



**The challenges to accessing services faced by adult (18 and above) disabled persons in Bangladesh: A systematic literature review.**

***Qumrun Naher Islam***

Bangladesh Bureau of Statistics, Sher-e-Bangla Nagar, Dhaka 1207, Bangladesh;

Master's in Public Health, The University of Sheffield, Sheffield, England;

Master's in Development Studies, BRAC University, Dhaka, Bangladesh;

Master's in Economics, University of Rajshahi, Rajshahi, Bangladesh.

[meghnahossain94@gmail.com](mailto:meghnahossain94@gmail.com)

**Abstract:** Disability is an umbrella term that includes three-tier impairment— impairment, handicap, and disability. The situation of the PWD's in Bangladesh is not improving much due to the access challenges to the provided services. This review aims to identify the access challenges in services faced by the adult (18 and above) disabled persons in Bangladesh so that government can focus on the issues and take appropriate intervention to address them. Objectives of the review is to identify the access challenges in services provided for an adult disabled person in Bangladesh, provide recommendations to improve the quality of life of the disabled living in Bangladesh and provide important information to the policymakers to take interventions to improve the lives of disable people and involve them in the country's development process. This is a systematic literature review based on qualitative analysis with narrative synthesis. MEDLINE/PubMed, CINAHL, and Google were searched for the review. PRISMA was used to track the number of included studies and their sources, not to extract information. There is no funding available.

PWDs are facing many challenges to get access to the services. In education, employment, health care, getting assistive devices, rehabilitation -in all sectors they are discriminated against. These challenges are not only for their functional difficulty but also for the societal outlooks. Disabled people are also responsible for their poor state as they do not raise their voices to acquire their rights. Disable people are not aware of the provided services. Government should provide more effort on awareness creation. To improve the disability situation, the government and other organizations along with disabled persons need to work together.

**Keywords:** challenges, accessing services, adult disable, systematic literature review, Bangladesh.

---

## **Introduction**

Disability is an umbrella term that includes three-tier impairment— impairment, handicap, and disability. Metts (2004) placed disability as “a mixed interconnected biomedical, social and environmental phenomenon that needs further analysis to be fully understood” [1]. A significant change has been noticed around disability, especially in developed countries, in the last 60 years. It happened due to increased awareness of the persons with disability (PWD) and their supports. However, the well-being of disabled persons in developing countries is still questionable. Disable people are suffering from a high range of inequality and discrimination [1]. To achieve the SDGs, Governments of different countries are trying to involve marginalized people including disabled persons in the development process and so they provide facilities to the PWDs to improve their lives. However, the situation of the PWD’s is not improving much due to the access challenges to the provided services [2].

## **Background**

Disability is a major concern for human rights as a PWD often faces discrimination in society and being deprived of having the benefits provided by the nation. The UN Economic and Social Commission for Asia and the Pacific (UNESCAP) had adopted The Asian and Pacific Decade for PWDs (1993–2002) in 1992 and afterward, the issues of disability and development, disability, and poverty attracted attention in Asian developing countries [3].

In most of the welfare countries, initial rights of PWDs are maintained, and following that Bangladesh Government has also induced the rights of disabled persons very seriously. To ameliorate the status of PWDs quickly and involve them in the development process, the Government of Bangladesh enacted a disability law [4]. It ensures that disabled people are citizens of equal rights and they can also contribute to the social and economic development of the country if they are provided the opportunity. However, PWDs mostly face ignorance and they are a marginalized group who do not have easy access to the initial social services such as basic health care, education, water, sanitation, and hygiene [4]. The agenda for SDGs 2030 is "leave no one behind" where disability is a cross-cutting issue in most of the goals. To achieve SDGs, it is necessary to ensure all citizens be participating in the development and it will not be possible without the participation of disabled people. It has been noticed that PWDs face deprivation, ignorance, and exclusion in most of the social, cultural, political, and economic lives of their communities [5]; they experience poverty and do not involve themselves in the country’s development process [6-8].

Disability is related to the physical and psychological condition of people which mainly creates disturbance performing their daily jobs in family and the society. World Health Report (2011) calculates that 15% of the world's population are facing some type of disability and 3.8% of them aged 15 years and above having serious difficulties in functioning, often look at healthcare services [9]. South Asia is the home of India, Pakistan, and Bangladesh which are the world’s second, sixth, and eighth-most populous countries [10]. In this region, the disability prevalence rate varies from 1.9% (Census—all age), [11] to 12.2% (Washington Group definition with clinical examination among the population of 18 years and above) [12]. According to the World Report of disability 2015, disability prevalence is 2.7% in Afghanistan where the data source surveys, it is 9.1% (WG) in Bangladesh, in Bhutan 3.4% (Census), India 2.2% (Census), Maldives 10.9% (WG), Myanmar 2.3% (Census), Nepal 1.9% (Census), Pakistan 2.5% (Census) and in Sri Lanka the prevalence of disability is 8.7% (Washington Group

definition) [13]. Disability can be by birth or by having an accident or from some mental disturbance. PWDs always face challenges to access the health services, education, employment sectors, in brief, they are always being discriminated against by society. Although great progress has been made to make the world more suitable for PWD, still, a far way needs to go [14].

Disability is not only a health condition; it is also a societal factor. Sometimes society hinders the access of a physically challenged person for their lack of knowledge. According to the International Classification of Functioning, Disability, and Health (ICF) disability is an upshot of the interaction between a negative health state and contextual factor. To improve their lives all countries are trying to provide extra facilities to them but it has been impeded due to lack of actual data. It is important to have authentic data on the prevalence of disabled persons and how they are enjoying the services provided for them and whether any changes have happened or not by having the facilities [15].

Due to the variation of definition and methodologies used, estimates of disability prevalence in Bangladesh varied [16]. The use of the term 'disability' creates confusion to many people because they realize the most serious limitations as disability and that is why mild and moderate disabilities are often being underreported. The World Report on Disability [17] and Mitra and Sambamoorthi [18] estimated a disability prevalence of 31.9% and 22.0% respectively where World Health Survey (WHS) 2002-2004 data was used. According to Household income and Expenditure survey (HIES) (2016), in Bangladesh, disability prevalence is 6.94% where the prevalence of females is (7.59%) higher than the males (6.27%) [19].

### **Rationale for Review**

The Bangladesh government has provided a lot of services for adult PWDs. However, disabled persons cannot access those services. They face challenges in accessing the health, education services, law and justice sector, employment, politics, housing, transport, social and cultural life, public services, and places. They are also affected by the environment and behavior of society. In a disaster, they are the most vulnerable. Women with disabilities are also subject to partner and non-partner violence more than women without disabilities [20]. Changes are happening in understanding disability but if the challenges can be identified then it will be easy to focus on the disability-related services and interventions [21]. A study done by Ali (2014) found that approximately 1.74 % of Bangladesh's GDP is lost due to disability. The Bangladesh government does not achieve more regarding income generation for PWDs [22].

Although the world economy is growing day by day, a significant percentage of PWDs have faced poorer health conditions than those without disabilities. The World Health Organization (WHO) report emphasizes the challenge to access to health care services where PWDs always face discrimination [48]. PWD comprehends that health providers and policymakers have premeditated notions about PWD's abilities, intentions, needs, and demands and that is why they have limited access to health care [20]. According to Mosher et al., (2017), disabled women receive lower family planning services [23].

It is clear that disability is not only about physical impairment, but also about the barriers imposed by society. The concept of disability is extended now. With the functional limitations, people with various health conditions such as people with HIV/AIDS and those with attention deficit disorder are also included in this definition. In short, the people who are discriminated against for their race, gender,

poverty, all can be introduced as disabled [24]. To include disabled persons in the development process, it is necessary not only to consider impair-based disability but also to include all other important causes of disability that create social exclusion [24]. For this reason, it is important to know their difficulties, challenges faced in daily life.

In every sector, awareness has a vital role to play. If the government wants to intervene in any sector, they should know the actual situation of that sector. Likewise, disability is such a sector where the government already implements some policies, provides benefits but the well-being of the disabled persons is not achieved. Still, in Bangladesh, disabled people are always facing discrimination, suffering from poor health conditions, poverty, living a miserable life. Why so? To know the answer government should understand whether the PWDs are enjoying the provided benefits or not. If not, why that happened? The review will try to answer the questions. The review will identify the potential important sectors where disabled persons cannot get access to enjoy the services although they have the right to have and what are the challenges faced by them. This review will be benefitted for the government of Bangladesh, policymakers, researchers, academia, students to have a clear idea about the service barriers faced by the PWDs. Reviewing this, policymakers can make disability services implement friendly policies and the government can provide attention to intervene on the particular sectors. It will also be helpful to create attention of donor agencies to invest in disability issues. It can open a new door for further research to identify the ways to have a better inclusion.

## **Materials and Methods**

Research Question: What challenges to accessing services are faced by an adult (18 and above) disabled person in Bangladesh?

Aim: Bangladesh government has provided many services to improve the living status of adult PWDs but the achievement is not as per expectation. PWDs are facing challenges in accessing the services and they cannot enjoy the facilities. The research aims to identify the challenges to access the services provided for adult disabled persons in Bangladesh and to make potential recommendations to address those issues.

### Objectives

1. To identify the access challenges in services provided for adult (18 and above) disabled persons in Bangladesh;
2. To provide recommendations to reduce the access challenges and improve the quality of life of the disabled living in Bangladesh;
3. To provide important information to the government and policymakers to make effective policies and interventions to improve the lives of PWD and involve them in the country's development process.

## **Method**

Study Design and justification of the choice: The research has systematically reviewed the existing literature on the selected topic and followed the qualitative analysis with narrative synthesis. When there is a limitation of primary or secondary data, the literature review is the best way to analyze the problem [25]. To fill the information gap in public health programs, a systematic literature review (SLR)

is one of the most important sources of data acquisition. This is the process where multiple data sources, grey literature are used to make the research comprehensive and transparent. Transparency, clarity, coverage, focus, accessibility, equality, integration are the seven key principles behind systematic literature reviews [25].

Study characteristics: The review included all relevant papers on the selected topic such as qualitative, quantitative, mixed-method studies, articles, editorials, commentaries, policy briefs. For this review, not only English papers but also Bengali papers were searched. Being a Bengali, it was easy for me to translate the papers into English. The literature only talked about the challenges faced by the PWDs in accessing services provided by the Bangladesh government are included in this research.

Population of the study: Adult (18 and above) disabled persons of Bangladesh are the main target group of this review. As they are a recognizable portion of Bangladesh, their development is much more important to improve the social and economic condition of Bangladesh. Although most of the selected studies do not specifically mention the age of the disabled persons, reviewing the whole literature it is assumed that the literature is for adult persons. The studies that are only for the children, mentioned clearly in the heading or the main body, and they are excluded. According to the Convention on the Rights of the Child, age below 18 is recognized as the child and Bangladesh has ratified this in 1990 [26]. That is why adult (18 and above) disabled persons are mentioned in the review.

Sources of information: To identify published literature on challenges to access in services provided for PWDs in Bangladesh, MEDLINE/PubMed, CINAHL, Google were searched. Full papers were also asked from the author online where needed. As it is a student paper and time is fixed, hand search was not possible. The world pandemic is also a strong reason not to visit libraries in person. PRISMA was used to track the number of included studies and their sources, not to extract information.

Search strategy of the literature: Four main search terms were selected with their Medical Subject Headings terms and vocabulary related key search terms: Bangladesh, a person with a disability, access challenges, service. Articles were also searched using the terms 'disability or disabilities or disabled or impairment or impaired or special or special needs or PWD', 'services or programs or intervention or resources', 'challenges or obstacles or challenges or difficulties or issues or problems' 'Bangladesh', 'South Asia', 'journal article', 'editorial', 'commentary', etc. Searched literature was primarily shortlisted based on the access challenges to services for disabled persons. No time limit was used so that the maximum number of papers can be searched. The full electronic search strategy used is attached in **appendix A**.

Study Selection: A critical selection criterion was maintained to select the articles. Firstly, the articles focused on disability in Bangladesh are identified. The second filter was the challenges to access in services. The third filter was the articles that focus on adults' (18 and above) disability issues; the studies only focus on children with disabilities were left out from the review. The last filter was the country. Lastly, the selected literatures were provided ID to locate them easily (**appendix B**).

Data collection: For this research, a pre-validated qualitative data extraction form was used. Some customizations were also done based on requirements. One student extracted and compile the data (me) as it is a student project. But in a systematic literature review, two or more person is needed to make it intensive.

Data items: Data items are listed in **appendix C**.

Quality assessment: Hawker et al (2002)'s quality assessment tool was used to evaluate the quality of the selected nine studies. It is a tool that is dedicated to evaluating studies that maintain the diversity in research paradigms. Due to quality, no study was rejected; rather, studies were evaluated and submitted descriptively [27]. This quality assessment tool used nine domains and no cut-off points were suggested here. To make it clearer, Lorenc et al., (2014)'s grading system was used to evaluate and grade the literatures where 30 to 36 points are given for high quality, 24 to 29 points are for medium quality, and 9 to 23 points are for low-quality studies [28]. For the grey literature, the AACODS tool was used. This checklist is designed to evaluate and appraise critically the grey literature. Detail of the quality assessment is provided in **appendix D and D1**.

Summary measures: A pre-validated qualitative data extraction form was used in the research with some customization. For preparing the data extraction form, MS word was used and one reviewer extracted data by hand searching.

Synthesis of results: As it is a qualitative review, narrative synthesis is appropriate for the research. To minimize bias narrative synthesis follows systematic, transparent, reproducible processes [29]. According to Thompson (2020), "narrative synthesis incorporates more diverse evidence sources and address questions that respond to questions about complex policy interventions" [30].

Ethical consideration: The research was not sent to any ethical board as it is a literature review. The supervisor's approval is enough for further processing. Supervisor's signed letter is attached in **appendix G**.

Funding: As it is a student project no funding is involved here.

## **Result**

### 3.1 Prisma flow chart

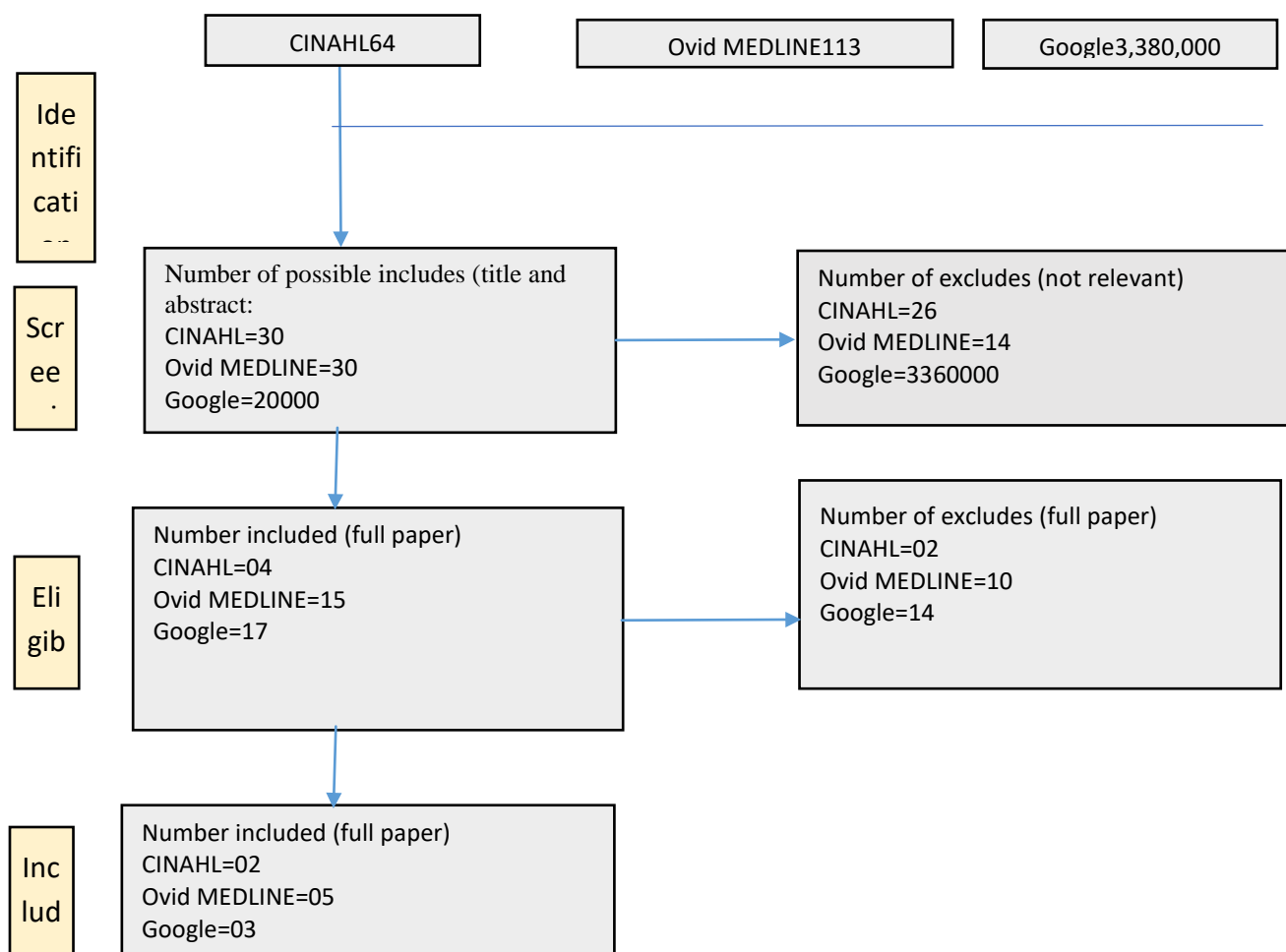


Fig:1

Searching the CINAHL database 64 kinds of literature on disabled persons were found but they are not all relevant to the topic. After searching the abstract 30 were found to review further. Due to not match with the target population 10 were excluded. 16 pieces of literature were not based in Bangladesh. Only four pieces of literature were found related to the topic and two were chosen for the review because they were most relevant to the research.

In the Ovid MEDLINE database, 113 pieces of literature were found. During the abstract review, 83 kinds of literature were excluded and 30 pieces of literature were chosen for the next step. Among them, the 15 pieces of literature were chosen for the full review, and the five most relevant pieces of literature were included in the research.

In google, 3,380,000 kinds of literature were and 20000 pieces of literature were chosen for further review. Maintaining the study criteria 17 kinds of literature were selected and after those five kinds of literature were found to be used. However, among them two were already found on other databases so, three were used.

The reason for not including the papers in the final study is mentioned in **appendix E** and the data extractions are provided in **appendix E**.

### Characteristics of the Studies

Ten studies were found which met the inclusion criteria for the review. The characteristics of the studies are presented below.

**Table:1 Characteristics of the Studies**

ID	Author Year	Country	Language	Published journal	Study design	Data analysis	Population	Aim
1.	Karki et al., (2021)	Nepal, India, and Bangladesh.	English	Disability and Rehabilitation: Assistive Technology.	Descriptive exploratory qualitative study design	NVivo 12	For this research, the government employees who made policy for assistive products service, who provide services, and the AT service users who used AT mostly for mobility and hearing-related problems are chosen.	To find out the challenges of accessing the AT services for the disabled persons living in Nepal, India, and Bangladesh and also provide a guideline, based on the identified practices, to develop a service delivery model suitable for these countries.
2.	Stuckey et al., (2020)	Bangladesh	English	SAGE	Qualitative interviews with thematic analysis.	Descriptive statistics	18+ males/females having uni- or bilateral transtibial or transfemoral amputation, seeking	To identify the experience of Bangladeshi people who were intended to have lower limb amputation (LLA) and prosthetic rehabilitation



ID	Author Year	Country	Language	Published journal	Study design	Data analysis	Population	Aim
							rehabilitation and prosthetic services, like to share their experience willingly by a one-on-one conversation were eligible for this study.	(PR) to understand the service of the providers and barriers to providing the services.
3.	Gudlavalleti, (2018)	South Asia	English	International Journal of Environmental Research and Public Health	Literature review	Not mentioned	Adults (18 to 50) with disability.	To identify the challenge faced by the adult disabled in accessing health care services in South Asia.
4.	Imam et al., (2021)	Bangladesh	English	Disability and Rehabilitation	Mixed-method (Online survey and scoping review) study.	For scoping review excel template and for the online survey IBM SPSS Statistics v.26, Armonk, NY were used.	For scoping review studies talked on PWDs and rehabilitation in Bangladesh were selected and for online survey Rehabilitation units that have at least one rehabilitation professional were included.	To assess the ongoing situation of the provided services for persons with disabilities in Bangladesh.

ID	Author Year	Country	Language	Published journal	Study design	Data analysis	Population	Aim
5.	Borg & Östergren, (2015)	Bangladesh	English	Disability and Rehabilitation: Assistive Technology.	Quantitative study design	By using IBM SPSS Statistics Version 20, descriptive and analytic statistics are performed to analyse the data.	Hearing aids or wheelchair users aged from 15–55 years.	To provide a better understanding of challenges faced by the PWDs in not accessing services on assistive devices describing potential reasons such as lack of awareness providers attitude, costs, usual reasons for not attending assistive technologies; and also make a comparison of the sources of Ads. The study also tried to provide solutions to the problem.
6.	Aldersey et al., (2018)	Bangladesh	English	Disability, CBR and Inclusive Development	Participatory action research study design. Photovoice and semi-structured interviews are done.	Photovoice and semi-structured interviews are done. For the photovoice analysis, the most reliable	Above 16 years old people who use wheelchairs were chosen for the interview.	To identify the challenges faced by wheelchair users living in Bangladesh, how these challenges exclude them from society, and the potential solutions to improve the

ID	Author Year	Country	Language	Published journal	Study design	Data analysis	Population	Aim
						pictures were identified , and based on that data were analysed. For semi-structured interviews, thematic analysis was done.		accessibility in services and include them in the society.
7.	Quinn et al., (2016)	Bangladesh	English	Disability, CBR and Inclusive Development	Qualitative study design. Semi-structured in-depth interviews .	Social determinants of health framework and the International Classification of Functioning (ICF) model.	Women between the 15 and 40 ages with a spinal cord injury or amputation by a traumatic cause and had been admitted to the hospital for at least 3 months.	To identify the barriers in social inclusion faced by the women PWDs in Bangladesh and to find out the influence of this exclusion on their health.
8.	Thompson S. (2020)	Bangladesh	English	Online paper. Found at <a href="https://opendocs.ids.ac.uk/opendocs/bitstream/handle/20.500.12413/15525/DI">https://opendocs.ids.ac.uk/opendocs/bitstream/handle/20.500.12413/15525/DI</a>	Non-systematic literature review.	Thematic analysis.	Updated academic and grey literature are selected for this review.	Identify the recent situation of PWDs living in Bangladesh Kenya, Nigeria,

ID	Author Year	Country	Language	Published journal	Study design	Data analysis	Population	Aim
				D%20SITAN%20Bangladesh%20Version%20I%20June%202020.pdf?sequence=1				Tanzania, Nepal, and Jordan.
9.	Nokrek et al., (2013)	Bangladesh	English	Online paper. Found at <a href="https://assets.publishing.service.gov.uk/media/57a08a48e5274a31e000050a/S_hiree-WP12.pdf">https://assets.publishing.service.gov.uk/media/57a08a48e5274a31e000050a/S_hiree-WP12.pdf</a>	Mixed method study design.	Microsoft Excel and SPSS are used for analysing quantitative data.	Working-age (15 and 59 years) disabled people who are identified by the Government of Bangladesh are chosen	To find out the poor disabled person's situation who involve themselves in income-generating activities live in the southwest coastal region of Bangladesh.
10.	Anwar et al., (2019)	Bangladesh	English	Online paper. Found at <a href="https://documents1.worldbank.org/curated/en/456261552536945647/pdf/135275-BRI-PUBLIC-13-3-2019-9-16-33-ProgrammbriefonDAF.pdf">https://documents1.worldbank.org/curated/en/456261552536945647/pdf/135275-BRI-PUBLIC-13-3-2019-9-16-33-ProgrammbriefonDAF.pdf</a>	Program Brief	-----	Disabled people in Bangladesh .	To recognize the disability allowance program for the PWDs in Bangladesh.

**Study quality:** By using Hawker et al (2002)'s quality assessment tool, five high quality, one medium quality and one low quality study is found. Three grey literatures are used here which are assessed by AACODS checklist.

**Table 2: Study quality**

Scores: Good=4 Fair=3 Poor=2 Very poor=1 Lower scores =poor quality

Quality: High: 30-36, Medium: 24-29, Low: 09-23

ID No	Author and Year	Title	Quality and Score of the study
1.	Karki et al., (2021)	"Access to assistive technology for persons with disabilities: a critical review from Nepal, India and Bangladesh"	High quality study <b>Total score=31</b>
2.	Stuckey et al., (2020)	"Challenges and facilitators to work participation for persons with lower limb amputations in Bangladesh following prosthetic rehabilitation"	High quality study <b>Total score=33</b>
3.	Gudlavalleti, (2018)	"Challenges in Accessing Health Care for People with Disability in the South Asian Context: A Review"	Low quality study <b>Total score=14</b>
4.	Imam et al., (2021)	"Situation analysis of rehabilitation services for persons with disabilities in Bangladesh: identifying service gaps and scopes for improvement"	Medium quality study <b>Total score= 27</b>
5.	Borg & Östergren, (2015)	"Users' perspectives on the provision of assistive technologies in Bangladesh: awareness, providers, costs and challenges"	High quality study <b>Total score=32</b>
6.	Aldersey et al., (2018)	"Barriers and Facilitators for Wheelchair Users in Bangladesh: A Participatory Action Research Project"	High quality study <b>Total score=34</b>
7.	Quinn et al., (2016)	"The Double Burden: Challenges and Facilitators to Socioeconomic Inclusion for Women with Disability in Bangladesh"	High quality study <b>Total score=34</b>
8.	Thompson S. (2020)	"Bangladesh Situational Analysis -Version II"	<b>Grey literature</b> Low quality study
9.	Nokrek et al., (2013)	"Livelihood challenges for extremely poor disabled people in the southwest coastal region of Bangladesh"	<b>Grey literature</b> Low quality study
10.	Anwar et al., (2019)	"Allowances for the Financially Insolvent Disabled: Program Brief"	<b>Grey literature</b> Low quality study

### Context of the studies

There are ten studies selected for the research that talked about the sectors where disabled persons face challenges to access. Some studies discussed the same topic where some have different points to identify. The following themes are produced to have an idea about the research as a whole.

**Table 3: Study context**

Id no	Authors and Year	Access to assistive device	Employment	Access to health care	Education	Communication	Rehabilitation	Disability allowance
1.	Karki et al., (2021)	✓						
2.	Stuckey et al., (2020)		✓					
3.	Gudlavallati, (2018)			✓				
4.	Imam et al., (2021)	✓					✓	
5.	Borg & Östergren, (2015)	✓						
6.	Aldersey et al., (2018)					✓		
7.	Quinn et al., (2016)		✓		✓	✓		
8.	Thompson S. (2020)		✓	✓	✓	✓		
9.	Nokrek et al., (2013)		✓	✓				
10.	Anwar et al., (2019)							✓

**Summary of the papers:** This section will talk about the different sectors where and why disabled persons are facing challenges to get access.

**Access to assistive device/ technology:** The review identified three studies that looked at assistive technology for PWD, are the researches done by Karki et al., (2021), Imam et al., (2021), and Borg & Östergren, (2015). Assistive device or technology (AD) is useful for the PWDs that reduces the need for formal health care services, helpful for their healthy and improved life. By using the ADs, they can easily move from one place to another, participate in education, involve themselves in the job market. Without ADs, they can lose the chance to live a dignified life [31]. According to the UNCRPD, PWDs have the right to have Ads at an affordable cost [32] but in Bangladesh, they are facing a lot of challenges to have ADs.

**Awareness:** All three studies found lack of awareness is a major challenge to get assistive devices by the persons with disabilities in Bangladesh. Karki et al., (2021) found that in Bangladesh disabled people have lower knowledge about ADs compare to service providers. It may be for the top-down policy-making approach in the country. Information is not delivered fully to the PWDs. However, less awareness is found in assistive device users. They are unaware of their needs, requirements and have

very little knowledge about the ADs and their use. Most of the time assistive device means only the wheelchair to them. Lack of knowledge of the available services makes their lives complicated, distressful and poor. It is responsible for ill health and less life expectancy. Policymakers also fail to provide information to disabled people about the services and the benefit of those facilities. The study shows that only the government effort is not enough to improve the living standard of the sufferers, the service users also need to be aware of the provided services [33]. Imam et al., (2021) also found lack of awareness as the major barrier to having the services [34]. Borg & Östergren, (2015) found that PWDs are illiterate about the benefits of ADs and also about the source of getting the devices. The media are not creating much awareness in this regard. Sometimes health professionals are also not informing the patients about the devices [35].

Eligibility: Karki et al., (2021) stated that in Bangladesh, by the direct care of the government or through the Civil Society Organisations (CSO) personal management, AT services are delivered to the PWDs, but due to the lack of uniformity, the services are not delivered well. There is an excessive need for ADs but due to the poor system, the person with a disability sometimes does not get access to the services. To be eligible for having a device they have to move to the service centers and after fulfilling all criteria they will get a device. Sometimes if one family has two disabled persons then only one can get a device. So, it is clear that all disabled people are not getting a device in Bangladesh [33].

Reachability: Karki et al., (2021) focus on the reachability of ADs. The facilities are all based in urban areas in Bangladesh which creates difficulties for the disabled to reach there. In rural Bangladesh, most of the AD services are provided by an impermanent sitting where native leaders or masses meet with the service providers to assess the needs and to distribute the devices. AD services are not always provided from an easily accessible place so family members of a disabled person need to go there to have the service which can cost money and time. It also discourages people to take the service. Sometimes they are also do not have the actual information about the service providers, so, they cannot reach there. Although the situation is improving, still PWD are suffering from the physical distance of the service centers, limitation in mobility, lack of or limited corroboration from household members, and the travel cost limits their reachability to AT services [33]. Borg & Östergren, (2015) showed that PWDs are not getting access to the services because of the NGOs mentality. In Bangladesh, there are a few NGOs working on ADs and they provide the service to some selected people and most of the disabled persons cannot reach the service [35].

Affordability: According to Karki et al., (2021) affordability is one of the main causes for PWDs not getting the AD services. Disabled persons need to buy the AD or it can be provided by the government or they can get it by charity, but the government services are not sufficient to meet the demand. However, the charity is also very limited and people have to buy the AD which is expensive for many of them. Sometimes the repair is not available in their locality so if they need to repair a device, they have to go distant places which creates difficulty for them. So, PWDs cannot afford the services many times. Although the Bangladesh government allocated resources for them, those are not maintained systematically [33]. Imam et al., (2021) found the cost of the assistive devices as a barrier to having the services. Government-supported ADs are not sufficient to fulfill the demand and not many NGOs are making the ADs. So, there is always a lack of supply, and most disabled persons cannot buy the devices due to the high price [34]. Borg & Östergren, (2015), also support the lack of affordability as a barrier to get the services. Most of the time disabled people are poor and due to the high price of the ADs, they cannot afford them [35].

**Access to Employment:** Four studies discussed the challenges faced by the PWDs in the employment sector. Stuckey et al., (2020), Quinn et al., (2016) and Thompson S. (2020), and Nokrek et al., (2013) describe in their studies how and why disabled persons are facing discrimination in employment sectors.

Spirituality: Stuckey et al., (2020) conducted a study on the persons who have LLA and PR to realize their experience in the working sector and they found spirituality as a challenge for work participation. People think that it is the will of the almighty so that they are not fit for the work. Almighty does not want them to work and that is why they are facing this problem and they do not try to participate in the working sector [36].

Attitudes: Three studies showed attitudes as a barrier in the employment sector. According to Stuckey et al., (2020), PWDs who faced LLA became very hopeless with their lives and do not get any motivation to work. Society also does not show the same respect as before and does not expect much from them. So, disabled persons do not get access to the normal employment sectors [36].

Thompson S. (2020) also found the societal and personal attitudes of disabled persons as a barrier to getting into the employment sector. They stated that disabled persons are shy about their difficulties and they don't want to take part in the employment sectors. They are less confident about their ability. They have the fear of being insulted and getting less wage in the sector. In Bangladesh where people have fewer jobs, no matter how educated they are, getting a job for the disabled is much more difficult. Society also does not positively accept them. Women with a disability face barrier due to the norms in society and face more exclusion. Most of the time the disabled people had some knowledge or skill but the available employment opportunities for them remain limited. Start-up business credits are also limited for them [14].

Quinn et al., (2016) found that disabled women consider themselves less competent than normal women in all sectors. Due to the lack of confidence, they do not try to get involved in income generation activities. In Bangladesh, society expects males in the employment sector and for disabled women, it becomes very tough to break the societal norms and get involved in the employment sector. Women with disabilities also expect to stay at home and wish to do household chores [37].

Mobility Devices: Stuckey et al., (2020) talk about mobility devices. Even though all participants reported that mobility devices are necessary to participate in any work, they face difficulties to use them. Prolonged prosthesis use is not very comfortable and sometimes they felt limb pain that results in a negative impact on their work participation. It is found that many participants remove their prostheses due to the fear of having damage of their body parts or to facing problems in their activities [36].

Environmental challenges: Many participants reported the environment as a barrier to their work participation. During the monsoon, especially in rural areas, the roads being damaged and been unusable, people with lower-limb imputation cannot easily move to their workplace. The structure of the buildings is also not user-friendly and they cannot use the commodes so, they cannot get access to the employment sector [36].

Transport: According to Nokrek et al., (2013) PWDs face challenges while traveling to their workplace. Sometimes they do not get help from their family members to get into a vehicle and sometimes the



driver or other people do not help them. Although the Bangladesh government has reserved a quota for them in the work sector, they do not involve themselves [38].

**Wage Discrimination:** Persons with disabilities are not hired by employers for work. Even if they are hired, they get less wage than regular labour for the same job. Sometimes although they have the skill to have the job, pass the written examination, they are not recruited due to their physical disability [38].

**Access to health:** Although three studies Gudlavalleti, (2018), Thompson S. (2020), and Nokrek et al., (2013) talk about the access barriers in health services for the PWDs, Gudlavalleti, (2018) observes the challenge in accessing the health sector from three different perspectives- socio-economic factors, nonmedical systemic factors, and provider perspectives.

**Socio-economic factors:** In Bangladesh, a country of South Asia, People are not aware of the health services provided for disabled persons. Not only that, long-distance of the available health services, costs of care, poor transportation becomes a major challenge to get health care [10]. The cost of health care and the distance to reach the facility are the most important challenges faced by the disabled in Bangladesh [39].

**Nonmedical Systemic Factors:** In Bangladesh, PWDs faced a significant barrier to access health services due to inaccessible buildings. The infrastructure is not user-friendly for the disabled. There is also inadequate equipment in regards to services. They face problems with transportation- they cannot move or get into public transportation as they are not suitably designed for disabled persons. There are limited ramps in Bangladesh, indoor and outdoor services, and also the washrooms in the hospitals are not good. They also have to deal with the poor mentality of their family members. It is found that family members are most concerned about the health of their non-disabled family members rather than the disabled [10]. PWD also have poor knowledge about tuberculosis, hepatitis, and HIV/AIDS and also had poor access to reproductive health care services [40].

**Provider Perspectives:** In South Asian countries, service providers do not feel the need of disabled persons most of the time. They do not recommend getting rehabilitation services to disabled persons. Sometimes a dispute can be seen between the general practitioners and the therapists. Sometimes service providers fail to provide quality services to the PWDs and that creates a bad impression about the services and disabled persons are not interested to get the services [41].

According to Thompson S. (2020), in Bangladesh, if women face disability, they get limited access to health care services compared to disabled men. This is because of the culture, family, and communal perspective, and the discrimination towards women. In Bangladesh where services are limited for the disabled, being a woman, they have to face the double burden of discrimination. Health services are costly for everyone, so, family members think providing services to a non-disabled person in the family will be more cost-effective. The distance of the service centers and the poor communication sometimes create a barrier to access to the health services [14]. Nokrek et al., (2013) found that even if a less disabled person goes to the health care sector, they get poor quality services and become permanently disable [38].

**Access to education and training:** Thompson S. (2020), Aldersey, et al., (2018), and Quinn et al., (2016) talk about the challenges in the education sector faced by disabled persons in Bangladesh. In

Bangladesh, many disabled people are out of the education sector and adolescents with disabilities do not complete their primary education compared to non-disabled. The lack of access includes bad transportation, lack of assistive technologies, a non-inclusive environment, lack of information, inaccessible institutions, negative attitudes and lack of sympathy of the society, family members, peers, and also lack of self-confidence. In addition to that, teachers are also not well trained to provide education to them which restricts educational access [14]. Aldersey et al., (2018) found attitude as a barrier to getting an education. Family members pressurise the disabled person to stop having education as they take it as a waste of money [42]. Quinn et al., (2016) also showed the importance of societal attitude as a major challenge for disabled women to get access to education. In Bangladesh, disabled women are facing disrespect, suffer from frustration, disappointment as their education gets no importance from anyone. Society treats them as a burden and the use of money for their education is futile. Most of the women who attend secondary and/or tertiary education faced discrimination from their teachers as the teachers do not have enough knowledge and training to handle the situation. The inaccessible infrastructure of the educational institution is also a challenge for the PWDs [37].

**Access to Communication:** The studies are done by Aldersey et al., (2018), Quinn et al., (2016), and Thompson S. (2020), talk about the challenges faced in the Communication/ Transportation sector by persons with disabilities.

**Roads, Sidewalks, and Ramps:** According to Aldersey et al., (2018), in their studies participants shared their bad experiences regarding the roads in rainy seasons. They said that during the monsoon when the roads get wet or flooded, they face difficulty in communication with the wheelchairs. In Bangladesh, as the roads are in a very bad condition, they do not get out normally to go to visit their relatives as they lose control over their wheelchairs and it creates barriers in their social lives. They also faced problems in busy roads and sidewalks are captured by the hawkers, they do not get enough space to move. As there is a limited number of ramps on roads, wheelchair users faced problems and they demanded more ramps on the roads [42].

**Use of transportation:** Wheelchair users cannot use public transportation due to the inaccessible vehicles and the negative attitude of the bus conductors and the passengers. As they take time to get into the vehicles, people feel disturbed by them and it makes them feel bad. Some PWDs can afford private vehicles but most of them cannot. Some of them use the rickshaw or CNG (Local vehicles) with their wheelchairs but most of them face challenges to travel. With the help of a facilitator, some people can move around but most of them do not want to take help from others and that is why they do not go out of their home and communicate with others [42].

Quinn et al., (2016) found difficulty in transportation for the women. Women do not go out due to a lack of a user-friendly vehicle. Sometimes, to get on a bus they are helped by the conductor but they have to pay extra money for that. They also face verbal or sexual abuse by others. Sometimes with the help of other family members, they can go out and have shopping, attend functions but they feel it is disrespectful for them. As they do not want to disturb others so, it seems better not to go outside to them. [37].

Thompson S. (2020) also found the transport system in Bangladesh as a challenge for disabled persons especially for women disabled to participate in public and civil affairs. PWDs face difficulties in accessing the vehicles, sometimes they do not get seats to sit despite the disability law where 5% of seats are supposed to be reserved for persons with disabilities [14].

Toilets: Aldersey et al., (2018) found that for most of the PWDs, going out is a problem due to the lack of accessible toilets. Narrow doors, lack of ramps, lower commodes (“squat” toilets) challenged them to get access to the facility. Not only that cleanliness is also a problem for them. PWDs reported that they do not go to any amusement park due to the lack of accessible toilets [42].

Attitude: The attitude of society towards disabled persons is a major barrier to participate in the community. Society ignored disabled persons' opinions and views in any matter. They do not want to go out to any function or shopping as they are treated with pity and they do not want that. Sometimes they were treated very badly by others and face with bad comments [42]. Quinn et al., (2016) also report that due to the lack of knowledge of disability and disability inclusion policy, women had to face bad behavior from society. Sometimes family members and the community treat them as a curse. They have to tackle the discrimination and for that, they always stay away from the community that set a bad memory in their mind [37].

**Access to Rehabilitation:** Imam et al., (2021) conducted “Situation analysis of rehabilitation services for persons with disabilities in Bangladesh: identifying service gaps and scopes for improvement”. They have identified some major issues in the rehabilitation sector and the poor condition of this sector is the main challenge for the PWDs to access the services [34]. For the PWDs rehabilitation professionals are the key workforce but they are often overlooked in the mainstream health policies and programs in many low- and middle-income countries, including Bangladesh [43]. There is no actual documentation of the professionals who works in the rehabilitation sector in Bangladesh. Many disabled persons do not get rehabilitation services due to the poor management of this sector [44].

Leadership and governance: The Ministry of Social Welfare and Services operates services for disabled persons through some projects or programs like the “National Foundation for the Development of the Disabled Persons (NFDDP)” [45] and also provides financial supports to NGOs operating rehabilitation services [46]. However, there is no specific outline to evaluate rehabilitation services in the country [47] and it is not included in the mainstream health sector and service delivery systems) [48]. Bangladesh Rehabilitation Council Act (BRC Act 2018) was approved in 2018 to acknowledge the academic institutes, service providers, professionals in the rehabilitation field and assess the service standards, no data regarding the enforcement of the BRC Act 2018 is found [49].

Finance: Most of the rehabilitation units are privately funded (55.2%), NGO-provides funds for 24.7% of centers, and only 20.1% are run by the government. The majority of the services (66.3%) require money to access their services. 95.5% paid rehabilitation service is common in physiotherapy clinics and 99.0% is in hospital disability units. In 2019–2020, only 0.3% of the national budget was allocated for the disability and rehabilitation services [50] where 85.2% was for disability allowances [51] and only 4.0% was for the rehabilitation services [50]. With this poor allocation, it is not possible to provide rehabilitation services to all disabled persons in Bangladesh [52].

Shortage of assistive devices: Although there is a huge demand for assistive devices in Bangladesh, only 23 types of ADs are available in Bangladesh where WHO recommends 50 different devices for disabled persons. Moreover, among the 23, 17 devices are produced by only two NGOs and government and private organizations are responsible to import the rest. There is only one government institute that produces Braille writing equipment in Bangladesh [53]. The equipment cannot meet the demand of the ADs required by the PWDs. In Bangladesh, 74.7% of the PWDs do not get their required ADs [54]

**Challenges to have financial allowances:** Anwar et al., (2019) produced a program brief on allowances provided for disabled persons in Bangladesh and its access barriers. Allowances are provided to the financially disabled persons for improving their socio-economic condition but it does not help much as many of them could not get the allowances as per their need. [55].

Awareness about the program: The publicity of the program was not enough to create awareness among disabled persons. According to the program, at all levels, national, district, upazilla, union, mauza, village, the circular will be good enough to attract disabled people to make an application to claim the allowances, but due to the poor circulation, not that many applications were there at the initial phase. There was no actual guidance about the frequency of the awareness campaign and only the mosques were responsible for mic-ing. In addition, the budget provided for awareness-generating activities was very limited. The administration set up was also very poor for disability services. So, it was very difficult to carry out meaningful awareness campaigns [55].

Registration: Registration is one of the problems to get the allowance. There were some specific criteria for being eligible for that. Rights and Protection Act, 2013 and the Neurodevelopmental Disability Protection Trust Act 2013, the Ministry of Social Welfare (MoSW) identified and registered more than 1.5 million PWDs but it was still a small portion of the actual number of disabled persons. There was a possibility of the exclusion of the disabled persons who were very poor with limited accessibility, who were unable to register themselves. Registering the women was another challenge. Although National Social Security Strategy (NSSS) 2015 and many other studies found women's disability is higher than men's and they are more vulnerable, most of the registration is done by disabled men [55].

Disbursement of Payment: The allowance was delivered to the disabled persons through some public bank maintaining some process. One of the rules was the physical attendance of the disabled person. Even though it was mentioned that if any disabled person cannot attend to collect the allowance, their representative can collect the amount any day from the fixed banks, but the bank did not maintain the rules. They fixed some days to disburse the amount and that day they had to face a long queue. It was also difficult for the beneficiaries to wait for a long time without any food, toilet facility, and with their disability. The bank also stopped providing money after bank hours and that causes several discomforts to the PWDs [55].

Replacement: There were certain rules to replace the existing beneficiary and include a new one. If the financial or disability status of a disabled person is improved or he or she is having another benefit scheme from the government or any other organization, the person is going to another place, death of the disabled persons – these criteria can replace any disabled person from the disability allowance (DA) scheme, but it was very difficult to identify a person who falls in these criteria except death. So, one person can get many benefits at a time where an extremely disabled person is not included in any of the benefits programs [55].

Complaint: It is found that if anybody complaint against the allowance system, they fall into the bad book of the authority as they had the power to maintain all the selection and payment processes. Sometimes local authorities took some money to include the name of a disabled person in the scheme although he or she has the financial ability to maintain their daily living. In this way, extremely poor disabled persons were leaving out of the scheme [55].

## **Discussion and Recommendation**

**Discussion:** The review is for identifying the challenges in various sectors among PWDs in Bangladesh. It is noticeable that for this review a total of 377 kinds of literature have been searched but only ten pieces of literature are used for the final review but no literature can describe fully the access barriers for disabled persons. So, the lack of research in this sector is evident. The research identified some main areas where disabled people are facing challenges to have the services. Although according to the disability act, they are eligible to get the services they are not getting them which excluded them from being a part of the country's development. If the situation remains like that, Bangladesh will not be able to achieve the SDGs by 2030. The motto of SDG is inclusive development and so, disabled person's development is one of the key issues that need to be addressed.

In Bangladesh, PWDs are not only excluded from social and political rights but also basic human rights. They have poor access to the education, health, employment sector although there is provision to include them in the development process. There are different types of quotas for them in different sectors. However, their position is not improving [55]. The research identifies that disabled people have limited access to the sectors due to the lack of awareness of the disability services, being neglected by their family members and the society, ancient infrastructure of the buildings, office environment, etc. These barriers are not only physical but also social and political, and awareness is necessary to overcome these challenges.

Assistive devices are more important for disabled people to lead a quality life but In Bangladesh, access to assistive devices is very limited. One of the main reasons is the lack of awareness among disabled persons about its benefits and proper use. PWDs only know about wheelchairs but nothing else and so, they do not try to have other devices. To create awareness media can play an important role but the media's proper influence is not seen in this case. Moreover, Community Based Rehabilitation (CBR) workers are playing a vital role to make the disabled person aware, but the doctors and nurses are not informing the patients about the facilities, which is a major concern for society. There can be many reasons behind that such as people with ambulatory impairments do not meet the doctors regularly or professionals may not be fully aware of the ADs. Whatever the reason is, everybody should be more concerned about informing disabled persons about assistive devices. It is found that only 49.4% of disabled persons who need the ADs have an idea about the service [56]. As most of the service providers are NGOs, they provide the products to them who are known to the NGOs. Sometimes NGOs do not get any idea about the necessity of the person but provide the device. So, many poor disabled especially disabled women do not get the service as they have limited freedom to go out and search for the services. Government should take strong policy on this issue.

Not only the case of assistive devices, but lack of awareness is a challenge for other sectors also. In education, employment, health care, communication, rehabilitation, allowance, there are many sectors where there is a special policy for them but they are fully unaware of those. Society and their family members are also unaware of that and they always feel a disabled person a burden to them. But if disabled persons can get the benefits and make themselves qualified, then nobody can insult them, smash their dignity. It will improve their self-confidence which will also benefit society.

According to the research findings, Bangladesh has produced a limited amount and variety of assistive devices. The shortage of ADs increases the challenge to disabled people's lives. Lack of affordability is one of the major barriers to assistive technologies, so, it is needed to develop techniques and systems to make them affordable. The World Health Organization is ready to facilitate such developments [57]. This

review also found affordability, accessibility, awareness as the main barriers to having ADs. To solve this problem Bangladesh government should find some solution and work with the WHO.

The review analyzed that poor road conditions, user-unfriendly buildings, transportation, toilets are the reasons for not accessing the employment, education, health sector by the PWDs. During the rainy season, the road became muddy, slippery which creates discomfort to move. In Bangladesh, some buildings are very old and they do not have a lift, especially in school and college buildings. There are also no disabled toilets. It creates a barrier of cleanliness for them. Although there is a policy for reserving seats in any transport for the disabled, most people do not maintain that. PWDs are often victimized by the conductors and other passengers. Better transport, buildings with improved facilities are needed for disabled persons.

Rehabilitation is a set of interventions that are needed for any person who is facing challenges in everyday life physically, mentally, and socially. It can be due to increasing age or ill health, or for chronic diseases or mess, wounds, trauma, or any other reason [58]. Rehabilitation might be needed by any person who is suffering from difficulties in mobility, vision, or cognition. The scope of rehabilitation is extensive and people with various health statuses or impairments may need rehabilitation at any point in life. Rehabilitation is cost-effective also [59].

By providing proper rehabilitation, hospital cost and stay time can be reduced [60]. The present review showed that PWDs are facing challenges to have the service. A poor monitoring system, limited budget, shortage of assistive devices makes the situation worse for the PWDs. Furthermore, the uneven geographical distribution of rehabilitation services in Bangladesh is a major problem where most of the rehabilitation centers are based in urban areas; Dhaka city (also the capital). On the other hand, rural areas are allocated with only 6.8% of rehabilitation units but rural areas are comprised of a heavy population [61].

PWDs are facing communication problems due to the attitude of the society, poor road conditions, lack of toilet facilities outside the home [62] also focuses on this problem where they talked about most on the verbal or oral communication. In Bangladesh, the information delivery process is not disability-friendly. There are websites for informing the disability issues but it is not beneficial for the visually impaired. The wheelchair users find it not useable easily. As they need to move it by hand it is more difficult for them, it is very tough for multiple disabled persons such as those who are disabled by hand and leg function.

Bangladesh government jointly with other organizations is working for the betterment of disabled persons. NFOWD is working as a think tank for them, was established in 1991 as the safeguard of the rights and interests of PWDs. Now, it is working in 23 districts nearly with 400 members. It has also a subgroup that is working for the women disabled person's rights [80]. But not only the government but also society should come forward to save disabled people's rights.

## **Recommendations**

### Recommendations for policy and practice

1. Government should provide more effort on awareness creation. As it is found as a barrier in accessing every sector, the government can involve media for publicity. Leaflets, flyers, tv scrolls, billboards, social media can be used for circulation. The disability issue can be discussed

in the union, upazila, and zill (Local level administrative units of Bangladesh) committee meetings. Local religious leaders can also take a vital role to make society aware.

2. Government can take some initiatives to employ disabled persons. Although there is a policy for them, they do not get the facility. The government also provides allowance but that is not sufficient for them. In addition, they face difficulty to get the benefit. Government with the collaboration with international non-government organizations (INGO), national non-government organizations (NNGO), and international organizations provide one-off fund for small businesses such as mobile banking, small shops, and so on.
3. To remove the mobility barrier, the government should focus on the road and infrastructure of the buildings. Ramps and walking trails should be provided. In all offices and educational institutes and public places, disability toilets and hygiene systems must be provided.

#### Recommendation for research

1. Quantitative and qualitative primary studies are necessary to find out the challenges faced by disabled persons and what they want to remove the barriers and improve their lives.
2. As there is no full review on this particular issue, more reviews are necessary to provide information to the policymakers. It will help them to have a quick look at the issue and make policy for them.

**Limitations:** The research has the following limitations:

1. There is limited literature found which meets the inclusion criteria for the review, so there are many areas of challenge which have not been researched or written about extensively.
2. The research talked about the adult disabled persons in Bangladesh but the age is mentioned nowhere. In most of the literature, age was not mentioned. After reviewing all the selected papers, it was decided that all talked about adult disabled persons. Therefore, researchers should be clearer about the population they are considering.
3. As it is a student project, one person completed the whole process. Therefore, it was not possible to have the data sifting and extraction checked by a second reviewer and so any accidental errors may not have been identified. This is usual for a student dissertation but is still a limitation to be aware of.

**Conclusion:** Disable people in Bangladesh are facing challenges accessing the services provided for them. It is not only about the physical challenges they have but also for the lack of awareness. They are always depressed by themselves, so, many times they do not ask anyone for their facilities. The government or the service providing organizations cannot improve their lives only by giving facilities, disabled people also should be aware of their benefits and try to use those to improve their lives; which will also help to make the country developed. Government has to focus on the challenges they face and try to take effective interventions to remove those challenges. Creating more income generating

activities will be helpful to mainstream the PWDs. To improve the disability situation, government and other organizations along with disabled people need to work together.

#### References:

1. Metts, R., Disability and Development: Background Paper Prepared for the Disability and Development Research Agenda Meeting, 2004. World Bank: Washington, DC.
2. Raghavan,R and Fozia,T., Services for young people with learning disabilities and mental health needs from South Asian communities, 2014.
3. SANO, M., et al., A Preliminary Consideration on the Policy and Legislation of Person with Disabilities in Bangladesh. *Kobe Gakuin J Rehabil Res* 2014 ; 9 ( 2 ): p. 1.
4. Bangladesh Bureau of Statistics, Rapid Assessment of Disability in Kurigram and Narsingdi Districts of Bangladesh, 2017. *Towards Global Health: Strengthening the Rehabilitation Sector through Civil Society Bangladesh*, 2017
5. World Health Organization and World Bank, World report on disability. 2011, Geneva, Switzerland: World Health Organization. xxiii, 325 p.
6. Filmer, D., Disability, poverty, and schooling in developing countries: results from 14 household surveys. *The World Bank Economic Review*, 2008. 22(1): p. 141-163.
7. Marella, M., et al., Prevalence and correlates of disability in Bogra district of Bangladesh using the Rapid Assessment of Disability survey. *BMC Public Health*, 2015. 15.
8. Trani, J.-F., et al., Disability and Poverty in Morocco and Tunisia: A Multidimensional Approach. *Journal of Human Development and Capabilities*, 2015: p. 1-31.
9. WHO and The World bank., World Report on Disability. Geneva: WHO Press, 2011. Available from: <https://www.who.int/publications/i/item/9789241564182>
10. Gudlavalleti, Challenges in Accessing Health Care for People with Disability in the South Asian Context: A Review. *Int. J. Environ. Res. Public Health* 2018, 15, 2366; doi:10.3390/ijerph15112366
11. Mactaggart, I.; Kuper, H.; Murthy, G.V.; Oye, J.; Polack, S. Measuring disability in population-based surveys: The interrelationship between clinical impairments and reported functional limitations in Cameroon and India. *PLoS ONE* 2016, e0164470. [CrossRef] [PubMed]
12. Williams, E.D.; Tillin, T.; Whincup, P.; Forouhi, N.G.; Chaturvedi, N. Ethnic differences in disability prevalence and their determinants studied over a 20-year period: A cohort study. *PLoS ONE* 2012, 7, e45602. [CrossRef] [PubMed]
13. Disability at a Glance 2015: Strengthening Employment Prospects for Persons with Disabilities in Asia and the Pacific. Available online: [https://www.unescap.org/sites/default/files/publications/SDD%20Disability%20Glance%202015\\_Final\\_0.pdf](https://www.unescap.org/sites/default/files/publications/SDD%20Disability%20Glance%202015_Final_0.pdf) (accessed on 25 July 2018).
14. Nilsson, F & Lee, Y., Bangladesh Situational Analysis Version II, 2020. Institute of Development Studies, 2020, p:4-5
15. WHO., Towards a Common Language for Functioning, Disability and Health, ICF, No date. Available from: <https://www.who.int/classifications/icf/icfbeginnersguide.pdf>
16. Marella, M., et al., Prevalence and correlates of disability in Bogra district of Bangladesh using the Rapid Assessment of Disability survey. *BMC Public Health*, 2015.



17. Loeb, M.E., A.H. Eide, and D. Mont, Approaching the measurement of disability prevalence: the case of Zambia. *ALTER-European Journal of Disability Research/Revue Européenne de Recherche sur le Handicap*, 2008. 2(1): p. 32-43.
18. Mitra, S. and U. Sambamoorthi, Disability prevalence among adults: estimates for 54 countries and progress toward a global estimate. *Disability and Rehabilitation*, 2014. 36(11): p. 940-947.
19. BBS, Final Report on the Household Income and Expenditure Survey 2016, 2019. Available from: [www.bbs.gov.bd](http://www.bbs.gov.bd).
20. National Grassroots and Disabilities Organization (NGDO), National Council for Women with Disabilities (NCDW) & Bangladesh Legal Aid and Services Trust (BLAST), 2015, Current status of Rights of Persons with Disabilities in Bangladesh: Legal and Grassroots Perspectives
21. Danish Bilharziasis Laboratory, for the World Bank, May 2004, Disability in Bangladesh: A Situation Analysis
22. Ali. Z, Economics of Disability in Bangladesh Working paper, 2014. EEP/shire, Dhaka. [https://assets.publishing.service.gov.uk/media/57a08998e5274a27b200016b/Economic-Costs-of-disability-in-Bangladesh\\_revised-paper.pdf](https://assets.publishing.service.gov.uk/media/57a08998e5274a27b200016b/Economic-Costs-of-disability-in-Bangladesh_revised-paper.pdf).
23. Mosher, W.; Bloom, T.; Hughes, R.; Horton, L.; Mojtabai, R.; Alhusen, J.L. Disparities in receipt of family planning services by disability status: New estimates from the national survey of family growth. *Disabil. Health J.* 2017, 10, 394–399. [CrossRef] [PubMed]
24. UN, fourth review and appraisal of the world programme of action concerning disabled persons, 2002. General Assembly 58th session, A/58/61. <http://www.un.org/esa/socdev/enable/rights/wgoda3.htm#4review> (accessed April 5, 2009).
25. Charles Sturt University , Literature Review: Systematic literature review, 2021. Available from [https://libguides.csu.edu.au/c.php?g=476545&p=3997202#:~:text=A%20systematic%20literature%20review%20\(SLR,2016\).&text=it%20involves%20planning%20a%20well,or%20answers%20a%20defined%20question](https://libguides.csu.edu.au/c.php?g=476545&p=3997202#:~:text=A%20systematic%20literature%20review%20(SLR,2016).&text=it%20involves%20planning%20a%20well,or%20answers%20a%20defined%20question).
26. Human Rights Watch, Bangladesh: Don't Lower Marriage Age, 2014. <https://www.hrw.org/news/2014/10/12/bangladesh-dont-lower-marriage-age>
27. Hawke.r S, Payne. S and Kerr. C. Appraising the evidence: reviewing disparate data systematically, 2002. *Qual Health Res.* 12:1284–99.
28. Lorenc.T, Petticrew. M, Whitehead. M. Quality assessment for the systematic review of qualitative evidence, 2014. NIHR Journals Library.
29. Neri MT, Kroll T. Understanding the consequences of access barriers to health care: experiences of adults with disabilities. *Disabil Rehabil*, 2003. 25(2):85–96. PMID: 12554383
30. Tomlinson M, Yasamy MT, Emerson E, Officer A, Richler D, Saxena S. Setting global research priorities for developmental disabilities, including intellectual disabilities and autism. *J Intellect Disabil Res.* 2014; 58(12):1121–30. <https://doi.org/10.1111/jir.12106> PMID: 24397279
31. Werder B. Assistive technologies in developing countries. K4D Helpdesk Report. Brighton (UK): Institute of Development Studies, 2018. p. 24.].
32. Smith, E., Chen, W., Congdon, N., Frick, K., Kassalow, J., Naidoo, K., & Sloan, J.A. 2016. Eyeglasses for Global Development: Bridging the Visual Divide. World Economic Forum. [http://www3.weforum.org/docs/WEF\\_2016\\_EYElliance.pdf](http://www3.weforum.org/docs/WEF_2016_EYElliance.pdf)

33. Karki, J., Rushton, S., ... De Witte, L. Access to assistive technology for persons with disabilities: a critical review from Nepal, India and Bangladesh. *Disability and Rehabilitation: Assistive Technology*, 2021. doi:10.1080/17483107.2021.1892843
34. Al Imam, M.H., Jahan, I., ... Khandaker, G. Situation analysis of rehabilitation services for persons with disabilities in Bangladesh: identifying service gaps and scopes for improvement, 2021. *Disability and Rehabilitation* 1–14. doi:10.1080/09638288.2021.1939799
35. Borg, J., Östergren, P.O. Users' perspectives on the provision of assistive technologies in Bangladesh: Awareness, providers, costs and barriers, 2015. *Disability and Rehabilitation: Assistive Technology* 10, 301–308. doi:10.3109/17483107.2014.974221
36. Stuckey, R., Draganovic, P., ... Dillon, M.P. Barriers and facilitators to work participation for persons with lower limb amputations in Bangladesh following prosthetic rehabilitation, 2020. *Prosthetics and Orthotics International* 44, 279–289. doi:10.1177/0309364620934322
37. Quinn M, Hunter C , Sumanta Ray S, Quadir M, Sen K, Cumming R. 2016. The Double Burden: Barriers and Facilitators to Socioeconomic Inclusion for Women with Disability in Bangladesh. *Disability, CBR & Inclusive Development*; 27 (2) <http://dcidj.org/article/view/474/299>
38. Nokrek, P., Alam, M. a., Ahmed, M. Livelihood challenges for extremely poor disabled people in the southwest coastal region of Bangladesh, 2013. *Shiree* 42 pp.
39. Senghor, D.B.; Diop, O.; Sombie, I. Analysis of the impact of healthcare support initiatives for physically disabled people on their access to care in the city of Saint-Loius, Senegal. *BMC Health Serv. Res.* 2017, 17, 695. [CrossRef] [PubMed]
40. Ahmad, M. Health care access and barriers for the physically disabled in rural Punjab, Pakistan. *Int. J. Sociol. Soc. Pol.* 2013, 33, 246–260. [CrossRef]
41. Devkota, H.R.; Murray, E.; Kett, M.; Groce, N. Healthcare provider's attitude towards disability and experience of women with disabilities in the use of maternal healthcare service in rural Nepal. *Reprod. Health* 2017, 14, 79. [CrossRef] [PubMed]
42. Aldersey, H., Morshedul Quadir, M., ... Nuri, R.P. Barriers and facilitators for wheelchair users in bangladesh: A participatory action research project, 2018. *Disability, CBR and Inclusive Development* 29, 24–44. doi:10.5463/DCID.v29i2.730
43. World Health Organization. Monitoring human resources for health-related rehabilitation services. Spotlight on health workforce statistics. Geneva: World Health Organization; 2009.
44. HI-Bangladesh. Policy brief-3: coordination between health and rehabilitation services in Bangladesh. Dhaka, Bangladesh: Handicap International; 2019.
45. National Foundation for Development of the Disabled Persons. Promotion of services & opportunities to the disabled persons in Bangladesh. Dhaka: Ministry of Social Welfare; 2017; [Internet]; [cited 2021 Jan 12]. Available from: <http://www.jpuf.gov.bd/site/page/61eaaf35-8568-4405-8bd0-7d7153c71e11/->
46. Axelsson C. Mapping report of physical rehabilitation services in Afghanistan, Bangladesh, Odisha (India) and Sri Lanka. Dhaka: Handicap International; 2014.
47. National Grassroots and Disabilities Organization, National Council for Women with Disabilities, Bangladesh Legal Aid and Services Trust. Current status of rights of persons with disabilities in Bangladesh: legal and grassroots perspectives. Dhaka: Bangladesh Legal Aid and Services Trust; 2015

48. Khan F, Amatya B, Mannan H, et al. Neurorehabilitation in developing countries: challenges and the way forward. *Phys Med Rehabil Int.* 2015;2(9):1070.
49. Government of Bangladesh. Bangladesh Rehabilitation Council Act 2018. Dhaka: Government of Bangladesh; 2018
50. Ministry of Social Welfare. Medium-term expenditure. Dhaka, Bangladesh: Ministry of Social Welfare; 2019
51. Nuri RP, Ghahari S, Aldersey HM, et al. Exploring access to government-led support for children with disabilities in Bangladesh. *PLoS One.* 2020;15(7):e0235439
52. Ekman B, Borg J, Khan A, et al. Disability, sociodemographics, and discrimination: a descriptive analysis of household survey data from Bangladesh. *Disabil CBR Inclus Dev.* 2020;31(3):6–22.
53. Khan MMH, Oku H, Nakagawa A, et al. Consideration on the improvement of assistive products' availability and the awareness of rehabilitation professionals in Bangladesh. *Technol Disabil.* 2020;32(1):33–42.
54. Pryor W, Nguyen L, Islam QN, et al. Unmet needs and use of assistive products in two districts of Bangladesh: findings from a household survey. *Int J Environ Res Public Health.* 2018;15(12):2901.
55. PSES and CDD, n.d. Towards Disability Inclusion - A Handbook for Inclusion of Persons with Disabilities in Government Programmes and the Apparel Industry.]
56. Kamaleri Y, Eide AH, eds. Living conditions among people with activity limitations in Lesotho: a national representative study. Oslo: SINTEF; 2011
57. WHO. Guidelines on the provision of manual wheelchairs in less resourced settings. Geneva: World Health Organization; 2008
58. Rehabilitation the health strategy of the 21st century, really? *Arch Phys Med Rehabil.* 2019; 100: 2212-2214
59. Shields GE, Wells A, Doherty P, Heagerty A, Buck D, Davies LM, Cost-effectiveness of cardiac rehabilitation: a systematic review. *Heart.* 2018; 104: 1403-1410
60. Katajisto, M., Laitinen, T. Estimating the effectiveness of pulmonary rehabilitation for COPD exacerbations: reduction of hospital inpatient days during the following year. *Int J Chron Obstruct Pulmon Dis.* 2017; 12: 2763-2769
61. Bangladesh Bureau of Statistics. Bangladesh population and housing census 2011. Dhaka: Bangladesh Bureau of Statistics; 2014.
62. Allan A., Massu, M. and Svarer, C., n.d., Breaking the Barriers to Financial Inclusion. Banking on Change Partnership Report for Care International UK

## Appendix A

### 1. Database: CINAHL

#	Query	Limiters/Expanders	Last Run Via	Results
S3	(( challenge* or challeng* ) OR MW (	Expanders - Apply equivalent subjects	Interface - EBSCOhost Research Databases	64

	access* or attitude* )) AND (S1 AND S2)	Search modes - Boolean/Phrase	Search Screen - Advanced Search Database - CINAHL	
S2	( challenge* or challeng* ) OR MW ( access* or attitude* )	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL	660,105
S1	Bangladesh AND ( disabilit* or disabl* or handicap* or Impair* or PWD )	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL	253

## 2. Database: Ovid MEDLINE(R)

Ovid MEDLINE(R) and Epub Ahead of Print, In-Process, In-Data-Review & Other Non-Indexed Citations and Daily <1946 to August 18, 2021>

#	Query	Results from 19 Aug 2021
1	Bangladesh.mp,jw.	17,986
2	(disabilit* or disabl* or handicap* or Impair* or PWD).mp,jw.	1,116,026
3	1 and 2	678
4	(challenge* or challeng*).mp,jw.	1,252,719
5	(access* or attitude*).mp,jw.	1,053,214
6	4 or 5	2,172,489
7	(service* or support* or facility).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]	11,333,061

8	3 and 6 and 7	113
---	---------------	-----

Bangladesh.mp,jw.

(disabilit\* or disabl\* or handicap\* or Impair\* or PWD).mp,jw.

1 and 2

(challenge\* or challeng\*).mp,jw.

(access\* or attitude\*).mp,jw.

4 or 5

(service\* or support\* or facility).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]

3 and 6 and 7

<https://ovidsp.ovid.com/ovidweb.cgi?T=JS&NEWS=N&PAGE=main&SHAREDSEARCHID=hkA1z01zCKuHmsD1gsNgC9ejlePkTwmbfSOKPhGfNqmjoknPhlY86evzyMJKrdoD>

### 3. Database: Google

Barriers for disabled person in Bangladesh

About 3,380,000 results

### **Appendix B: Identification number of the selected studies**

ID No		Author and Year	Country	Title
1.		Karki et al., (2021)	Nepal, India and Bangladesh	“Access to assistive technology for persons with disabilities: a critical review from Nepal, India and Bangladesh”
2.		Stuckey et al., (2020)	Bangladesh	“Challenges and facilitators to work participation for persons with lower limb amputations in Bangladesh following prosthetic rehabilitation”
3.		Gudlavalleti, (2018)	South Asia	“Challenges in Accessing Health Care for People with Disability in the South Asian Context: A Review”
4.		Imam et al., (2021)	Bangladesh	“Situation analysis of rehabilitation services for persons with disabilities in Bangladesh: identifying service gaps and scopes for improvement”

ID No		Author and Year	Country	Title
5.		Borg & Östergren, (2015)	Bangladesh	"Users' perspectives on the provision of assistive technologies in Bangladesh: awareness, providers, costs and challenges"
6.		Aldersey et al., (2018)	Bangladesh	"Barriers and Facilitators for Wheelchair Users in Bangladesh: A Participatory Action Research Project"
7.		Quinn et al., (2016)	Bangladesh	"The Double Burden: Challenges and Facilitators to Socioeconomic Inclusion for Women with Disability in Bangladesh"
8.		Thompson S. (2020).	Bangladesh	"Bangladesh Situational Analysis version II"
9.		Nokrek et al., (2013)	Bangladesh	"Livelihood challenges for extremely poor disabled people in the southwest coastal region of Bangladesh"
10.		Anwar et al., (2019) (2019)	Bangladesh	"Allowances for the Financially Insolvent Disabled: Program Brief"

### Appendix C: Data items

- i. Access to assistive device
- ii. Employment
- iii. Access to health care
- iv. Education
- v. Communication
- vi. Rehabilitation
- vii. Disability allowance

### Appendix D : Quality Assessment checklist

This checklist is from Hawker, S., S. Payne, et al. (2002). "Appraising the Evidence: Reviewing Disparate Data Systematically." *Qualitative Health Research* 12(9): 1284-1299.

Scores: Good=4 Fair=3 Poor=2 Very poor=1 Lower scores =poor quality

Quality: High: 30-36, Medium: 24-29, Low: 09-23

#### Format of the tool:

1. Abstract and title:	Did they provide a clear description of the study?	Good: Structured abstract with full information and clear title. Fair: Abstract with most of the information. Poor: Inadequate abstract. Very Poor: No abstract.
------------------------	--	---

2. Introduction and aims:	Was there a good background and clear statement of the aims of the research?	<p>Good: Full but concise background to discussion/study containing up-to date literature review and highlighting gaps in knowledge. Clear statement of aim AND objectives including research questions.</p> <p>Fair: Some background and literature review. Research questions outlined.</p> <p>Poor: Some background but no aim/objectives/questions, OR aims/objectives but inadequate background.</p> <p>Very Poor: No mention of aims/objectives. No background or literature review.</p>
3. Method and data:	Is the method appropriate and clearly explained?	<p>Good: Method is appropriate and described clearly (e.g., questionnaires included). Clear details of the data collection and recording.</p> <p>Fair: Method appropriate, description could be better. Data described.</p> <p>Poor: Questionable whether method is appropriate. Method described inadequately. Little description of data.</p> <p>Very Poor: No mention of method, AND/OR Method inappropriate, AND/OR No details of data.</p>
4. Sampling:	Was the sampling strategy appropriate to address the aims?	<p>Good: Details (age/gender/race/context) of who was studied and how they were recruited. Why this group was targeted. The sample size was justified for the study. Response rates shown and explained.</p> <p>Fair: Sample size justified. Most information given, but some missing.</p> <p>Poor: Sampling mentioned but few descriptive details.</p> <p>Very Poor: No details of sample.</p>
5. Data analysis:	Was the description of the data analysis sufficiently rigorous?	<p>Good: Clear description of how analysis was done. Qualitative studies: Description of how themes derived/respondent validation or triangulation. Quantitative studies: Reasons for tests selected hypothesis driven/numbers add up/statistical significance discussed.</p> <p>Fair: Qualitative: Descriptive discussion of analysis. Quantitative.</p> <p>Poor: Minimal details about analysis.</p> <p>Very Poor: No discussion of analysis.</p>
6. Ethics and bias:	Have ethical issues been addressed, and what has necessary ethical approval gained? Has the relationship between researchers and participants been adequately considered?	<p>Good: Ethics: Where necessary issues of confidentiality, sensitivity, and consent were addressed. Bias: Researcher was reflexive and/or aware of own bias.</p> <p>Fair: Lip service was paid to above (i.e., these issues were acknowledged).</p> <p>Poor: Brief mention of issues. Very Poor: No mention of issues.</p>

7. Results:	Is there a clear statement of the findings?	<p>Good: Findings explicit, easy to understand, and in logical progression. Tables, if present, are explained in text. Results relate directly to aims. Sufficient data are presented to support findings.</p> <p>Fair: Findings mentioned but more explanation could be given. Data presented relate directly to results.</p> <p>Poor: Findings presented haphazardly, not explained, and do not progress logically from results.</p> <p>Very Poor: Findings not mentioned or do not relate to aims.</p>
8. Transferability or generalizability:	Are the findings of this study transferable (generalizable) to a wider population?	<p>Good: Context and setting of the study is described sufficiently to allow comparison with other contexts and settings, plus high score in Question 4 (sampling).</p> <p>Fair: Some context and setting described, but more needed to replicate or compare the study with others, PLUS fair score or higher in Question 4.</p> <p>Poor: Minimal description of context/setting.</p> <p>Very Poor: No description of context/setting.</p>
9. Implications and usefulness	How important are these findings to policy and practice?	<p>Good: Contributes something new and/or different in terms of understanding/insight or perspective. Suggests ideas for further research. Suggests implications for policy and/or practice.</p> <p>Fair: Two of the above (state what is missing in comments).</p> <p>Poor: Only one of the above. Very Poor: None of the above</p>

AACODS checklist for grey literature

AACODS		YES	NO	?
Authority	<p><b>Identifying who is responsible for the intellectual content.</b></p> <p><b>Individual author:</b></p> <ul style="list-style-type: none"> <li>• Associated with a reputable organisation?</li> <li>• Professional qualifications or considerable experience?</li> <li>• Produced/published other work (grey/black) in the field?</li> <li>• Recognised expert, identified in other sources?</li> <li>• Cited by others? (use Google Scholar as a quick check)</li> <li>• Higher degree student under “expert” supervision?</li> </ul> <p><b>Organisation or group:</b></p> <ul style="list-style-type: none"> <li>• Is the organisation reputable? (e.g. W.H.O)</li> <li>• Is the organisation an authority in the field?</li> </ul> <p><b>In all cases:</b></p> <ul style="list-style-type: none"> <li>• Does the item have a detailed reference list or bibliography?</li> </ul>			
Accuracy	<ul style="list-style-type: none"> <li>• Does the item have a clearly stated aim or brief?</li> <li>• Is so, is this met?</li> <li>• Does it have a stated methodology?</li> <li>• If so, is it adhered to?</li> </ul>			



	<ul style="list-style-type: none"> <li>• Has it been peer-reviewed?</li> <li>• Has it been edited by a reputable authority?</li> <li>• Supported by authoritative, documented references or credible sources?</li> <li>• Is it representative of work in the field?</li> <li>• If No, is it a valid counterbalance?</li> <li>• Is any data collection explicit and appropriate for the research?</li> <li>• If item is secondary material (e.g. a policy brief of a technical report) refer to <ul style="list-style-type: none"> <li>• the original. Is it an accurate, unbiased interpretation or analysis?</li> </ul> </li> </ul>			
Coverage	<p>All items have parameters which define their content coverage. These limits might mean that a work refers to a particular population group, or that it excluded certain types of publication. A report could be designed to answer a particular question, or be based on statistics from a particular survey.</p> <ul style="list-style-type: none"> <li>• Are any limits clearly stated?</li> </ul>			
Objectivity	<p>It is important to identify bias, particularly if it is unstated or unacknowledged.</p> <ul style="list-style-type: none"> <li>• Opinion, expert or otherwise, is still opinion: is the author's standpoint clear?</li> <li>• Does the work seem to be balanced in presentation?</li> </ul>			
Date	<p>For the item to inform your research, it needs to have a date that confirms relevance</p> <ul style="list-style-type: none"> <li>• Does the item have a clearly stated date related to content? No easily discernible date is a strong concern.</li> <li>• If no date is given, but can be closely ascertained, is there a valid reason for its absence?</li> <li>• Check the bibliography: have key contemporary material been included?</li> </ul>			
Significance	<p>This is a value judgment of the item, in the context of the relevant research area</p> <ul style="list-style-type: none"> <li>• Is the item meaningful? (This incorporates feasibility, utility and relevance)</li> <li>• Does it add context?</li> <li>• Does it enrich or add something unique to the research?</li> <li>• Does it strengthen or refute a current position?</li> <li>• Would the research area be lesser without it?</li> <li>• Is it integral, representative, typical?</li> <li>• Does it have impact? (in the sense of influencing the work or behaviour of others)</li> </ul>			

Burls, A. 2009, What is critical appraisal? Bandolier, viewed 4 November 2009.

Jess

Tyndall,

Flinders

University,

Nov

2010

## Appendix D1: Quality assessment of the papers

Scores: Good=4 Fair=3 Poor=2 Very poor=1 Lower scores =poor quality

Quality: High: 30-36, Medium: 24-29, Low: 09-23

ID	Autho rs and Year	Abstract and title	Introduction and aims	Method and design	Sampling	Data analysis	Ethics and bias	Results	Transferabi lity or generaliza bility	Implications and usefulness	overall quality
		score	score	score	score	score	score	score	score	score	score
1.	Karki et al., (2021)	The title of the study is very clear that fully complement the research and the abstract provides an overall view of the study.  <b>Good=4</b>	The study follows a very well-structured background and it reviewed the recent literature carefully to present an idea about the situation of PWDs in accessing to the assistive technology with some clear questions.  <b>Good=4</b>	The research followed qualitative method to collect data which is appropriate for this study but there is no questionnaire found.  <b>Fair=3</b>	The study showed the data collection tools but how the sample is chosen, not mention clearly. The sample size is appropriate although the age and gender of the participants and how they were selected were not described well.  <b>Poor=2</b>	A detailed and clear description of data analysis is provided. NVivo 12 is used to analyze data  <b>Good=4</b>	The researcher considers the ethical issues for the analysis but limitations of the study were not mentioned.  <b>Fair=3</b>	As it is a thematic analysis, the result section is presented well and very understandable.  <b>Good=4</b>	The research is conducted in three countries and it is showing the situation of PWDs in a particular issue. The study achieved a fair score in the sampling category.  <b>Fair=3</b>	The research can add value in the policy making of Bangladesh to improve the situation of persons with disabilities  <b>Good=4</b>	High quality study  <b>Total score=31</b>
2.	Stuckey et al., (2020)	The study has an appropriate title and	The introduction reviews existing literature matched with the study and	Qualitative interviews are taken for the	Convenience sampling is used to select the sample size, participant's	Data analysis process is mentioned	A clear description of ethical issue and	The study has a very	The study used convenience sample	The study has identified the barrier facing by persons of	Low quality study

ID	Authors and Year	Abstract and title	Introduction and aims	Method and design	Sampling	Data analysis	Ethics and bias	Results	Transferability or generalizability	Implications and usefulness	overall quality
		score	score	score	score	score	score	score	score	score	score
		clear abstract. <b>Good=4</b>	the aim of the study is rightly identified but research question is not there. <b>Fair=3</b>	study which is clearly mentioned in the method part. However, there is no questionnaire attached with the study. <b>Fair=3</b>	age and gender is clearly mentioned. <b>Good=4</b>	d very clearly. Descriptive statistics is used here. <b>Good=4</b>	limitation of the study is mentioned. <b>Good=4</b>	understandable result section. <b>Good=4</b>	that chose young, healthy and able to participate participants, so, it is not generalizable. The study achieved a good score in the sampling category. <b>Fair=3</b>	lower limb amputation (LLA) and reviewing those challenges, government can take effective policy to improve their situation. <b>Good=4</b>	<b>Total score=33</b>
3.	Gudlavalleti, (2018)	The title is very appropriate for the study but the abstract does not provide all necessary information. The abstract does not	Introduction is well described but aim and objective is not described clearly, research question is also missing. <b>Poor=2</b>	Design and method are not mentioned properly. Reviewing the literature, it is found that it follows the structure of the	The review has mentioned the included literature for the study but no detailed criteria is identified. <b>Very poor=1</b>	Not mentioned. <b>Lower scores =poor quality</b>	Not mentioned. <b>Lower scores =poor quality</b>	Results are easily understandable <b>Good=4</b>	Not mentioned and it gets a poor score in sampling. <b>Lower scores =poor quality</b>	The study is useful for policy implication as it clearly showed the barriers in accessing the health sectors of the disabled persons. <b>Good=4</b>	Low quality study <b>Total score=14</b>

ID	Autho rs and Year	Abstract and title	Introduction and aims	Method and design	Sampling	Data analysis	Ethics and bias	Results	Transferabi lity or generaliza bility	Implications and usefulness	overall quality
		score	score	score	score	score	score	score	score	score	score
		follow the actual format of an abstract. <b>Poor=2</b>		literature review. <b>Very poor=1</b>							
4.	Imam et al., (2021)	An appropriate title has been provided for the study and abstract is clearly explanation. <b>Good=4</b>	A clearly understandable introduction is provided with a specific aim but the research question is missing. <b>Fair=3</b>	It is a mixed method study (Quantitative and scoping review) which explained properly but no questionnaire is attached here. <b>Fair=3</b>	Purposive sampling has been used in the study and the criteria of selection can be more detailed. <b>Fair=3</b>	Data analysis is process is clearly mentioned. <b>Good=4</b>	Ethics and bias for this study is not mentioned. <b>Lower scores =poor quality</b>	Result is well described and understandable. <b>Good=4</b>	Not mentioned but it gets fair score for sampling <b>Poor=2</b>	It clearly identifies the situation of the rehabilitation services of Bangladesh that is very useful for the researchers for further analysis. It is also good for the government of Bangladesh. <b>Good=4</b>	Medium quality study  <b>Total score= 27</b>
5.	Borg & Östergren, (2015)	The literature has an abstract with a clear title. <b>Good=4</b>	Good introduction with clearly identified aim but research questions are not mentioned. <b>Fair=3</b>	The study is conducted using an appropriate method. No questionnaire is included.	The study mentioned the inclusion criteria very clearly. <b>Good=4</b>	Data analysis technique is very clear. <b>Good=4</b>	The study has explained the ethical issues clearly but nothing has	Clearly understandable result. <b>Good=4</b>	Nothing mentioned about the transferability but it has good score in sampling.	Using the study result, government can improve the rehabilitation service to benefit the	High quality study  <b>Total score=32</b>

ID	Authors and Year	Abstract and title	Introduction and aims	Method and design	Sampling	Data analysis	Ethics and bias	Results	Transferability or generalizability	Implications and usefulness	overall quality
		score	score	score	score	score	score	score	score	score	score
				Fair=3			discussed on the bias of the study. Fair=3		Fair=3	PWDs in Bangladesh. Good=4	
6.	Alders et al., (2018)	The title is very clear about the purpose of the study but the abstract is needed to be improved a bit. Fair=3	The introduction is well structured with recent literature reviews related with the topic and aims are also clear. Research questions are mentioned there. Good=4	Method and design of the study is clearly described. A sample questionnaire is also added. Good=4	Sampling is well described Good=4	Clearly described the thematic analysis, no software used. Good=4	Ethical issue and the bias section are clear enough to understand. Good=4	Results are well described. Good=4	The study is not generalizable and it is mentioned clearly in the limitation section. The study gets good score in sampling section. Good=4	Findings of the study is very important to policy and practice as it identifies the challenges of the wheelchair users and also open the door of further analysis to improve the situation. Good=4	High quality study  Total score=34
7.	Quinn et al., (2016)	Title and the abstract of the study is very understandable as they are well described. Good=4	Introduction can depict the situation of the selected topic with recent literatures but no specific research question is mentioned here. Fair=3	The method has been chosen for the study is very related and well described. However, no	Sampling is very well structured and the participants are recruited well. Good=4	Data analysis method is clearly described. Good=4	Ethics and bias of the literature is mentioned clearly. Good=4	Results are very easy to understand. Good=4	The study is not generalizable. Although it is not mentioned specifically but from	The study is adding value in the policy implication and in the further research. Good=4	High quality study  Total score=34

ID	Authors and Year	Abstract and title	Introduction and aims	Method and design	Sampling	Data analysis	Ethics and bias	Results	Transferability or generalizability	Implications and usefulness	overall quality
		score	score	score	score	score	score	score	score	score	score
				questionnaire is added. <b>Fair=3</b>					the limitation sector it is easily understandable and the research get a higher score in sampling. <b>Good=4</b>		

Assessment of the grey literatures:

ID	Author and year	AACODS		Y	N	?	
8.	Thompson S. (2020)	Authority	Identifying who is responsible for the intellectual content.				
			<b>Individual author:</b>				
			• Associated with a reputable organisation?			✓	
			• Professional qualifications or considerable experience?			✓	
			• Produced/published other work (grey/black) in the field?			✓	
			• Recognised expert, identified in other sources?			✓	
			• Cited by others? (use Google Scholar as a quick check)	✓			
			<b>Organisation or group:</b>				
			• Is the organisation reputable? (e.g. W.H.O)	✓			
			• Is the organisation an authority in the field?	✓			
			<b>In all cases:</b>				
			• Does the item have a detailed reference list or bibliography?	✓			
			Accuracy	• Does the item have a clearly stated aim or brief?	✓		
				• Is so, is this met?	✓		
			• Does it have a stated methodology?	✓			
			• If so, is it adhered to?	✓			
			• Has it been peer-reviewed?	✓			
			• Has it been edited by a reputable authority?		✓		
			• Supported by authoritative, documented references or credible sources?	✓			
			• Is it representative of work in the field?	✓			
			• If No, is it a valid counterbalance?				
			• Is any data collection explicit and appropriate for the research?	✓			
			• If item is secondary material (e.g. a policy brief of a technical report) refer to the original.		✓		
			• Is it an accurate, unbiased interpretation or analysis?	✓			
			Coverage	All items have parameters which define their content coverage. These limits might mean that a work refers to a particular population group, or that it excluded certain types of publication. A report could be designed to answer a particular question, or be based on statistics from a particular survey. • Are any limits clearly stated?		✓	
			Objectivity	It is important to identify bias, particularly if it is unstated or unacknowledged.			

			<ul style="list-style-type: none"> <li>Opinion, expert or otherwise, is still opinion: is the author's standpoint clear?</li> </ul>	✓		
			<ul style="list-style-type: none"> <li>Does the work seem to be balanced in presentation?</li> </ul>		✓	
		Date	For the item to inform your research, it needs to have a date that confirms relevance			
			<ul style="list-style-type: none"> <li>Does the item have a clearly stated date related to content? No easily discernible date is a strong concern</li> </ul>	✓		
			<ul style="list-style-type: none"> <li>If no date is given, but can be closely ascertained, is there a valid reason for its absence?</li> </ul>			
			<ul style="list-style-type: none"> <li>Check the bibliography: have key contemporary material been included?</li> </ul>	✓		
		Significance	This is a value judgment of the item, in the context of the relevant research area			
			<ul style="list-style-type: none"> <li>Is the item meaningful? (this incorporates feasibility, utility and relevance)</li> </ul>	✓		
			<ul style="list-style-type: none"> <li>Does it add context?</li> </ul>	✓		
			<ul style="list-style-type: none"> <li>Does it enrich or add something unique to the research?</li> </ul>	✓		
			<ul style="list-style-type: none"> <li>Does it strengthen or refute a current position?</li> </ul>	✓		
			<ul style="list-style-type: none"> <li>Would the research area be lesser without it?</li> </ul>	✓		
			<ul style="list-style-type: none"> <li>Is it integral, representative, typical?</li> </ul>	✓		
			<ul style="list-style-type: none"> <li>Does it have impact? (in the sense of influencing the work or behaviour of others)</li> </ul>	✓		
9.	Nokrek et al., (2013)	Authority	Identifying who is responsible for the intellectual content.			
			<b>Individual author:</b>			
			<ul style="list-style-type: none"> <li>Associated with a reputable organisation?</li> </ul>			✓
			<ul style="list-style-type: none"> <li>Professional qualifications or considerable experience?</li> </ul>			✓
			<ul style="list-style-type: none"> <li>Produced/published other work (grey/black) in the field?</li> </ul>			✓
			<ul style="list-style-type: none"> <li>Recognised expert, identified in other sources?</li> </ul>			✓
			<ul style="list-style-type: none"> <li>Cited by others? (use Google Scholar as a quick check)</li> </ul>	✓		
			<b>Organisation or group:</b>			
			<ul style="list-style-type: none"> <li>Is the organisation reputable? (e.g. W.H.O)</li> </ul>		✓	
			<ul style="list-style-type: none"> <li>Is the organisation an authority in the field?</li> </ul>			✓
			<b>In all cases:</b>			
			<ul style="list-style-type: none"> <li>Does the item have a detailed reference list or bibliography?</li> </ul>	✓		
		Accuracy	<ul style="list-style-type: none"> <li>Does the item have a clearly stated aim or brief?</li> </ul>	✓		
			<ul style="list-style-type: none"> <li>Is so, is this met?</li> </ul>	✓		
			<ul style="list-style-type: none"> <li>Does it have a stated methodology?</li> </ul>	✓		
			<ul style="list-style-type: none"> <li>If so, is it adhered to?</li> </ul>	✓		



			<ul style="list-style-type: none"> <li>• Has it been peer-reviewed?</li> </ul>	✓		
			<ul style="list-style-type: none"> <li>• Has it been edited by a reputable authority?</li> </ul>			✓
			<ul style="list-style-type: none"> <li>• Supported by authoritative, documented references or credible sources?</li> </ul>	✓		
			<ul style="list-style-type: none"> <li>• Is it representative of work in the field?</li> </ul>	✓		
			<ul style="list-style-type: none"> <li>• If no, is it a valid counterbalance?</li> </ul>			
			<ul style="list-style-type: none"> <li>• Is any data collection explicit and appropriate for the research?</li> </ul>	✓		
			<ul style="list-style-type: none"> <li>• If item is secondary material (e.g. a policy brief of a technical report) refer to the original.</li> </ul>	Primary		
			<ul style="list-style-type: none"> <li>• Is it an accurate, unbiased interpretation or analysis?</li> </ul>	✓		
		Coverage	<p>All items have parameters which define their content coverage. These limits might mean that a work refers to a particular population group, or that it excluded certain types of publication. A report could be designed to answer a particular question, or be based on statistics from a particular survey.</p> <ul style="list-style-type: none"> <li>• Are any limits clearly stated?</li> </ul>		✓	
		Objectivity	<p>It is important to identify bias, particularly if it is unstated or unacknowledged.</p>			
			<ul style="list-style-type: none"> <li>• Opinion, expert or otherwise, is still opinion: is the author's standpoint clear?</li> </ul>	✓		
			<ul style="list-style-type: none"> <li>• Does the work seem to be balanced in presentation?</li> </ul>	✓		
		Date	<p>For the item to inform your research, it needs to have a date that confirms relevance</p>			
			<ul style="list-style-type: none"> <li>• Does the item have a clearly stated date related to content? No easily discernible date is a strong concern</li> </ul>	✓		
			<ul style="list-style-type: none"> <li>• If no date is given, but can be closely ascertained, is there a valid reason for its absence?</li> </ul>			
			<ul style="list-style-type: none"> <li>• Check the bibliography: have key contemporary material been included?</li> </ul>	✓		
		Significance	<p>This is a value judgment of the item, in the context of the relevant research area</p>			
			<ul style="list-style-type: none"> <li>• Is the item meaningful? (This incorporates feasibility, utility and relevance)</li> </ul>	✓		
			<ul style="list-style-type: none"> <li>• Does it add context?</li> </ul>	✓		
			<ul style="list-style-type: none"> <li>• Does it enrich or add something unique to the research?</li> </ul>	✓		
			<ul style="list-style-type: none"> <li>• Does it strengthen or refute a current position?</li> </ul>	✓		
			<ul style="list-style-type: none"> <li>• Would the research area be lesser without it?</li> </ul>	✓		
			<ul style="list-style-type: none"> <li>• Is it integral, representative, typical?</li> </ul>	✓		
			<ul style="list-style-type: none"> <li>• Does it have impact? (In the sense of influencing</li> </ul>	✓		

			the work or behaviour of others)			
10.	Anwar et al., (2019)	Authority	Identifying who is responsible for the intellectual content.			
			<b>Individual author:</b>			
			• Associated with a reputable organisation?	✓		
			• Professional qualifications or considerable experience?	✓		
			• Produced/published other work (grey/black) in the field?			✓
			• Recognised expert, identified in other sources?			✓
			• Cited by others? (use Google Scholar as a quick check)	✓		
			<b>Organisation or group:</b>			
			• Is the organisation reputable? (e.g. W.H.O)	✓		
			• Is the organisation an authority in the field?	✓		
			<b>In all cases:</b>			
			• Does the item have a detailed reference list or bibliography?	✓		
			Accuracy	• Does the item have a clearly stated aim or brief?	✓	
		• Is so, is this met?		✓		
		• Does it have a stated methodology?			✓	
		• If so, is it adhered to?				
		• Has it been peer-reviewed?		✓		
		• Has it been edited by a reputable authority?				✓
		• Supported by authoritative, documented references or credible sources?		✓		
		• Is it representative of work in the field?		✓		
		• If No, is it a valid counterbalance?				
		• Is any data collection explicit and appropriate for the research?		✓		
		• If item is secondary material (e.g. a policy brief of a technical report) refer to the original.			✓	
• Is it an accurate, unbiased interpretation or analysis?	✓					
Coverage	All items have parameters which define their content coverage. These limits might mean that a work refers to a particular population group, or that it excluded certain types of publication. A report could be designed to answer a particular question, or be based on statistics from a particular survey.			✓		
	• Are any limits clearly stated?					
Objectivity	It is important to identify bias, particularly if it is unstated or unacknowledged.					
	• Opinion, expert or otherwise, is still opinion: is the author's standpoint clear?	✓				
	• Does the work seem to be balanced in	✓				

			presentation?			
	Date	For the item to inform your research, it needs to have a date that confirms relevance				
		• Does the item have a clearly stated date related to content? No easily discernible date is a strong concern			✓	
		• If no date is given, but can be closely ascertained, is there a valid reason for its absence?			✓	
		• Check the bibliography: have key contemporary material been included?	✓			
	Significance	This is a value judgment of the item, in the context of the relevant research area				
		• Is the item meaningful? (this incorporates feasibility, utility and relevance)	✓			
		• Does it add context?	✓			
		• Does it enrich or add something unique to the research?	✓			
		• Does it strengthen or refute a current position?	✓			
		• Would the research area be lesser without it?	✓			
		• Is it integral, representative, typical?	✓			
		• Does it have impact? (In the sense of influencing the work or behaviour of others)	✓			

#### Appendix E: Reason for not including the papers in the final study

Sl	Title	Data base	Reason for not including
i.	Primary health care seeking behaviour of people with physical disabilities in Bangladesh: a cross-sectional study	CINAHL	This study does not talk about the barriers faced by the PWDs. It talks about their need.
ii.	Challenges for people with disabilities during disasters in Bangladesh: an exploratory study in Gaibandha district	CINAHL	The study mainly identifies the need of the disabled people during disasters; nothing about how they face challenges to access services during disasters.
iii.	Access to water and sanitation among people with disabilities: results from cross-sectional surveys in Bangladesh, Cameroon, India and Malawi	Ovid MEDLINE	The study does not match with the required objective.
iv.	Assessing Barriers to Effective Coverage of Health Services for Adolescents in Low- and Middle-Income Countries: A Scoping Review	Ovid MEDLINE	Full paper not available
v.	Barriers to healthcare services for persons	Ovid MEDLINE	The study does not match with the

	with disabilities in Bangladesh amid the COVID-19 pandemic		required objective.
vi.	Challenges for people with disabilities during disasters in Bangladesh: an exploratory study in Gaibandha district	Ovid MEDLINE	Duplicate
vii.	Experience of families in accessing government led support for children with disabilities in Bangladesh	Ovid MEDLINE	Talked about children
viii.	Health-care utilization by disabled persons: A survey in rural Bangladesh	Ovid MEDLINE	The study is about what they do if they need health care not what type of challenges they faced.
ix.	Predictors of referral uptake in children with disabilities in Bangladesh – Exploring barriers as a first step to improving referral provision	Ovid MEDLINE	Talked about children
x.	Primary health care seeking behaviour of people with physical disabilities in Bangladesh: a cross-sectional study	Ovid MEDLINE	Duplicate
xi.	Service providers' perspectives in providing services to children with disabilities and their families in Bangladesh	Ovid MEDLINE	It is about the providers not about the service users.
xii.	The Inclusion of Rights of People with Disabilities and Women and Girls in Water, Sanitation, and Hygiene Policy Documents and Programs of Bangladesh and Cambodia: Content Analysis Using EquiFrame	Ovid MEDLINE	Does not match with the objective.
xiii.	The Double Burden: Barriers and Facilitators to Socioeconomic Inclusion for Women with Disability in Bangladesh	Google	Duplication
xiv.	Access to assistive technology for persons with disabilities: a critical review from Nepal, India and Bangladesh.	Google	Duplication
xv.	Mental Health and Community-Based Rehabilitation: A Qualitative Description of the Experiences and Perspectives of Service Users and Carers in Bangladesh	Google	Does not talk about the challenges
xvi.	Report on Metanarratives of Disability Project	Google	Does not talk about the challenges
xvii.	Inclusive Education in Bangladesh: Are Pre-service Teachers Ready to Accept Students with Special Educational Needs in Regular Classes?	Google	About needs not the access challenge
xviii.	Exploring access to government-led support for children with disabilities in Bangladesh	Google	About children

xix.	Experience of families in accessing governmentled support for children with disabilities in Bangladesh	Google	About children
xx.	Education for Disabled Children in Bangladesh: Perceptions, Misconceptions and Challenges	Google	About children
xxi.	Persons with disabilities: breaking down barriers	Google	Does not talk about the access challenges to services
xxii.	PERSONS WITH DISABILITIES RIGHTS AND PROTECTION ACT IN BANGLADES	Google	Does not talk about the access challenges to services
xxiii.	Models of disability and people with disabilities in Bangladesh: A review	Google	Does not talk about the access challenges to services
xxiv.	Disability among elderly rural villagers: report of a survey from Gonoshasthaya Kendra, Bangladesh	Google	Does not talk about the access challenges to services
xxv.	Community based rehabilitation: Does it really improve the level of productivity among persons with physical disabilities	Google	Does not talk about the access challenges to services
xxvi.	Assessment of Educational Needs of Disabled Children in Bangladesh	Google	It is about needs, does not talk about the access challenges to services

## Appendix F: Data Extraction

Data Extracted by: Qumrun Naher Islam

ID	Author Year	Study design	Data analysis	Sample	Aim	Results / Key messages	Limitations / notes	Conclusion
1.	Karki et al., (2021)	Descriptive exploratory qualitative study design	NVivo 12	<p>Key informant interviews were conducted for this research. Government employees who made policy for assistive products service, who provide services and the AT service users who used AT mostly for mobility and hearing-related problems were chosen for interviews. In India, Bangladesh (BD) and Nepal there were 15,16 and 14 Key Informant Interviews (KIIs) conducted respectively. Observational notes were also made during the visits at service delivery</p>	<p>To find out the challenges of accessing the AT services for the disabled persons living in Nepal, India, and Bangladesh and also provide a guideline, based on the identified practices, to develop a service delivery model suitable for these countries.</p>	<p>To provide the assistive device services, system is not strong enough. There is a lack of awareness among the service providers and also among the service receivers. Services are not affordable and reachable. Sometimes many disabled persons are not considered as eligible for the services.</p>	Nothing mentioned	<p>The Government should focus on the practicability of the policies. There is huge difference in the service provision between rural and urban areas.</p>

ID	Author Year	Study design	Data analysis	Sample	Aim	Results / Key messages	Limitations / notes	Conclusion
				centres.				
2.	Stuckey et al., (2020)	Qualitative interviews with thematic analysis.	Descriptive statistics was used to analyse the data and interview was transcribed verbatim.	Convenience sampling was used to select 10 18+ male/female having uni- or bilateral transtibial or transfemoral amputation, who are seeking rehabilitation and prosthetic services, like to share their experience willingly by a one-on-one conversation were eligible for this study. Face to face interviews were conducted.	To identify the experience of Bangladeshi people who were intended to have lower limb amputation and prosthetic rehabilitation to understand the service of the providers and barriers to providing the services.	The research identifies that disable people cannot take part in the employment sector due to spirituality, negative attitude of the family members or the society, future planning of work, lack of mobility devices, environmental challenges, desire of work and gender role in the society.	This study only focuses on the young participants who have lower limb amputations in Bangladesh and also aware of prosthetic rehabilitation, it does not mention anything about them who are not aware of prosthetic rehabilitation.	There is a huge demand of rehabilitation and prosthetic services among the people who have lower limb amputation in Bangladesh. Further research is needed in this area.
3.	Gudlavalleti, (2018)	Literature review	Not mentioned	Adults (18 to 50) with disability.	To identify the challenge faced by the adult disabled in accessing health care services in South Asia.	People with disability face infrastructural challenges in accessing the health services. Not only that they also have to face negative attitude of the family and society. Family members prefer to provide health facility	Nothing mentioned	In south Asian countries significant number of people with disabilities do not get health services due to social prejudice and having the lack of knowledge of the

ID	Author Year	Study design	Data analysis	Sample	Aim	Results / Key messages	Limitations / notes	Conclusion
						to a non-disabled person as they considered important person of the family. Service providers sometimes do not provide quality health service to the disabled person.		family members. It is very important to find out some locally affordable and available quality health services for the disabled adults.
4.	Imam et al., (2021)	Mixed-method (Online survey and scoping review) study.	For scoping review excel template and for the online survey IBM SPSS Statistics v.26, Armonk, NY were used.	For scoping review studies between January 2021 and March 2021 talked on PWDs and rehabilitation in Bangladesh were selected and for online survey rehabilitation units that have at least one rehabilitation professional were included purposively. 1689 rehabilitation centres were approached for interview.	To assess the ongoing situation of services for persons with disabilities in Bangladesh	The study produces two categories of results; scoping review and online survey result. It is found that there is no specific monitoring policy of the services provided by the rehabilitation service providers. A number of 1152 rehabilitation centres were participated in the survey (68.2% response rate) and among them 36.3% were the physiotherapy centres, hospital units were 26.5%, community-based rehabilitation	Nothing mentioned	There is huge demand for rehabilitation services in Bangladesh, so, government should expand the services from primary to tertiary level. The services should be free for all so that more people can access the services.



ID	Author Year	Study design	Data analysis	Sample	Aim	Results / Key messages	Limitations / notes	Conclusion
						services were 15.6%. Rehabilitation centers are mainly in urban areas and most of them are privately funded.		
5.	Borg & Östergren, (2015)	Quantitative study design	By using IBM SPSS Statistics Version 20, descriptive and analytic statistics are performed to analyse the data.	Data were collected from 581 people (15–55 years ) Who were using hearing aid or wheelchair or individuals with hearing impairments not using hearing aids and individuals with ambulatory impairments not using wheelchairs. They were living in eight districts of Bangladesh. Hearing aids or wheelchairs users aged from 15–55 years.	To provide a better understanding of challenges faced by the PWDs in not accessing services on assistive devices describing potential reasons such as lack of awareness providers attitude, costs, describing common reasons for not possessing assistive technologies; and also make a comparison of	It is found that lack of affordability is the main reason for not getting an ADs. There is also huge gap in understanding and awareness related the service provision.	As the research is based on cross sectional study, it does not show the causal relationship of the events. The sample was not representative nationally or regionally and risk of selection bias is there.	To plan a system for providing assistive technologies, age, sex, type of impairment and socioeconomic status must be considered.

ID	Author Year	Study design	Data analysis	Sample	Aim	Results / Key messages	Limitations / notes	Conclusion
					the sources of Ads. The study also tried to provide solutions of the problem.			
6.	Aldersey et al., (2018)	Participatory action research study design. Photovoice and semi-structured interviews are done.	For the photovoice analysis most reliable pictures were identified and based on that data were analysed. For semi structured interviews thematic analysis, were done.	Above 16 years old people who use wheelchairs were chosen for the interview.	To identify the challenges faced by wheelchair users living in Bangladesh, how these challenges exclude them from the society and the potential solutions to improve the accessibility and inclusion for wheelchair users in Bangladesh.	Participants face barriers in public spaces for not having required number of ramps, inaccessible toilets, and societal negative attitudes. Women wheelchair users face greater barriers than men in accessing the services. The situation worsens during the rainy season. Participants recommended for better road infrastructure; especially during monsoon, and modifications of the public transportation system.	The participants were chosen based on their contact with CRP. Although the rule was to collect interviewees from different parts of the country, most of them were from capital city Dhaka. Photovoice method sometimes ignore the most facing barriers of the participants as it was totally in the hand of the data collectors.	There is a huge scope to do further research in this topic, so that new ideas can come up to remove the barriers faced by the wheelchair users and they can be involved in the society's development process.

ID	Author Year	Study design	Data analysis	Sample	Aim	Results / Key messages	Limitations / notes	Conclusion
7.	Quinn et al., (2016)	Qualitative study design. Semi-structured in-depth interviews.	Social determinants of health framework and the International Classification of Functioning (ICF) model	Fifteen women were chosen purposefully whose age were between 15 and 40 with either a spinal cord injury or amputation via a traumatic cause and who had been discharged for at least 3 months after inpatient admission.	To identify the barriers in social inclusion faced by the women PWDs in Bangladesh and to find out the impact of this exclusion on their health.	Women PWDs of Bangladesh faced challenges to get education, they are excluded from formal work, they do not get public facilities, getting married is a problem for them and they also face the increase risk of violence and exclusion from community activities and social groups.	The study involves those disabled women who has financial ability to get health facilities in a health center and they were present in CRP that time. So, it does not represent the situation of all women disabled. Poor women and the women who were not in the health center that time was not captured.	To remove the barriers in social inclusion, government should take practical intervention and scale-up disability related program. To improve their health condition, it is necessary to improve the road condition so that they can move to the health centres to get services. Vocational training services should be provided to include them in the formal work force.
8.	Thompson S. (2020)	Non-systematic literature review	Thematic analysis	For this study academic and grey literature are included. It focuses on the general situation for people with disabilities in Bangladesh, Kenya,	Identify the recent situation of PWDs living in Bangladesh, Kenya, Nigeria, Tanzania, Nepal and Jordan.	People with disabilities in Bangladesh faced challenges to access in employment, education, social protection, transportation, health care, and getting	Nothing mentioned	People who involve themselves in the situational analysis of the disabled persons living in the country get the opportunity to provide feedback

ID	Author Year	Study design	Data analysis	Sample	Aim	Results / Key messages	Limitations / notes	Conclusion
				and Nigeria. databases, search engines and websites which host grey literature. Being an under researched area, most of the literature and evidence is grey literature.		assistive devices. They are also suffering from social disrespect. Sometimes they feel ignored in their family too.		on the current situation of PWDs. In this way they can play a vital role in improving the situation of the PWDs.
9.	Nokrek et al., (2013)	Mixed method study design.	Microsoft Excel and SPSS are used for analysing quantitative data.	Working-age (15 and 59 years) disabled people who are identified by the Government of Bangladesh are chosen	To find out the poor disabled person's situation who involve themselves in income-generating activities live in the southwest coastal region of Bangladesh.	Disabled people always face discrimination. Employers do not want them to hire due to their physical impairment or even though they are hired by anyone, they get low wage than anyone else. Women with disability face negative attitude of the family and the society and most of the time they are subject to bullying.	Nothing mentioned	Awareness creation is very important among the disabled people and in their families. They should be encouraged to have a saving plan for their livelihood. Community based rehabilitation is important to improve their lives.
10.	Anwar et al., (2019)	Program Brief	-----	Disabled people living in Bangladesh	To recognize the disability allowance program for the	It was expected that with this disability allowance, poor disabled people will	Nothing mentioned.	Although there are some limitations of the program, it helps the disabled

ID	Author Year	Study design	Data analysis	Sample	Aim	Results / Key messages	Limitations / notes	Conclusion
					PWDs in Bangladesh.	improve their financial condition and social esteem. However, the PWDs faced some barriers to access the allowance. They faced problem with the system of the disbursement of the payment, to be registered in the program and so on. The allowance was the extreme poor disabled but not for all. The limitation of the program was not having a well monitoring system. For this many disabled people who basically do not need the service were included and poor disabled people were excluded from the service.		person to improve their self-esteem but government should expand the amount of the benefit.