscape, enabling students with disabilities to overcome traditional barriers and engage with academic content on a more equal footing with their peers. In the context of Kashmir, assistive technology has become an indispensable tool for enhancing educational outcomes and fostering academic independence.

A pertinent example is the case of Syeda Haqmit Yaseen, a visually impaired first-year BA student from Anantnag. Syeda's educational journey illustrates the profound effect of assistive technology on her ability to engage with academic resources and navigate the learning environment independently. By utilizing a smartphone, smart cane, computer, and audio recorder, Syeda has been able to access reading materials, complete assignments, and participate in classroom activities without the constant need for external assistance. These technologies have not only facilitated her academic performance but have also empowered her to engage more fully in the educational process.

Assistive technology enables students like Syeda to transcend the limitations imposed by their disabilities, thus promoting inclusivity in education. Through screen readers, text-to-speech software, and other adaptive tools, students with disabilities are no longer reliant on traditional, often inaccessible, methods of learning. Instead, they can independently access information, contribute to academic discussions, and develop critical skills necessary for their personal and professional growth.

The integration of assistive technology in education is, therefore, not merely an enhancement but a fundamental requirement for ensuring that students with disabilities can achieve educational equity. In the case of Kashmir, where access to resources may be limited, the role of assistive technology becomes even more critical. It provides these students with the tools necessary to overcome geographical and infrastructural constraints, facilitating their participation in mainstream education. Ultimately, assistive technology is a crucial enabler of both educational success and broader social inclusion for persons with disabilities.

Challenges to Assistive Technology

While assistive technology has significant beneficial effects for persons with disabilities, there are various challenges or barriers to their use (Dwivedi, 2019). Based on interviews conducted with different participants in this study, it was observed that persons with disabilities face several problems when using assistive technology. Some of these challenges are highlighted below:

Financial Challenges

Persons with disabilities, particularly those from rural areas and low-income families, often face financial obstacles in acquiring assistive technology. Abass, from a hilly area in North Kashmir (Kupwara), expressed that he comes from a low-income family, making it difficult for him to purchase a mobile phone for his studies. When asked about government grants for assistive devices, he stated, "I came to know very recently that the government is providing such devices for PWDs." This sentiment was echoed by nearly 60% of participants, who indicated that financial constraints prevent them from purchasing devices that could enhance their capabilities and overall quality of life.

Lack Of Awareness

Many participants from rural areas reported a lack of awareness regarding government schemes and the facilities offered by non-governmental organizations. Abass also noted that he only became aware of assistive technology when he arrived at Kashmir University, highlighting the gap in awareness in rural areas. However, it is worth mentioning that Syeda Hakmit from South Kashmir received her education in a special school, which enabled her to advance more effectively.

Social Stigma Associated With Assistive Technology

Stigma encompasses negative attitudes or discrimination against individuals based on distinguishing characteristics, such as mental illness, health conditions, or disabilities (Caddell, 2023). Notably, stigma is also associated with the assistive devices used by persons with disabilities. During conversations with participants, 70% reported experiencing stigma while using their assistive devices in public spaces. A locomotor-disabled individual from the hilly area of North Kashmir (Kupwara) shared that he faces significant challenges when navigating his scooter or tricycle, as people often look at him with differing attitudes.

Zahoor Ahmed, who became disabled, recounted how societal attitudes initially made him feel like a "dead body in the world." Although he has gained independence through the use of a tricycle, wheelchair, and scooter, the shadow of stigma persists. While Zahoor acknowledges that societal perceptions have improved over time, he still encounters negative attitudes, particularly when using assistive devices in public.

This stigma can deter individuals from fully engaging in social, cultural, and professional activities, adversely affecting their quality of life. However, Zahoor emphasizes the importance of collaboration between the government, society, and persons with disabilities to foster an inclusive environment. By challenging stigma and promoting awareness, we can ensure that assistive technology serves not only as a tool for independence but also as a bridge toward social acceptance and participation.

Conclusion

The findings of this study underscore the transformative role of assistive technology in shifting the

discourse surrounding disability from one rooted in charity to one grounded in human rights. Assistive technology is not merely a tool for convenience but a fundamental component of ensuring the autonomy and empowerment of persons with disabilities (PWDs). This centrality is reflected in international frameworks such as the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD), which emphasizes access to assistive technology across several articles. As a signatory to the UNCRPD, India's Rights of Persons with Disabilities Act (RPWD) similarly incorporates provisions for assistive technology, demonstrating a clear recognition of its role in enhancing the quality of life and promoting the rights of PWDs.

While this study focused on Kashmir, the key findings emerged through three main themes. The first theme, From Dependence to Independence, highlighted how assistive technology enables PWDs in Kashmir to transition from reliance on others to self-reliance. The second theme, From Social Exclusion to Social Inclusion, underscored the significance of assistive technology in promoting social participation and breaking down barriers that previously isolated PWDs from mainstream society. The third theme, The Role of Assistive Technology in the Education of Persons with Disabilities, emphasized how these technologies contribute to educational attainment, opening new avenues for academic success and professional development.

However, this study also identified several challenges that impede the full potential of assistive technology, including financial constraints, lack of awareness, and the stigma associated with its use. These barriers highlight the need for concerted efforts by various stakeholders—including government agencies, non-governmental organizations, and social institutions—to enhance accessibility, affordability, and awareness of assistive technology in Kashmir. A multi-pronged approach that includes financial support for low-income PWDs, comprehensive training programs, and mass awareness campaigns will be crucial to ensuring the widespread adoption of assistive technologies.

challenges. First, the government should ensure the availability of assistive technology at affordable prices and provide free access to these technologies for low-income PWDs. Second Participants in this study suggested several actionable measures to address these, Suggestions

efforts should be made to identify PWDs across the region through collaboration with NGOs, social, and religious institutions, ensuring that they receive the necessary training and resources. Third, widespread awareness campaigns should be initiated to dismantle the stigma associated with disability and assistive technology. Finally, the establishment of a nodal officer at the state level could ensure the monitoring of accessibility and the implementation of assistive technology programs.

Limitations Of The Study

While this study provides valuable insights, it acknowledges certain limitations. The sample size, although informative, is not extensive enough to capture the full range of experiences among PWDs in Kashmir. Future research should aim to include a larger and more diverse sample. Additionally, this study focused on PWDs who already use assistive technology. Further studies should explore the challenges faced by those without access to these technologies to better understand the barriers to adoption and potential solutions.

In conclusion, this study affirms that assistive technology is a powerful enabler, transforming the lives of PWDs by promoting independence, inclusion, and educational opportunities. Its widespread adoption is essential for building a progressive, dignified, and inclusive society. By addressing the financial, social, and awareness-related challenges surrounding assistive technology, stakeholders can ensure that PWDs in

Kashmir and beyond can fully participate in and contribute to society.

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