

## Original Research Article

# People with physical disabilities in Sri Lanka are in need for the service of community physiotherapists

Vindya Vimani Senadheera\*, Kavinda Tharani Malwanage, Sithravelayuthan Mayooran, Abdul Majeed Mohomad Rikas, Agampodi Liyanage Indrajith Prasanna

Department of Physiotherapy, Faculty of Allied Health Sciences, University of Peradeniya, Sri Lanka

**Received:** 13 June 2021

**Accepted:** 15 July 2021

### \*Correspondence:

Dr. Vindya Vimani Senadheera,

E-mail: [vindyasenadheera@gmail.com](mailto:vindyasenadheera@gmail.com)

**Copyright:** © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

## ABSTRACT

**Background:** Physiotherapists have long been recognized as important providers of services for people with disability. In Sri Lanka the concept of community physiotherapy has not emerged yet. The present study aimed to identify the need for 'community physiotherapy service' in Kandy district, Sri Lanka.

**Methods:** A community service projection community based rehabilitation, of three years was conducted by the department of physiotherapy, faculty of allied health sciences, University of Peradeniya, Sri Lanka in 2017-2019 in collaboration with department of social service and social welfare of Kandy district secretariat, Sri Lanka.

**Results:** One hundred and seventy participants with physical disabilities were included in the study 94 (55.29%) were males (mean age; 33.57 (SD  $\pm$ 23.17) and 76 (44.71%) were females (mean age; 33.14 (SD  $\pm$ 24.98). The pediatric population was 41.76% (N=71) followed by 38.82% of adults (N=66) and 19.41% of elderly patients (N=33) of the total population. The highest number of PWD had pediatric conditions (39.41%), followed by musculoskeletal (31.76%), neurological (15.88%), geriatric (8.82%) and cardio-respiratory (4.12%) conditions. The majority (55.88%) of all the people with disabilities who visited the clinics were in need for further physiotherapy consultation and follow up.

**Conclusions:** In Kandy district of Sri Lanka alone, number of people with physical disabilities who are in need of continuous physiotherapy follow ups is high compared to services already available. Conducting a successful community-based rehabilitation program in Sri Lanka as a whole, require having a specialized health care practitioner to the primary health care team; 'a community physiotherapist'.

**Keywords:** Community, Disabilities, Rehabilitation, Physiotherapy

## INTRODUCTION

The world health organization (WHO) defines disabilities as, 'an umbrella term, covering impairments, activity limitations, and participatory restrictions. An impairment is a problem in body function or structure; an activity limitation is a difficulty encountered by an individual in executing a task or action; while a participation restriction is a problem experienced by an individual in involvement

in life situations. WHO reports that there are more than 1 billion people around the world live with disabilities; and 80% of them are from low-income countries, many from the WHO South-East Asia region.<sup>1</sup> The world report on disability states that rate of disability prevalence in Sri Lanka is 12.9% based on the World Health Survey.<sup>2</sup> The 'health for all' Alma Ata was declared in 1978 through which WHO initiated community based rehabilitation (CBR) to give people with disabilities access to

rehabilitation in their own communities using mostly local resources. This promoted health as a human right and prioritized primary health care and community-based approaches. CBR is defined as, “a strategy that can address the needs of people with disabilities within their communities in all countries. This strategy promotes community leadership and the full participation of people with disabilities and their organizations. It promotes multi-sectoral collaboration to support community needs and activities, and collaboration between all groups that can contribute to meeting its goals”.<sup>3</sup>

In Sri Lanka the CBR program is a National program under the ministry of social service and social welfare. CBR was first introduced in the government sector in 1981. Since 1994 the ministry has developed it to a national CBR program together with other stakeholders like the ministry of health and ministry of education, ministry of vocational training and non-governmental organizations.<sup>1</sup>The standard rules on the equalization of opportunities for persons with disabilities state that rehabilitation measures include those which provide and/or restore functions, or compensate for the loss or absence of a function or a functional limitation.<sup>4</sup> Rehabilitation can occur at any stage in a person’s life but typically occurs for time-limited periods and involves single or multiple interventions. Rehabilitation may range from more basic interventions such as those provided by community rehabilitation workers and family members to more specialized interventions, such as those provided by physiotherapists.<sup>5</sup>

Physiotherapists have long been recognized as important providers of services for people with disability (PWD). An appropriate level of physiotherapy can promote social inclusion through optimizing a person’s function and encouraging participation in the economic and social life of the community. A survey on CBR by the world confederation for physical therapy (WCPT) found that physiotherapists play a variety of roles in CBR services. They assist health teams, CBR workers, and community health workers in the delivery of rehabilitation services to people in rural communities.<sup>6</sup> The need for physiotherapy service at community level through ‘community physiotherapists’ has long been identified and steps had been taken to incorporate it to primary health care service in developed countries.<sup>7-11</sup> For example, the concept of community physiotherapy scheme had been set up in England since 1970s for a variety of reasons; i.e. provision of treatment for patients isolated at home due to acute illness, provision of immediate treatment for patients whose general practitioners have no direct access to hospital physiotherapy departments, abolition of transport problems, increased relevance of treatment where problems are specifically related to the home, involvement of carers, provision of early treatment in preventing later in-patient admission, improved response to treatment in elderly and confused patients, early discharge from hospital, identification of patients who

might eventually need full rehabilitation services, who otherwise might not have received treatment.<sup>9</sup>

Though, the concept of community physiotherapy around the globe has a history of half a century running back until 1970s, in Sri Lanka the concept is at a primitive level. Unfortunately, the need for the community physiotherapy service has not been recognized yet, making the PWD in Sri Lanka underprivileged of a valuable service. PWD in Sri Lanka have to visit specialized rehabilitation centers or hospitals in which physiotherapy service is available to get physiotherapy treatments. Physiotherapy service is still limited to an institution-based service rather than community-based. Therefore, PWD in Sri Lanka are frequently being entitled to receive the physiotherapy service depending upon where they live and their economic status rather than purely on a basis of need. This scenario goes against the objectives of the national CBR program of Sri Lanka, which includes, ‘encourage home-based care rather than institution-based care’.<sup>1</sup> Direct access to physiotherapy at community level, through the service of ‘community physiotherapist’, can enhance the quality of life of PWD in Sri Lanka by; early diagnosis and treatment, provide timely and appropriate referral, abolition of transport barriers and involvement of family members in the caring.

In this background, the department of physiotherapy, faculty of allied health sciences, University of Peradeniya, Sri Lanka, engaged in a three-year community service project on, CBR in 2017-2019 in the divisional secretariats in Kandy district to identify the need for ‘community physiotherapy’ in Kandy district, Sri Lanka. This research report will present the findings of the project.

## METHODS

Current three years CBR project was conducted as a community service, by the department of physiotherapy, faculty of allied health sciences, University of Peradeniya, Sri Lanka in 2017-2019 in collaboration with department of social service and social welfare of Kandy district secretariat, Sri Lanka. The main objective of the project was to identify the need for ‘community physiotherapy’ in Kandy district, Sri Lanka. The specific objectives of the project were; to assess and treat PWD with musculoskeletal, neurological, pediatric and cardio respiratory conditions in divisional secretariats of Kandy district in the community setting, provide appropriate referral when necessary, to conduct awareness programs for PWD and their families in order to increase their interest and involvement in CBR program and to identify the need of continuous physiotherapy service for the PWD in Kandy district.

An academic staff member of department of physiotherapy had been regularly participating the monthly progress report meeting of department of social

service and social welfare, held in Kandy district secretariat chaired by Additional district secretary, Kandy. At the end of 2016, the staff member informed of the project at the meeting and divisional secretariats were selected to carry out the project in 2017. Correspondingly, in 2018 and 2019 divisional secretariats were randomly selected out of 20 divisional secretariats in Kandy district to conduct the CBR program for that particular year. People with physical disabilities were included in the project while, people with disabilities in relation to vision, hearing and speech, patients with mental impairments and intellectual impairments were excluded.

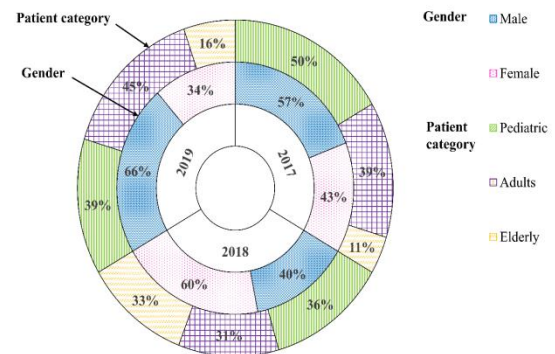
The staff of department of physiotherapy visited the PWD in the selected divisional secretariats in the community level. The staff were accompanied by the social service officers of the divisional secretariat. CBR clinics were organized at the divisional secretariat office and people with disabilities in the particular divisional secretariat were informed through social service officers to participate the clinic. All the patients with physical disabilities who visited the clinic were included in the study as participants. Under this programs, PWD among different categories with physical disabilities, such as paediatric, neurological, musculoskeletal, and cardio respiratory problems were assessed according to the assessment form prepared by the department of Physiotherapy and treated during the CBR clinics throughout the year. Their needs were recognized and appropriate physiotherapy treatments and referrals were given regularly. The awareness programs have been conducted for PWD and their families in order to increase their interest and involvement in conducting a successful CBR program. As for CBR, PWD and their family members are the key decision makers, their active participation is vital to improve the efficiency of CBR program. The project followed the principles of the declaration of Helsinki.

## RESULTS

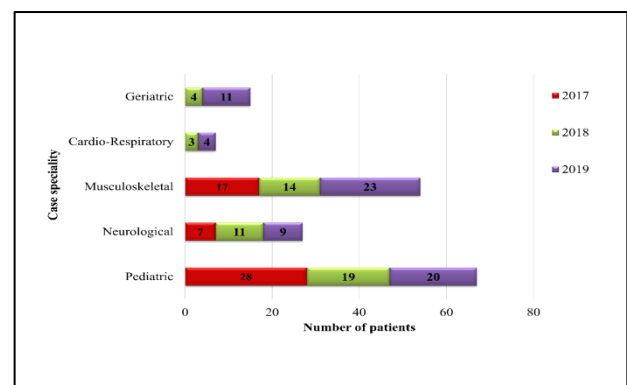
One hundred and seventy participants with disabilities were included in the study. Among them, 94 participants (55.29%) were males (mean age; 33.57; SD-23.17) and 76 participants (44.71%) were females (mean age; 33.14 SD-24.98). Demographic data of the participants which is further subdivided to describe the demographic characteristics based on the year is shown in (Figure 1). It was appeared that, 41.76% of total sample included pediatric patients, as the highest number of patients reported (N=71), followed by 38.82% of adults (N=66) and 19.41% of elderly patients (N=33).

The number of PWD who included in the study, with different case specialties including pediatric, neurological, musculoskeletal, cardio-respiratory and geriatric conditions is shown in (Figure 2). It was found that, among the different case specialties of the patients, the highest number of PWD had pediatric conditions

(39.41%), followed by musculoskeletal (31.76%), neurological (15.88%), geriatric (8.82%) and cardio-respiratory (4.12%) conditions. These individuals had to be found with both congenital and acquired disabilities that restricted them from being the active participants of the community.



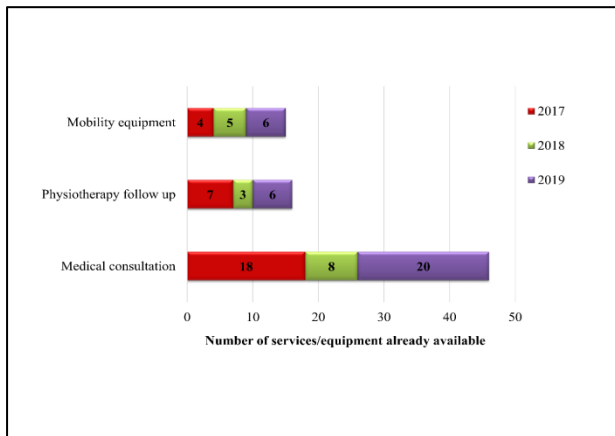
**Figure 1: Demographic data of the participants.**



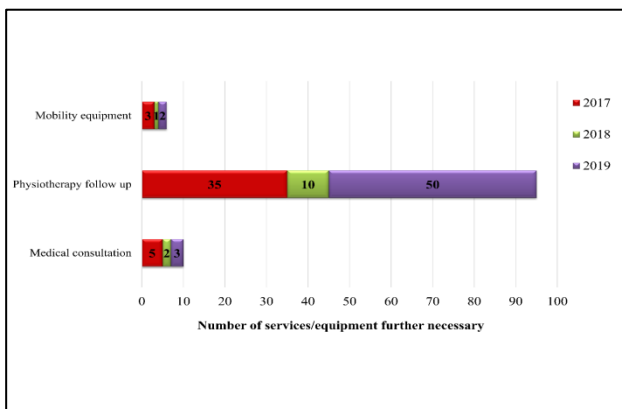
**Figure 2: Number of individuals with different diseases and disabilities.**

The number of PWD who were already under medical consultations, physiotherapy follow ups and who had mobility equipment, which is further divided based on the year they visited the clinics is depicted in (Figure 3). Amongst, 27.06 % of PWD were under continuous medical consultation and only 9.41% of them were found to have continuous physiotherapy follow-ups. Around nine percent (8.82%) of PWD possessed mobility devices including wheelchairs, walkers, crutches and canes as per the individual requirement. Accordingly, it was found that only 45.29% were acquired the medical and physiotherapy consultations together with required mobility devices although there were more PWD in need for more health care services. The number of individuals who were in need for further medical and physiotherapy consultation, and mobility equipment is shown in (Figure 4) which was further fractionated based on the year of reported. Thorough assessment and screening of the PWD

who visited the selected divisional secretariats in the given three years, revealed that 5.88% of individuals required further medical consultation and 3.53% individuals required different types of mobility devices. Further, it was emerged that 55.88% of all the PWDs who visited the clinics were in need for further physiotherapy consultation and follow-up. Correspondingly, 65.29 % (N=111) of PWD were found with insufficient health care facilities.



**Figure 3: Number of individuals with health care services and equipment already available.**



**Figure 4: Number of individuals with health care services and equipment further necessary.**

## DISCUSSION

Physiotherapists have the potential to play a number of roles in CBR, dependent on local cultural and socio-economic circumstances. Recognizing the need to support CBR and the development of the profession, the world confederation for physical therapy (WCPT) has approved a position statement on CBR at the 15th general meeting of WCPT in 2003.<sup>6</sup>

It has been found from this study that there are many PWD in Kandy district, Sri Lanka who don't have a continuous physiotherapy services. The gap between the available physiotherapy services which is 3.68% and the

physiotherapy services needed which is 80.65% in Kandy district alone, is too wide. The gap between available community physiotherapy service and required community physiotherapy service seem to be high in developing countries. A study conducted in Western-India has found that a pool of community physiotherapists with specialized knowledge, skills and motivation should be created as they are insufficient in number to cater the need of PWD in Western-India.<sup>12</sup> Moreover, studies conducted among Nigerian and African community have shown that supply and utilization of physiotherapy service at community level is very low.<sup>13,14</sup> Number of reasons have been identified for this scenario; i.e. unavailability of community physiotherapy service, poor knowledge of the health care workers and community dwellers of the roles and scope of physiotherapy, poor health care seeking behaviors of the community dwellers, patronage of traditional health workers and poor referral practices by health workers.<sup>13</sup> In a research done in the rural areas of Thailand, it has been found that even though the physiotherapists were available in the community hospitals, they hardly participated in the programs due to lack of time from their routine work in the hospital.<sup>15</sup>

The need of community physiotherapy service to enhance the quality of life of PWD in Sri Lanka has not yet been recognized. Many factors may have influenced this; i.e. poor knowledge of the relevant authorities, health care workers and community of the roles and scope of physiotherapy, poor health care seeking behaviors of the PWD in community, patronage of traditional health workers and poor referral practices by workers of primary health care team. In this case, the service of community physiotherapists, who could play many roles in CBR including instigating CBR services, team leaders and managers, providers of direct care, and advisers to governments and local communities on establishing CBR programs should be recognized and established.<sup>16</sup>

In order to bring an insight to this prevailing problem the CBR project carried out by the department of physiotherapy, faculty of allied health sciences of University of Peradeniya in selected divisional secretariats in Kandy district, received positive feedbacks from the district secretary, additional district secretary (social service) and social service officers(SSO) of Kandy district, Sri Lanka. The additional district secretary, Mr. J. C. Ranepura had commented that, "the CBR project conducted by the department of physiotherapy of faculty of allied health sciences, University of Peradeniya, Sri Lanka was found to be a highly beneficial program for PWD in Kandy district. I approve the continuation of the project and I am much thankful for your kind cooperation in this regard". Mr. K.J.R. Samaraweera, the SSO of district secretariat office, Kandy had quoted that "community based rehabilitation program have been conducted since 1992. This program leads to protect human Rights of disabled people by rehabilitating them to be independent in their day to day life and financially.



Physiotherapy plays an important role in the community based rehabilitation program. department of physiotherapy, faculty of allied health sciences, University of Peradeniya has identified and treated for the disabled people through this program for years. I am much delighted to say that disabled people have developed up to some extent of functional level through this program and hope to get your service in future as well". Further, Mr. N. G. Keerthirathna and Ms. M. D. C. Jyawardana, SSO of divisional secretariat of Pathadumbara, had suggested that this program should be carried out in long term to get the best out of it. They have stated that "It is a valuable community based service for the people with disabilities and further it is suitable to conduct this program division wise to improve the health status of people with disabilities. I think a good result can be achieved if a long term program can be carried out for a selected group of people with disabilities. I am much thankful to the department of physiotherapy, the staff and students for their contribution". The point the authors would like to raise is that, this is the status of PWD who need physiotherapy service only in Kandy district alone. For the best of our knowledge this kind of physiotherapy service to PWD in community is conducted in Kandy district only. In this scenario, what is the situation of PWD in other 24 districts of Sri Lanka who are in need of continuous physiotherapy service?

Since the inception of physiotherapy bachelor level degree programs in Sri Lanka in 2005, around 1000 physiotherapy graduates of 10 batches have been produced by universities of Sri Lanka. Annually, around 100 physiotherapy graduates are absorbed to the health service in Sri Lanka. Though they are being recruited to government and private sector hospitals, none of the passed out graduates were directed to provide their service to PWD in community level. Though a small percentage of PWD have the access to specialized rehabilitation centers and hospitals in which physiotherapy service is available, to get continuous physiotherapy service, it is evident from the above findings that the majority of PWD does not have enough facilities to get continuous access to physiotherapy service from specialized rehabilitation centers. Therefore, creating a cadre for the position of 'community physiotherapist' is highly in need to improve the quality of life of PWD in Sri Lanka. Thereby, Sri Lanka will adhere to the WHO global action plan (2014-2021) by taking a huge step towards fulfilling second objective of the action plan; strengthen and extend rehabilitation, habilitation, assistive technology, assistive and support services and community based rehabilitation.<sup>17</sup>

## CONCLUSION

In Kandy district of Sri Lanka alone, number of PWD who are in need of continuous physiotherapy follow ups is so high compared to services already available. Direct access to physiotherapy at community level can enhance the quality of life of PWD in Sri Lanka. Conducting a

successful CBR program in Sri Lanka as a whole, require having a specialized health care practitioner to the primary health care team; 'a community physiotherapist'.

## ACKNOWLEDGEMENTS

Authors are thankful to district secretary and additional district secretary (social service) of Kandy district and divisional secretaries for granting approval and support to conduct the project, district social service officer and social service officers of Kandy divisional secretariats and staff members of the department of physiotherapy of faculty of allied health sciences of University of Peradeniya, for their commitment to conduct the CBR project successfully.

*Funding: No funding sources*

*Conflict of interest: None declared*

*Ethical approval: Not required*

## REFERENCES

1. Compilation of community-based rehabilitation practices in the WHO South-East Asia Region. Available at: <http://apps.who.int/iris/handle/10665/204891>. Accessed on 20 May 2021.
2. Summary world report on disability. Available at: <https://www.who.int/teams/noncommunicable-diseases/sensory-functions-disability-and-rehabilitation/world-report-on-disability>. Accessed on 20 May 2021.
3. CBR: a strategy for rehabilitation, equalization of opportunities, poverty reduction and social inclusion of people with disabilities: joint position paper. Available at: [https://www.dinf.ne.jp/doc/english/resource/cbr/cbr\\_e.html](https://www.dinf.ne.jp/doc/english/resource/cbr/cbr_e.html). Accessed on 20 May 2021.
4. Standard rules on the equalization of opportunities for persons with disabilities: resolution adopted by the general assembly. Available at: <https://www.un.org/development/desa/disabilities/standard-rules-on-the-equalization-of-opportunities-for-persons-with-disabilities.html>. Accessed on 20 May 2021.
5. Community-based rehabilitation: CBR guidelines. Available at: [https://www.who.int/disabilities/publications/cbr/050405\\_CBR\\_guidelines\\_1st\\_meeting\\_report.pdf](https://www.who.int/disabilities/publications/cbr/050405_CBR_guidelines_1st_meeting_report.pdf). Accessed on 20 May 2021.
6. World confederation for physical therapy. primary health care and community based rehabilitation: implications for physical therapy based on a survey of WCPT's member organisations and a literature review. Available at: <https://silo.tips/download/primary-health-care-and-community-based-rehabilitation>. Accessed on 20 May 2021.
7. Waters WHR, Udy SC, Lunn JE. A domiciliary physiotherapy service. *Lancet*. 1974;1033-4.
8. Partridge CJ. Access to physiotherapy services. *J Rev Coll Gen Pract*. 1982;32(243):634-6.
9. Burnard S. Development of a community physiotherapy service. *Physiother*. 1988;74(1):4-8.

10. Forster A, Young J. The role of community physiotherapy for stroke patients. *Physiother*. 1990; 76(8):495-7.
11. Seymour JC, Kerr KM. Community based physiotherapy in the Trent Region: A survey. *Physiother*. 1996;82(9):514-20.
12. Rajan P. Community-based physiotherapy in Western India: Some findings from surveys. *Asia Pacific Disabil Rehabil J*. 2012;23(4):90-6.
13. Igwesi-Chidobe C. Obstacles to obtaining optimal physiotherapy services in a rural community in southeastern Nigeria. *Rehabil Res Pract*. 2012;2012:1-8.
14. Mbada C, Olawuyi A, Oyewole OO, Odole AC, Ogundele AO, Fatoye F. Characteristics and determinants of community physiotherapy utilization and supply. *BMC Health Serv Res*. 2019;19(1):1-10.
15. Nualnetr N. Physical therapy roles in community-based rehabilitation: A case study in rural areas of north eastern thailand. *Asia Pacific Disabil Rehabil J*. 2009;20(1):73-82.
16. Bury T, Project Manager, WCPT. Primary health care and community based rehabilitation: implications for physical therapy based on a survey of WCPT's member organisations and a literature review. *Word Confed Phys Ther*. 2003;(1):1-31.
17. Health for all better people health with for disability all people with disability. Available at: <https://www.mhinnovation.net/resources/who-global-disability-action-plan-2014%E2%80%932021-better-health-all-people-disability>. Accessed on 20 May 2021.

**Cite this article as:** Senadheera VV, Malwanage KT, Mayooran S, Rikas AMM, Prasanna ALI. People with physical disabilities in Sri Lanka are in need for the service of community physiotherapists. *Int J Community Med Public Health* 2021;8:3799-804.