

Availability of Assistive Products in Bangladesh from the Priority Assistive Products List of World Health Organization

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[Abstract] In Bangladesh, 9.1% people out of 160 million total population are the disabled. But the availability of assistive products (AP) is very limited in Bangladesh because of financial incapability, lack of advanced technology, poor distribution system, ignorance of rehabilitation professionals about APs, etc. The World Health Organization (WHO) has recently announced 50 Priority Assistive Products List (APL) to ensure development and distribution of assistive products for all. However, there is no official database of APs in Bangladesh which makes information on available APs in Bangladesh unknown to the disabled. In these circumstances, availability of APs in Bangladesh was surveyed clinically. There is only one rehabilitation center in Bangladesh. This center is producing assistive products along with some other organizations. In this research, the founder and rehabilitation professionals of that center along with another organization were asked about the assistive products they produce from APL. The result of the survey revealed that, 23 out of 50 APs of APL were available in Bangladesh including production from rehabilitation center, NGOs, government and imports. In developed countries like USA, UK and Japan, they have all 50 APs in their database. So it is indicated that, the availability of APs Bangladesh is in primitive stage.

Key words: Disability, Bangladesh, Assistive Products List, WHO

I Introduction

In present world, about 1 billion or 15% people are experiencing disability¹⁾. Disability exists in all developed, developing and under developed countries. Various surveys found that, persons with disabilities suffer a lot in poor countries than in rich ones^{2,3,4)}. Suitable Assistive Products (AP) can minimize the sufferings of person with disabilities and make their life meaningful to the society. Like other developed countries, Bangladesh has around 12,091,458 persons with disabilities; among them 5,338,620 are male 6,752,838 are female⁵⁾. The country is facing this disability problem from its independence in 1971,

when a significant number of veterans and wounded freedom fighters were made forcefully. In terms of accessing required assistive products for the persons with disabilities (PWD) the country hasn't yet developed any proper system. Government and some other NGOs are producing and distributing APs to the disabled people in a limited manner. To ensure high quality affordable assistive products for all disabled people over the world, World Health Organization (WHO) has launched a Priority Assistive Products List (APL)⁶⁾ in 2016. That APL contains 50 kinds of priority assistive products in 6 different categories. But till now no study has been done yet about available APs of the country from the APL. This

research was conducted to reveal the available assistive products in Bangladesh by surveying rehabilitation center and disability related organizations of Bangladesh.

II BACKGROUND



Figure-1 Persons with Disabilities in Bangladesh

In Bangladesh, 9.1% people are considered as persons with disabilities but there is no any official database for assistive products. A recent study found that, nearly half of total persons with disabilities spend less than 2 dollars for their assistive products. And more than half of PWDs (53.3%) don't use AP because they don't know about appropriate APs⁷⁾. Figure-1 indicates PWDs of Bangladesh (photos were taken by Stephan Uttom and the daily star online). A department of Ministry of Social Welfare Bangladesh, National Disabled Development Foundation produces braille books, artificial limbs, wheel chairs, tricycles, crutches, standing frames, walking frames, white canes and elbow crutches, etc. to distribute to the persons with disabilities. From 2010, government established 103 Disability Service Centers for 492 sub-districts throughout the country. Persons with disabilities can get treatment services and limited kinds of assistive products from these service centers. Figure 2 shows the map of 103 Disability Service Centers of Bangladesh. But as for their limited capacity

and resources disabled service centers only could provide services and assistive products to 110000 people till now which cost 0.42 million USD⁸⁾.

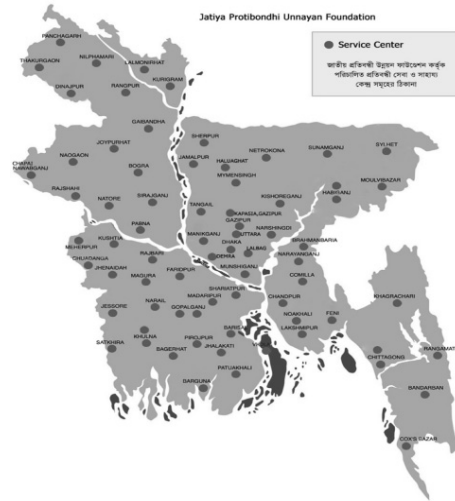


Figure- 2 Map of Disability Service Centers

In Bangladesh 12 organizations are producing assistive products in a limited manner. These are Lamb Hospital, Dinajpur, DBLM, Nilphamari, Karitas, Rajshahi, Midmission Hosital, Natore, Impact Foundation, Chuadanga, Nalta Hospital, Satkhira, Rotary Health Care, Khulna, SARPV, Cox's Bazar, CDC, Chittagong, Center for the Development of the Disabled (CDD), Savar, BRAC limb & brace fitting centre, Dhaka and Center for the Rehabilitation of the Paralysed (CRP), Savar. Apart from these, there are few more local organizations that produce assistive products in a community-based service. Assistive products material are locally produced. As the import materials cost much so organization prefer low cost local materials. There is only one rehabilitation center and is the largest disability related organization in the country, which is Center for the Rehabilitation of the Paralysed (CRP). Center for the Development of the Disabled (CDD) is considered as second largest disability related organization of Bangladesh. CRP is considered as largest disability related organization

because it is operating over the country through 11 of its branches and the number of employees is 1035, where CDD operates from only one center with less than 200 employees⁹). As there is no any private business company in the country for production and distribution of assistive products so CRP and CDD play most vital role in this sector. Assistive products of these two big disability related organizations can give a better idea of whole country's assistive products situation. Brief introduction of these two organizations are stated below.

A CENTER FOR THE REHABILITATION OF THE PARALYSED (CRP)

CRP was established in 1979 by Valerie A. Taylor with the mission of promoting an environment where all disabled people have equal access to health, rehabilitation, education, employment, the physical environment, and information. CRP provides medical treatment, rehabilitation, and support services with the focus on physical, emotional, social, psychological and economic aspects. It promotes the development of skilled personnel in health care and rehabilitation in the country. In collaboration with other organizations, CRP has developed centers in different parts of the country to expand the services for disabled people. It works for promoting empowerment of disabled people through community-based services, advocacy, and networking on disability issues. Along with all other disability and rehabilitation services CRP has some educational institutions. These include, Bangladesh Health Professions Institute (BHPI), William & Marie Taylor School, CRP Nursing College, School of Prosthetic & Orthotic Unit. At present, 5985 students are studying in these institutions. CRP has a quite big work-shop and factory of assistive products at Savar, Dhaka. From that factory, they produce and distribute

wheelchairs, special seating, trolley, tricycle with wheelchair, crutch, calipers, etc. Figure- 3 shows assistive products of CRP (photos were taken by author). From the establishment CRP has provided treatment services and assistive products to 350378 PWDs 10).



Figure-3 Assistive Products of CRP

B CENTER FOR THE DEVELOPMENT OF THE DISABLED (CDD)

CDD was established in 1996 with the mission of bringing the disability issues in mainstream development to enable persons with disabilities' equal opportunities and full participation. Now CDD is working in network with more than 350 organizations over the world. Their prime concern is educating the community to become more inclusive with persons with a disability. CDD provides essential support system to disabled persons to participate in society. With the help of partner organizations, CDD covers whole Bangladesh in their service area network. They produce and supply different types of assistive products such as wheelchairs, artificial limbs, hand splints, visual and hearing aids (but those visual and hearing aids are not listed in the list of APL), etc. to the disabled persons. Figure-4 indicates some of assistive products usually fabricated by CDD (photos were taken by author).



Figure- 4 Assistive Products of CDD

III PURPOSE

As there is no established production and distribution system of APs in the country. PWDs haven't sufficient knowledge about available APs. Lack of integration among all organizations working for disability and assistive products, leads to incomplete information of APs to the disabled people. So it is very important to discover the available APs to know the real situation of APs in Bangladesh. The purpose of this research is to identify the APs available in Bangladesh from APL of WHO.

IV METHOD

World Health Organization states that, at present more than 1 billion people need APs and it will reach 2 billion by 2050¹¹⁾. Only 1 out of 10 who needs assistive products can access due to unaffordability, unavailability, lack of awareness and trained personnel. This situation prevails all over the world including developed countries. To improve access to high quality, affordable assistive products in all countries in 2016, Priority Assistive Products List (APL) was launched by World Health Organization. Figure- 5 shows English Brochure of APL. APL includes 50 priority assistive products in 6 different categories, where Mobility items 16, Vision 9, Hearing 7,

Communication 4, Cognition 9 and Environment 5. To survey the assistive products of Bangladesh ISO 9999 classification was studied. As ISO classification contains vast area of discussion so that was not selected as method for this research. On the other hand, 50 APL of WHO has a specific content of identifying assistive products. For this reason APL of WHO was chosen as a method of this research. While completing this research, literature review was done for preliminary data collection. And to know the actual available APs in the country 3 largest centers of rehabilitation center, CRP, were visited and surveyed along with main office of CDD.



Figure- 5 English Brochure of APL

V RESULTS

The survey result of this research reveals that, Center for the Rehabilitation of the Paralyzed produces 37 kinds of assistive products including other parts and materials of assistive products. In terms of APL of WHO CRP produces 18 kinds of assistive products. Below Table-1 shows assistive products availabilities of Bangladesh including CRP, CDD and others.

Table- 1 Assistive Products of CRP, CDD and others from the APL of WHO¹²⁾

Category of APL	Names of AP	CRP	CDD	Others
1. Mobility (16)	Canes/sticks	√	×	
	Crutches, axillary/ elbow	√	√	
	Orthoses, lower limb	√	√	
	Orthoses, spinal	√	×	
	Orthoses, upper limb	√	√	
	Prostheses, lower limb	√	√	
	Standing frames, adjustable	√	√	
	Tricycles	√	√	
	Walking frames/walkers	√	√	
	Wheelchairs, manual for active use	√	√	
	Wheelchairs, manual assistant-controlled	√	√	
	Wheelchairs, manual with postural support	√	×	
	Wheelchairs, electrically powered	√	×	
	White Cane	×	×	√ import
	Club foot braces	×	×	√ import
Therapeutic footwear	×	×	√ import	
2. Vision (9)	-----	×	×	
3. Hearing (7)	-----	×	×	
4. Communication (4)	Communication boards/books/cards	√	√	
	Braille writing equipment	×	×	√ Govt.
5. Cognition (9)	-----	×	×	
6. Environment (5)	Chairs for shower/ bath/toilet	√	√	
	Hand rails/grab bars	√	×	
	Pressure relief cushions	√	×	
	Ramps, portable	√	√	
	Pressure relief mattresses	×	×	√ import

From the 6 categories of APL Mobility, Vision, Hearing, Communication, Cognition and Environment, only 3 categories of APs are noticed at CRP these are Mobility items 13 (81% from the APL Mobility items), Communication item 1 (25% from the APL

Communication items) and Environment items 3 (80% from the APL Environment items). CDD produces around 30 kinds of assistive products and materials from where 12 kinds of APs are included on APL. CDD also produce same 3 categories of APs where

Mobility (56%), Communication (25%) and Environment (40%). Figure-6 indicates APs of CRP and CDD in categories and percentage. Government produces 1 item that is Braille materials from the APL and rest 4 kinds of APs white cane, club foot braces, therapeutic footwear and pressure relief mattresses are imported from China. From all these productions of APs total 23 kinds of assistive products are available in Bangladesh from 50 APL of WHO.

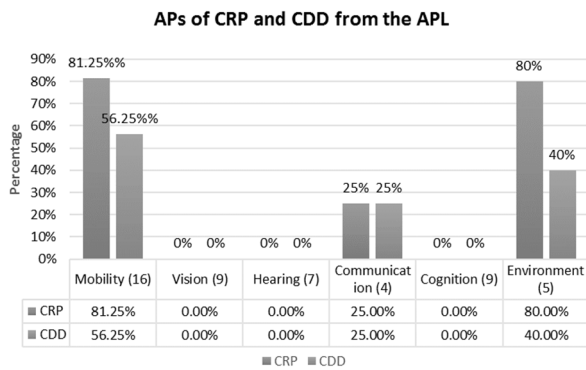


Figure- 6 APs of CRP and CDD in Percentage

VI DISCUSSION

In Bangladesh, over all Mobility & Environment AP items can be found 100% from the APL. And 50% of Communication items of AP from the APL were noticed. But all these assistive products are not in standard quality. For example, orthoses, prostheses, standing frames, tricycles, manually propelled wheelchair with postural support, and electrically powered wheelchair are locally made. The materials which used for producing locally made assistive products are cheap and low in quality. There is no use of advanced technology and technique. For example, bi-cycle, van and rickshaw’s rejected wheels are often used for producing wheelchairs. Most of the times, these assistive products are not customized according to the users demand. As the production cost is not expensive so disabled people can buy it in cheap price.



Figure- 7 Homemade AP of Bangladesh

But it doesn’t meet their actual needs and satisfactions. So the PWDs can’t get maximum benefit from these assistive products, even after being availed. As PWDs spend very few amount of money for their assistive products the fabricating organizations can’t also produce high quality assistive products to sell them. A recent survey paper presented on WHO conference reveal that, around 80% of AP users of Bangladesh use homemade ones¹³⁾. Figure-7 shows a homemade AP of Bangladesh (photo was collected from an article of bdnews24.com). Apart from these, no Vision, Hearing and Cognition items from the APL were found in the country by our survey. United Nations, Economic and Social Commission for Asia and the Pacific report (2016) revealed that, in all PWDs in Bangladesh, 44.2% are Vision, 16.6% are Hearing and 15.8% are Cognition disabilities¹⁴⁾. But these 3 big areas of APs remain unsolved for PWDs in Bangladesh. Technologically developed APs like PDA, DAISY player, alarm signalers, fall detector, GPS locators, etc. are not noticed at all in any of the organization. Affordability can be cause of not having technologically developed assistive products. Because around 80% of the PWDs of Bangladesh live below poverty line¹⁵⁾.

The production of assistive products has been increased from last 8 years in the country. In 2010, CRP

Table- 2 Improvement of AP production by CRP & CDD¹⁶⁾

Name of Organization	In 2010 AP from APL	In 2018 AP from APL
CRP	Mobility- 7 Environment- 0 Communication- 0	Mobility- 13 Environment- 4 Communication- 1
CDD	Mobility- 7 Environment- 2 Communication- 1	Mobility- 9 Environment- 2 Communication- 1

produced 7 assistive products from APL and CDD produced 10 from the APL. In 2018, CRP made 18 APs and CDD 12 from the APL of WHO. Table-2 indicates the improvement of assistive products production of CRP and CDD.

At present, among all the PWDs in Bangladesh, the highest percent of all disability category, 26.9% are old age people, whose age are more than 65 years. According to the UN report (2016), by 2030 the people age 65+ will be 7.4% and by 2050 it will be 15.5% of total Bangladesh population. This information indicates that, Cognition assistive products which we found is now 0% in the country should be given much priority along with Vision and Hearing items of assistive products.

VII CONCLUSION

In the developed countries like, USA, UK, Japan they have all these 50 APL in their national data base system of AbleData, DLF data and TAIS data. PWDs can easily get these assistive products from their country whenever they need. But in the developing countries like, Bangladesh PWDs can't access all those assistive products. So it is indicated that, availability of APs in Bangladesh is in primitive stage. Although assistive production has been increased but training for the rehabilitation professionals and end users didn't improve. The knowledge of rehabilitation

professionals about assistive products especially, technologically developed APs hasn't measured yet so far; that study should be done. Because if the rehabilitation professionals don't have enough knowledge about suitable and advanced level assistive products they can't suggest or train the PWDs about that APs. A recent study of Disability Inclusion for Health and Development, Nossal Institute for Global Health, found that more than half (53.3%) PWDs in Bangladesh didn't use APs because they don't know about suitable assistive products. From this point of view, we have taken interview of Bangladesh rehabilitation professionals of different organizations about their knowledge and expertise of assistive products. That research result will also be published in our next research stage after taking similar interviews to the Japanese rehabilitation professionals.

VIII ACKNOWLEDGEMENT

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WHO の APL から見たバングラアディシュにおける 福祉用具の利用状況

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[要約] バングラデシュでは全人口の 9.1%が障害者で、様々な支援を必要としている。これらの中で福祉用具に着目すると、バングラデシュでは義肢・装具・車いすなどの製作と提供は散見されるが、他はほとんど確認されていない。一方、WHO は、発展途上国でまず導入されるべき福祉用具 50 品目のリスト (Assistive Products List ; APL) を 2016 年に公開した。本研究では、この APL を利用して、バングラデシュにおける福祉用具の状況を明らかにすることを目的とした。方法としては、バングラデシュでは福祉用具の公的供給システムやデータベースが未整備なため、実際に福祉用具を製作・供給している施設の関係者にインタビューを行い情報を得た。対象は、バングラデシュで福祉用具の製造と提供を行っている施設の中で最大規模の CRP (麻痺障害者のリハビリテーションセンター) とした。本来であれば、障害者の評価と福祉用具の適用を実践しているリハビリテーション専門職を対象とすべきであるが、今回は概要を把握することとして、文献および施設の代表者に対する聞き取りで調査した。この結果、CRP では、APL に記載されている 50 品目のうち 23 品目について製作あるいは外部からの導入により提供していることが明らかとなった。この 23 品目の内容としては、移動支援とコミュニケーション支援および環境改善などが多数を占めていたが、技術レベルの高い福祉用具や視覚障害者・聴覚障害者・認知障害者のための福祉用具は含まれていなかった。

キーワード : 障害者、バングラデシュ、福祉用具、Assistive Products List、WHO