

Disability and Rehabilitation in Bangladesh : From field notes of CRP

Md. Mahfuzur Rahman

The Centre for the Rehabilitation of the Paralysed (CRP), Bangladesh
Head of Occupational Therapy Department

Mitsuhiko SANO, PhD

Kobe Gakuin University, Faculty of Rehabilitation
Department of Social Rehabilitation

[Abstract] According to the World Bank, one billion people, or 15% of the world's population, experience some form of disability. In Bangladesh, there is a particularly high rate of disability. The health care system in Bangladesh is undeveloped compared to developed countries. Consequently, NGOs are compensating for the weakness of Bangladesh's health care system. For this reason, the purpose of this paper is to report on the activities of an NGO's rehabilitation centre, which is called CRP (Centre for the Rehabilitation of the Paralysed). CRP was founded in 1979 by physiotherapist, Miss Valerie Taylor. The vision of CRP is to ensure the inclusion of disabled people into mainstream society. Therefore, CRP is intended to offer rehabilitation. CRP has a rehabilitation hospital in Savar and Mirpur. In these hospitals, physiotherapists, occupational therapists and speech and language therapists rehabilitate patients with paralysis and children with cerebral palsy. CRP makes prosthetics and orthotics, and assistive devices such as wheelchairs. CRP is provided with a vocational training centre, Bangladesh Health Professionals Institute (BHPI) and a nursing institute. However, many PWDs in Bangladesh cannot receive high quality medical care, such as that given by CRP. The issues of CRP are finance problems, how to cultivate human resources, and how to provide poor PWDs with an opportunity to receive medical care.

Key Words : CRP, Rehabilitation, PWDs, NGO, Bangladesh

INTRODUCTION

According to the World Bank, one billion people, or 15 percent of the world's population, experience some form of disability [1]. In Bangladesh the prevalence of disability is believed to be high for reasons relating to overpopulation, extreme poverty, illiteracy, lack of awareness, and above all, lack of medical care and services. No comprehensive empirical study has been conducted at present to determine the incidence and prevalence of disabilities in Bangladesh. The few studies that have been conducted reflect a medical rather than

a social model of disability, and they are also limited in geographical coverage [2]. Action Aid-Bangladesh and Social Assistance and Rehabilitation for the Physically Vulnerable (NGO : SARPV) put the percent of PWDs (person with disabilities) at 8.8% of the total population. Bangladesh Protibandhi Kalayan Samiti (NGO) records 7.8%, while in another survey Action Aid Bangladesh (1996) records 14.04% people suffered from a form of impairment. The Government of Bangladesh (GOB) surveys in 1982, 1986 and 1998 estimated a national prevalence rate of disability at 0.64%, 0.5% and 1.60% [3]. WHO's global estimate pre-

dicts approximately 10% of all people have a disability of one kind or another [4]. This is also considered to be true in Bangladesh with some sources quoting a higher disability rate in rural Bangladesh. The health care system in Bangladesh is undeveloped compared with developed countries. Consequently, NGO is compensating for the weakness of the health care system in Bangladesh. For this reason, the purpose of this paper is to report the activities of the NGO's Rehabilitation centre which is named CRP.

METHODS

The author, Dr. Mitsuhiro SANO organized a research team on this topic. The team members are Dr. Hiroshi Furukawa, Dr. Hidehisa Oku, Dr. Akio Nakagawa, Mr. Kaoru Takanashi and Mr. Isao Ojima. This team made a field survey of the CRP from 14.12.2012 to 26.12.2012.

CRP as a NGO

The disability movement within NGOs is still at an early stage in Bangladesh. Since the post liberation war-torn days many indigenous voluntary organisations have become involved in disability issues and CBR (Community Based Rehabilitation) programs to tackle and improve the overall situation in the country and to support the government efforts in disability issues. People with disabilities are more likely to be unemployed and generally earn less even when employed (5). Co-operation between NGOs and the government is an important factor in the field of disability and CBR. As the role of NGOs in the development field has been strongly recognized, a significant number of NGOs have emerged in Bangladesh. However, the number of NGOs in the field of disability and CBR remains insignificant.

The Centre for the Rehabilitation of the Paralysed commonly known as CRP has taken the lead and has worked for 31 years for the disabled people in Bangladesh. CRP was founded in 1979 by Miss Valerie Taylor. She came to Bangladesh (then known as East Pakistan) in 1969 as a volunteer physiotherapist, and was appalled at the lack of facilities for the disabled and the often poor diagnosis by local doctors. The situation for the disabled was worsened in the aftermath of the 1971 Independence War, after which Bangladesh won its independence from Pakistan. After many years of disappointments and setbacks, CRP was opened in 1979. The premises were two cement storerooms in the grounds of a Dhaka hospital. The capacity soon grew from 4 patients to about 50.

CRP moved premises twice more before 1990. Land was purchased in Savar where current headquarters were established. From the original green-field site, an extensive range of facilities has been developed to include world class treatment for spinal injuries, ground-breaking therapy services, an academic institute which is pioneering the teaching of new professions, workshops, an inclusive school and recreational facilities. CRP focuses on a holistic approach to rehabilitation, recognising that all aspects of the rehabilitation process are vital for its success. CRP's headquarters is in Savar with an additional three functioning sub-centres



Figure 1 The entrance of main building in CRP

throughout Bangladesh. CRP–Gonokbari is a residential vocational re–training centre for disabled women and girls, CRP–Gobindapur is a centre for out–patient and community based services in Sylhet Division, and CRP–Mirpur is a thirteen–storey centre in Dhaka which provides medical, therapy and diagnostic services.

People throughout Bangladesh are touched by the work of CRP. CBR projects of CRP operate in 13 districts of the country. Accident and disability prevention programmes of CRP include research components and aim to educate vulnerable groups on safe working and living practises. Advocacy and networking activities bring CRP's work to the attention of relevant officials and promote improved co–ordination among the many organisations with which CRP works. Raising awareness and publicity campaigns inform the population of relevant issues and attempt to break down the barriers, superstitions and stigmas which prevent disabled people from enjoying equal rights and opportunities.

Vision, Mission, and Objectives of CRP

The vision of CRP is to ensure the inclusion of disabled people into mainstream society. The mission of CRP is to promote an environment where all disabled people can have equal access to health, rehabilitation, education, employment, the physical environment and information.

CRP's objectives are

- To provide treatment, rehabilitation and support services focusing on physical, emotional, social, psychological and economic aspects.
- To promote the development of skilled personnel in health care and rehabilitation in the country and the region.
- To develop sub–centres in different parts of the

country to expand the services for disabled people in collaboration with other organisations (NGOs, Government, self help organisations and private sector).

- To organise and promote programmes for the prevention of disability.
- To develop programmes for disabled children, focusing on early identification, therapeutic interventions and education.
- To promote advocacy and networking on disability issues focusing on equalisation of opportunities for disabled people through the removal of physical and social barriers.
- To promote empowerment of disabled people through community based services in collaboration with other organisations and social institutions (NGO's, Government, Self help organisations and private sector)
- To promote empowerment of disabled girls and women, focusing on confidence building, education, Vocational Training and employment.
- To raise awareness about disability issues nationally, regionally and internationally.
- To conduct research consistent with the vision, mission and overall objectives of CRP.
- To promote sports and recreational opportunities for disabled people.
- To promote collaboration opportunities nationally, regionally and internationally to share experiences and expertise.

Services of CRP

Medical Care Unit

The hospital at CRP–Savar is the only hospital in Bangladesh that specialises in the treatment of spinal cord injuries. CRP's Medical Care Unit(MCU) provides high quality health services to spinal cord injury patients, both from traumatic and non–traumatic origins, also neurological and orthopaedic cases through its outpatient department, pathology



Figure 2
Paediatrics ward

open 24 hours a day throughout the year only for the Spinal Cord Injured(SCI) patients. During this reporting period, the total number of admissions was 395, of whom 87% were male and 13% were female, 93% were new cases and 7% re-admission. 35.7% of patients had pressure sores on their admission to CRP.

Most of the patients were treated conservatively (87%) while only 13% of the patients were managed with surgical intervention that had specific indication for surgery. A total of 339 patients were discharged on completion of their rehabilitation by a multi-disciplinal team(MDT). 29 patients were referred to other hospitals due to various complications for which CRP was not equipped to manage and 17 patients died.

Operation Theatres

Orthopaedic, Spinal and Plastic surgeries were performed in CRP's two well-equipped theatres three days each week. During this reporting period, a total of 304 patients were successfully operated on : 58 spinal surgeries, 161 orthopaedic surgeries, 85 plastic and reconstruction surgeries.

Pathology

A total of 29,579 pathology tests were performed

unit, radiology unit and inpatient department.

According to the Annual Report 2010–2011, the services of CRP are provided as follows :

Inpatient Services

The inpatient department of CRP is

of which 11,145 tests were done free of cost and CRP's Social Welfare Department(SWD) subsidised Tk 38,310.00 for support of the poor patients.

Radiology

A total of 13,109 x-rays were done in this reporting year of which 680 images were free of cost and CRP's Social Welfare Department(SWD) subsidised Tk 110,501.00 for x-rays for poor patients.

Outpatient Services

Outpatient services are available every day except Friday and Government holidays. In this year we have delivered OPD services to 47,786 patients. Most of the patients were suffering from orthopaedic, conditions.

Paediatrics

The CRP Paediatric unit provides two services – an inpatient service and an outpatient service. The service offers a multidisciplinary approach with many different professions (Paediatrician, Physiotherapist, Speech & Language Therapist, Orthopedics, Nurses, Social Welfare unit, special seating, Orthotics & Prosthetics). In-patient Service – This residential program provides two weeks intensive services for 21 children, most of whom are children with cerebral palsy. This program is designed to integrate children with disabilities into their own family and community. Therapists educate the mother about the child's condition, and teach them how to take care of the child at home. In these two weeks, the mother and child are involved in different group therapy, individual and combined treatment sessions and an educational program. Between July 2010 and June 2011 the Paediatric Unit dealt with a total number of 512 inpatients. The Unit served 13,136 outpatients. 1,451 among them are new patients[5].

Physiotherapy Department

Physiotherapy service is provided for both in-patients and out-patients. Out-patient services are provided at CRP-Savar, CRP-Mirpur, A.K Khan-CRP Chittagong center, Sylhet Moulovi Bazar. Out patients physiotherapy services are also going to be started soon in proposed divisional centers in Rajshahi and Barishal. Out patient adult Neurological Rehabilitation unit- Patients with stroke, head injury, GBS, poliomyelitis, multiple sclerosis, Parkinson's disease, nerve injury, bell's palsy, motor neuron disease are treated in the unit. PNF, Bobath and other neurological rehabilitation concepts are used here to treat a wide range of neurologically impaired patients. According to the Annual Report 2010-2011, during this reporting period, physiotherapists in the spinal cord injury inpatient unit have managed 395 patients. A total of 38,113 appointments of 10,988 patients were treated from the physiotherapy outpatient department[6].

Occupational Therapy Department

Occupational therapy service is available in four different ways: Outpatient, Inpatient, Paediatric and the Hand Therapy Unit. According to the Annual Report 2010-2011, over the year a total of 395 patients were treated at the Inpatient unit and 63.62% of them were independent in their daily activities and engaged in different income generating activities. A total of 1,320 outpatients with 16,664 appointments and 581 hand therapy clients with 3,387 appointments have received service from the OT department. To provide quality services, 13 qualified occupational therapists, 15 occupational therapy assistants and 13 interns are working in the department[7].

Hand Therapy

The hand therapy outpatient unit was set up in

2008 with the help of Interplast Australia & NZ.

Speech and Language Therapy Department

Speech and language therapy is an established profession in many countries all around the world but is still very new in Bangladesh. Our first ever newly graduated speech and language therapists have been working at CRP since 2010. There are Speech and language therapy departments in both Savar and Mirpur. According to the Annual Report 2010-2011, a total of 777 patients received SLT service from CRP-Savar and 400 patients received SLT services from CRP-Mirpur from July 2010 to June 2011[8].

Prosthetics and Orthotics Department

The department was set up in 2003, but it has taken a number of years to get it up to full speed. This was due to CRP awaiting the return of the staff that had been sent to India and Vietnam to be trained in Prosthetics and Orthotics. Now the department is fully established with well trained professionals from abroad and using modern technology. The department was set up with the technical and financial support of the International Committee of the Red Cross-Special Fund for the Disabled (ICRC-SFD) with modern instruments and materials. This allows the department to design and fabricate a wide range of Orthoses, from the simple arch support (support fallen arches in the feet) to the more complicated bilateral jointed KAFO (calipers) to allow a person with disabilities to stand and walk independently. In Prostheses they manufacture things from partial feet, below-knee artificial limb to the complex above knee amputation replacement prosthesis. The department sees a wide range of disabilities especially children with club feet, CP, congenital disabilities and teenagers that have been affected by Polio as a child, Spinal cord injury. Many of the

amputations of the lower limb are due to the high incident of (RTA) road traffic accidents and accidents at work due to the appalling health and safety at work record the country has.

According to the Annual Report 2010–2011, in this reporting year, their team worked with 4,285 new patients and 2,091 follow-up patients. They also began treating children using The Foot Abduction Brace (FAB) Ponseti method, a manipulative technique that corrects congenital clubfoot without invasive surgery. In addition, our department provided 453 FABs for treating club foot patients, of these 376 patients were followed up [9].

Assistive Devices Department

As part of its commitment to holistic rehabilitation, CRP produces a wide range of wheeled or non-wheeled mobility and assistive devices. All items are made with low-cost, locally available materials to ensure that, should something go wrong, it can be repaired quickly with minimum outlay. The designs are very sturdy and thus able to withstand the uneven conditions often found in Bangladesh.

Vocational Training Institute

Most patients with spinal injuries are from poor backgrounds and work as manual labourers. Many

patients at CRP will be unable to return to their previous employment after suffering paralysis. If a spinally injured person cannot earn a living to support his or her family, the physical and emotional rehabilitation at CRP will be of little value. To address this need CRP runs vocational training projects which aim to enable trainees to live financially independent lives. Courses currently offered are computer applications, electronics repair, tailoring and shop management.

Bangladesh Health Professionals Institute (BHPI) in CRP

CRP has a strong commitment to training and believes that training plays a vital role if health care services in Bangladesh are to be strengthened and developed. At present, only a few health professionals in Bangladesh are trained adequately to provide appropriate treatment and rehabilitation. In response to the lack of training facilities for health care professionals, BHPI was established in 1992 by CRP with the goal of producing highly skilled staff to work in health care provision and rehabilitation countrywide. BHPI provides a number of nationally recognised training courses. These courses include BSc in Physiotherapy, Occupational Therapy and Speech and Language Therapy, Physiotherapy and Occupational Therapy Diplomas, Laboratory Sciences and Radiography Diploma, Certificate in Education for Special Edu-



Figure 3 Original Wheelchair of CRP



Figure 4 Vocational Training Institute in CRP (Savar)

cation and Diploma in Rehabilitation Nursing. All the courses run at the BHPI are recognised by their respective government departments. Some other institutes in Bangladesh offer physiotherapy courses at various levels but the BHPI is the only institute in the country to offer a BSc in Occupational Therapy and a BSc in Speech and Language Therapy program. CRP is constantly promoting these professions by lobbying and networking with the government to create posts and awareness of the value of such health professionals. At present a total of 656 students including 181 new students are studying in different courses. BHPI also has an inclusive school for children with disabilities where children with cerebral palsy and other disabilities can study alongside able-bodied children. At present 303 students attend the Inclusive Education school, of these, 57 students are disabled.

Nursing Institute

The CRP Nursing Institute is running a three-year Diploma in Nursing Science and Midwifery affiliated with the Bangladesh Nursing Council (BNC). Participants from any group are eligible to be admitted to the course. The total admission capacity is 40. In three sessions 90 students are currently receiving education in the Nursing Institute.

Sub Centre of CRP

CRP–Mirpur

Designed to enable CRP to increase both its level of service and its financial sustainability, CRP–Mirpur has a 13-storey centre in Dhaka City. All services at CRP–Mirpur are operated on a commercial basis with a view to making the maximum contribution to the operating costs of CRP–Savar. The out-patient physiotherapy, occupational therapy and speech and language therapy treatments given at CRP–Mirpur include patients with

various orthopaedic conditions, neurological conditions and paediatric conditions. The most common treatments are for back pain, neck pain, osteoarthritis, sports injury, stroke, head injury, hand injury, cerebral palsy and children with developmental disorders. The first floor provides diagnostic services of the highest standard. A newly installed, state-of-the-art x-ray machine complements the fully equipped pathology laboratory.

CRP–Gonokbari

Gonokbari is the residential vocational training centre for adolescent girls and women with disabilities who stay for a fixed training period. Last year 183 disabled women underwent rehabilitation from CRP–Gonokbari of whom 94 have returned to the community. Marks & Start is a programme conducted by CRP in partnership with Marks & Spencers, and trains women in garment production. Till now women undertaking the Marks & Start programme have an almost 100% chance in gaining meaningful employment.

Finance of CRP

CRP's work is financed by four main sources. These are donations from overseas or Dhaka-based representatives of foreign agencies, donations from local sources, income from commercial pro-



Figure 5 Vocational Training Institute in CRP (Gonokbari)

jects and contributions from services users. Large donor agencies also provide avenues of funding for CRP. Currently CRP receives funding through DANIDA (Denmark) and the United States Department of Labor, Liliane Foundation (Netherlands) and Kerk in Actie (Netherlands). Agencies in Dhaka with overseas links also provide funding. These include CIDA (Canada), British High Commission, German Embassy, Australian High Commission and Manusher Jonno. Income generating activities (IGA) is an area which CRP places great emphasis on. Projects include the sale of plants, fish, handicrafts, furniture, greeting cards and rental of guest house accommodation.

Many of CRP's service users come from very poor backgrounds and they cannot pay for the full cost of their services. CRP operates a three-leveled system of payment in which those who are able to pay the full cost do so, those who can contribute some of the cost pay a percentage of the costs, and those who are very poor pay only what they are able to afford. In the case of children with cerebral palsy there are Tk1000 a day hospitalization expenses. However, if their parents have no ability to pay, there is support. According to a hearing investigation of CRP by author, 21% of patients have received medical treatment free of charge in fact[10]. Users are means tested by CRP's social welfare staff who decide on appropriate levels of payment. User contributions are an important source of finance and help CRP to operate in a fair and transparent fashion [11].

CONCLUSION

In this paper, it is reported that the concrete action of CRP as the leading NGO in order to understand the situation of disabilities in Bangladesh. The current situation of people with disabilities in

Bangladesh is in a very bad condition for the reason that the health care system is not well developed. Considering above 10% of the population in Bangladesh has a disabling condition, CRP also can not meet the needs of many patients due to the small number of persons and hospital staff. According to a hearing investigation of CRP by author, in a rehabilitation of a child, the patient must wait for six months, in order to be hospitalized[12]. Thus, many PWDs in Bangladesh cannot receive high quality medical care, such as that given by CRP. The issues of CRP are finance problems, how to cultivate human resources, and how to provide poor PWDs with an opportunity to receive medical care. There are many problems we're faced with. The activities of CRP have been reported from field notes, but an analysis of the PWDs situation in Bangladesh was not reported. And the situation of hearing disability and visual disability also remain problems. And other remaining problems are research on the situation of hearing disabilities and a visual disabilities. The authors would like to report on these remaining problems in the next study.

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バングラデシュの障害者とりハビリテーション： CRPの現地調査からの報告

ムハマド・マフズル・ラーマン

バングラデシュ麻痺者リハビリテーションセンター

作業療法士科科长

佐野 光彦

神戸学院大学リハビリテーション学部

社会リハビリテーション学科

世界銀行によれば、世界の人口の15%の人々が何らかの障害を持っている。バングラデシュにおいては、貧困や医療制度の未整備を理由として、障害率は高くなる傾向にある。その医療制度の弱点を補っているのが、NGOである。そこで、本稿では医療NGOのCRP（Centre for the Rehabilitation of the Paralysed：麻痺者リハビリテーションセンター）の活動内容を報告する。CRPは、1979年にイギリス人の理学療法士Valerie Taylorによって設立された。CRPは、障害者を社会の一員として迎え入れることを標榜としており、そのためのリハビリを提供することを目的としている。CRPは、サバル（Savar）とミルプール（Mirpur）にリハビリ病院を持っている。そこでは、理学療法士、作業療法士、言語聴覚士が、麻痺者や脳性麻痺の子どもたちへリハビリを行っている。義士装具や車椅子などの福祉機器も製造している。職業訓練施設、Bangladesh Health Professional Institute (BHPI)、看護学校なども併設されている。しかし、この充実した設備で対応できる障害者は、ごく一部でしか過ぎない。CRPの今後の課題は、人材の育成と、貧しい障害者にいかにして医療を届けるかにある。

キーワード：CRP、リハビリテーション、障害者、NGO、バングラデシュ