



Standard development of rehabilitation services for cerebral palsy children in disability services center and their networks

Suchaya Thiansaengthong*, Jaturong Boonyarattanasoontorn

Social Welfare Management Program, the Faculty of Social Work and Social Welfare, Huachiew Chalermprakiet University, Samut Prakan 10540, Thailand.

Abstract

This qualitative research aimed to study the situations of rehabilitation services given to cerebral palsy children in disability services center and networks for physically challenged children and to develop the standard of rehabilitation services for Cerebral Palsy. Fieldwork was conducted along with in-depth interviews of a sampling group comprising management levels, heads of the service team, service providers and clients, totaling 37 people. All are from disability services center and service networks for physically challenged children, which provide rehabilitation services for cerebral palsy children. The results can be summarized into a standard of rehabilitation services for cerebral palsy children in disability services center and networks. There are 8 components, 25 indicators and 65 diagnosis guidelines. The total score is 325 points. The 8 components are 1) Qualifications of the service providers 2) Location, facilities and equipment 3) Access to services 4) Privileges of a child patients; 5) Rehabilitation services 6) Database system 7) Coordination system and 8) Evaluation and assessment of service quality.

Keywords: Cerebral palsy children, standard development of rehabilitation services, disability services center

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1. Introduction

According to the Empowerment of Persons With Disabilities Act, B.E. 2550 [1] and its amendment (second edition), B.E. 2556 [1], Sections 20/3 and 20/4, states that there shall be service center for physically challenged people to thoroughly and fairly support and develop their quality of life. The act specifies two types of service center: 1) Disability Services Center and 2) provincial service center. The first type can be founded by an organization for physically challenged people or other organizations that provide services to them. They must be certified by standards listed in Section 6(10) and provide services based on the zone, type of disability or specific needs. The second type is founded by the Department of Empowerment of Persons with Disabilities to support and coordinate the services of Disability Services Center and other matters. It aims to develop the quality of life for physically challenged people in all 77 provinces in Thailand. [2]

The general service centers have five duties: 1) Provide information and updates relating the rights, welfare and assistance as requested by the Cerebral

Palsy 2) Demand the rights and benefits of physically challenged people or elimination of all forms of discrimination to them on their behalf 3) Provide assistance in terms of basic living skills, rehabilitation, occupation including recruitment for physically challenged people 4) Assist physically challenged people or those who risk having disabilities to receive healthcare and rehabilitation or specific tools according to their needs, and 5) Coordinate with authorized government agencies to assist physical challenged people according to their needs.[3]

The service center for physically challenged people policy began in 2014 and has been in effect for more than five years. A statistical report from the Department of Empowerment of Persons with Disabilities shows that as of 16 December 2016, a total of 1,173 service centers are divided into 1,096 general service centers and 77 provincial centers. Among these numbers, in the fiscal year 2016, there were 64 general centers all across Thailand that are registered and certified under organizations for physically challenged people or the ones that provide services to them (including both organizations of and for physically challenged people).[4]

From the statistics above, it is found that only 64 general service center are registered as formal center.

*Corresponding author; email:suchaya.amm@gmail.com

When compared with 157 certified organizations for physically challenged people (including both organizations of and for physically challenged people) under Section 6(10), the registered center are equivalent to only 40.76% of the total numbers. The percentage is barely sufficient for the 1.7 million physically challenged people in Thailand.[5]

In the past, only a few organizations for physically challenged people tried to study and process the registration to be a formal general service center. Each organization may have had its own reasons or limitations such as knowledge and understanding about the operation, concepts and readiness of the management team or head of the organization, readiness of staff, tools and facilities for activities of each target group according to the regulations. For another thing, the service center for physically challenged people is a new policy and mechanism of Thai society. It is also a new mission of the Department of Empowerment of Persons with Disabilities. As a result, it issued the Act Empowerment of Persons with Disabilities Regulations Concerning Principles, Methodology and Conditions of Service Center for Persons with Disabilities B.E. 2556 [6]. This law authorized a working committee to establish a service system for service center and determine the plan, format, guidelines, establishment rules and operation of each type of service center. Especially in Section 4, which describes the operational standards and service provisions to people with disabilities, Rule No.20 states that all service centres must have an operation and service standard as the criteria announced by the department. However, this is merely a rule that is written conceptually. Practically, there is no determined standard that can be used as a guideline for general service center for physically challenged people. To this day, there is still no standard that acts like a framework to control, monitor and evaluate the operation of each service center. In my opinion, the service standard of general service center is very important and necessary for the quality of the center' operation and efficiency of service activities for a specific symptom. It is also crucial in terms of responding to specific needs and service arrangements under the concept of rights for people with disabilities as a mechanism and "make the right real".

Cerebral palsy, or CP is a group of physical and movement disorders in children. Cerebral Palsy children are classified as a type of children with special needs. Their disabilities are formed due to damage to a part of the brain that controls movements and gestures, so the affected children will have difficulties to move and balance themselves. They will not be able to control the movement of their arms, legs and body and tend to face developmental delays. They have a slow progress in terms of movement development and usually have limited development in other aspects as well such as physicality, emotion, socialization, fundamental learning and self-assistance [7].

From a survey done by the National Statistical Office in 2007, the number of children who require special needs from birth until the age of 24 is 182, 599, or 9.75% of the citizens with disabilities. Among them, 13,309 are children with cerebral palsy, which is 7.29% of the total number of children with special needs [8]. Cerebral Palsy children are classified as an important target group of service center. The centers have to arrange a service package for the Cerebral Palsy children and their caregivers as required by the regulations to enhance rehabilitation services. The physical rehabilitation package consists of four main activities: 1) Physiotherapy, 2) Speed-language pathology, 3) Occupational therapy and 4) Recreational therapy [9], and other activities that help to rehabilitate, stimulate and support the learning of the patients. The caregivers also need to be provided with necessary knowledge to be able to take care of and rehabilitate the children correctly. These packages conform with the intention of the Empowerment of Persons with Disabilities Act, B.E. 2550 and its amendment (second edition), B.E. 2556.

I am interested in the research of standard development of rehabilitation services for cerebral palsy children in general service center for persons with disabilities and their networks. This research aimed to study the situations of rehabilitation services given to cerebral palsy children in general healthcare centers and service networks for physically challenged people and to develop the rehabilitation service standards for Cerebral Palsy in these centers. The results from this study will provide guidelines to support and develop the capacity of the service system of the service center as formal and standardized center and guide the service providers to offer high-quality service packages. Moreover, the results can yield recommendations to the responsible government agencies and national organizations for people with disabilities. They can use this information as guidelines to track, inspect and support the general service centers to follow the approved standard rehabilitation model.

This research is also beneficial to the organizations for people with disabilities that are certified under Section 6(10). They can study the results and use them to develop their capacity and standardize their service system until they can register as a formal Disability Services Center for people with disabilities. This can increase the numbers of general service center and open more channels for children and people with disabilities and the caregivers to gain access to the welfare, benefits and services. The overall quality of the lives of Thai people with disabilities will be developed according to the social model that emphasizes the basic rights of people with disabilities and as a mechanism to "make the right real".

2. Research Objectives

This research aimed to:

2.1 Study the situations of the rehabilitation services given to Cerebral Palsy children in disability services center and service networks for physically challenged people.

2.2 Develop the rehabilitation service standards for Cerebral Palsy in those center.

3. Research Methodology

This research is a qualitative research using field research and in-depth interviews.

3.1 In terms of the study of the situations of rehabilitation services given to cerebral palsy children in general healthcare centers and service networks for physically challenged people, in-depth interviews were conducted and the data were synthesized to compose the draft standards.

1. Interviewee group - All interviewees were selected specifically by purposive sampling method from the general service center and service networks for physically challenged people in Bangkok. Only five centers that provide rehabilitation services for Cerebral Palsy children were selected, namely the healthcare center for people with general disabilities of the Foundation for Children with Disabilities and another four Learning and Rehabilitation Center for Children with Disabilities by Families (Minburi, Udomsuk, Nongkaem and Wangthonglang districts) which belong to the service network. I conducted in-depth interviews with management levels, heads of the service teams, service providers and clients, totaling 37 interviewees.

2. Research tool - I conducted the in-depth interview by using open questions about the service situations, contexts, providers' qualifications, problems, obstacles, satisfaction, strengths and weaknesses of the services, capital, suggestions and support towards the development of rehabilitation service standards given to cerebral palsy children in general healthcare center and service networks for physically challenged people. The questions were reviewed for accuracy by three experts in children and people with disabilities, medicine for children with disabilities and special education. The final index of item-objective congruence or IOC is 1.0. Some word choices and content have been amended according to their recommendations. As a pilot group I tried out the questions with five interviewees who faced a similar situation and analyzed the results to improve all questions again before starting the study interviews.

3. Data collection - Data were collected personally by the researcher using semi-structured or guided interviews with one interviewee at a time. I used the in-depth interview method as specified in 1) Data analysis - I performed a content analysis of the collected

data which related to the subject matter and focus on the reasons behind it. Then, I presented the main ideas in writings to link to the draft standards, components and measurement indicators. This draft can be developed to service standards for Cerebral Palsy children in general service center and service networks for physically challenged people, as planned in the objectives.

3.2 In terms of the development of rehabilitation service standards for Cerebral Palsy children in general service center and service networks for physically challenged people, I synthesized the data collected from the in-depth interview in 1.4 and proposed the draft standards, components and measurement indicators for the rehabilitation services given to Cerebral Palsy children in general service center and service networks for physically challenged people. The procedures of this process are described below.

1. Finished drafting the standards for the rehabilitation services given to Cerebral Palsy children in general service center and service networks for physically challenged people.

2. Called for a meeting with experts to receive their suggestions on the draft. All of the five experts who were involved have expertise and experiences working with Cerebral Palsy children and/or the caregivers of this group of children. They also have at least 5-year experiences in terms of the measurement and evaluation on the subject matters.

3. Developed the draft standards according to the recommendations from the experts.

4. Tested the amended standards by using an external evaluation by myself. I sought comments and suggestions from related parties including management levels, service providers and clients of the service center and networks. The draft standards were tested with a purposive sampling group at four facilities. Two of them were registered as formal service center for people with disabilities and provide rehabilitation services for Cerebral Palsy children. Another two are the centers that provide rehabilitation services for Cerebral Palsy children but have not been registered as formal service center. After that the test results were summarized into two points: evaluation results and comments of the stakeholders.

5. Concluded the final draft standards for the rehabilitation services given to Cerebral Palsy children in general service center and service networks for physically challenged people. The test results and stakeholders' comments were applied to improve the final draft.

4. Results and Discussion

The research results can be summarized as follows:

4.1 The situations of the rehabilitation services given to cerebral palsy children in general healthcare center and service networks for physically challenged

people can be summed up into eight important aspects as follows:

1. Rehabilitation services for Cerebral Palsy children in general service center for physically challenged people - From the research, I have found four types of service. The first type is the information and knowledge service. The service providers provide information, knowledge, rights and privileges for the affected children and their caregivers. It is found that this is the most important and necessary service that conforms to the duties and mission of the general service center for physically challenged people as specified by the Act's policy. The second type of service is also related to knowledge and skills in terms of Cerebral Palsy children's rehabilitation. It is the service that provides service packages such as physiotherapy treatment, Thai massage, movement training, occupational therapy or learning activity, and recreational therapy. The third service provides social skills to the Cerebral Palsy children and their families. This is the activity some people call "learning activity for a wide world". It helps teach life experiences and social skills to the affected children and their caregivers. The last service is the power boosting service in the form of a self-help group, or commonly known as "friend for friend group".

2. Cerebral Palsy Children families' contexts relating to the rehabilitation - There are many problems concerning this aspect. First of all, the families have to face an attitude issue. The families of the affected children have troubles overcoming the physical challenge. Next, some caregivers do not have knowledge to take care of and rehabilitate the Cerebral Palsy children, so they need to search for a relevant knowledge source. Lastly, there is a problem about responsibility sharing among the family members. The affected children have to be taken care of closely all the time.

3. Strengths and weaknesses of the provided services in the targeted five service centers - One of the strengths is the concept to strengthen the Cerebral Palsy children's families and to have qualified and experienced service providers who have appropriate knowledge. All five service centers also have fully integrated services, and they act as a ground to let the Cerebral Palsy children befriend and socialize with others. Moreover, they provide additional services to the families. There is another outstanding strength unlike other service centers, which comes in the form of a self-help group or "friend for friend group". In terms of weaknesses, findings show that the four center in the network have small facilities and no specific training rooms. The center's buildings are either rented houses or townhouses with limited space. Their training materials are not various and sufficient for all clients. I have also found the weakness in terms of the document system used to collect forms, registrations, profiles, statistics and other data. The system is not very effective. For the last point, the centers do not

receive sufficient funds as they have not been certified as a formal service center according to the government's law, and they do not have sources of funds to support the operation.

4. Qualifications of the service providers to Cerebral Palsy children in general healthcare center and service networks for physically challenged people - All centers are well aware of the importance to have qualified service providers. The first qualification upon which all interviewees agree is that the service providers must have specific capacity, experiences and skills that match with the services they give. And when they need to service a patient with specific needs, they must use a specific expert who really specializes in that disability. From the interviews, I can conclude that there are four main qualifications of the service providers for Cerebral Palsy children. First, the service provider must specifically take care of this group of children. Second, he/she must have knowledge relating the rehabilitation of Cerebral Palsy children. The knowledge can be divided into two levels: basic knowledge and specific knowledge. Third, he/she must have skills and expertise in the rehabilitation of Cerebral Palsy children. Fourth, he/she must be able to train his/her own child and other children with various disabilities. If all four qualifications are met, the client will be very confident in the quality of service.

5. Suggestions for the development of general healthcare center and service networks for physically challenged people - Overall, the interviewees were satisfied with the rehabilitation services for Cerebral Palsy children of the five center because they responded to the needs of the children and the families. Although there were problems and obstacles sometimes, the clients usually can accept them as they understand the center's limitations, and the problems were minor and did not affect the rehabilitation. The clients in the target group have suggested that they wanted the center to arrange some occupational training for the caregivers after finishing the rehabilitation training and service hours.

6. Service system for the rehabilitation of Cerebral Palsy children in general healthcare center and service networks for physically challenged people - I have interviewed the officers who are responsible for the policy of the Department of Empowerment of Persons with Disabilities. They stated that the system must follow the Empowerment of Persons with Disabilities Regulations Concerning Principles, Methodology and Conditions of Service Center for Persons with Disabilities B.E. 2556, especially Section 3 which mentions the service provisions and service system for the rehabilitation of physically challenged people. The main content of this section is to organize a committee to assess the children's ability, to assess the children's ability and to plan individual education programs (IEP). Each service center must arrange an appropriate service that matches with each patient's needs. If any

Table 1. Draft service standards for Cerebral Palsy children in general service center and the service networks (1st edition)

| Component | Number of indicators (indicators) | Evaluation Guidelines* | Weight of scores (scores) |
|-------------------------------------|--------------------------------------|---------------------------|------------------------------|
| 1. Service quality | 8 | 27 | 135 |
| 2. Service providers' qualification | 4 | 15 | 75 |
| 3. Location | 4 | 10 | 50 |
| 4. Tools and facilities | 2 | 7 | 35 |
| 5. Evaluation / measurement | 2 | 6 | 30 |
| 6. Data recording system | 3 | 12 | 60 |
| 7. Coordination system | 2 | 5 | 25 |
| Total | 25 | 82 | 410 |

Remark: *means the evaluation guideline of each indicator. Each one has 5 scores.

Table 2. Draft service standards for Cerebral Palsy children in general service center and the service networks (2nd edition)

| Component | Number of indicators (indicators) | Evaluation Guidelines* | Weight of scores (scores) |
|----------------------------------------------|--------------------------------------|---------------------------|------------------------------|
| 1. Service providers' qualification | 4 | 13 | 65 |
| 2. Location, tools and facilities | 5 | 12 | 60 |
| 3. Access to service | 3 | 6 | 30 |
| 4. Privileges for children with disabilities | 2 | 6 | 30 |
| 5. Rehabilitation service | 3 | 7 | 35 |
| 6. Data recording system | 3 | 7 | 35 |
| 7. Coordination system | 2 | 5 | 25 |
| 8. Evaluation / measurement | 3 | 9 | 45 |
| Total | 25 | 65 | 45 |

Remark: *means the evaluation guideline of each indicator. Each one has 5 scores.

Disability Services Center can operate as specified by the regulations, they can be entitled to receive support from the government.

7. Per-unit capital of the rehabilitation services for Cerebral Palsy children in general healthcare center and service networks for physically challenged people - It is found that the budget policy of the Department of Empowerment of Persons with Disabilities to support the general service center for physically challenged people conforms to the framework of the Empowerment of Persons With Disabilities Regulations Concerning Principles, Methodology and Conditions of Service Center for Persons With Disabilities B.E. 2556. The ratio of supporting funds in Section 3 which mentions service arrangements following the mission of general service center for physically challenged people refers to the expense management principles for medical rehabilitation services of the National Health Security Office Fund. This government agency has duties regulating the list of treatment and cost of each medical rehabilitation treatment for hospitals and healthcare service centers [10]. The pricing scheme is per-unit capital. For example, a physiotherapy session is 150 Baht/person/time. An occupational therapy session costs 150 Baht/person/time or 75 Baht/person/time for a group therapy. The Depart-

ment of Empowerment of Persons with Disabilities applies this expense management framework to define the cost scheme in Section 3 and uses it as a credit limit of supporting funds for general service center for physically challenged people. From the interview, I have found a weakness in the expense recording system as there were no expense records, and the income and expense account system was not effective enough. I also focused on the approved per-unit budget of the service center for physically challenged people, which are 150 Baht/person/time/activity. The management levels have agreed that this amount was enough and appropriate. However, each agency should have an opportunity to be considered first because this is a channel that can help each provider arrange high-quality and efficient services.

8. Support to build standards of the rehabilitation services for Cerebral Palsy children in general healthcare center and service networks for physically challenged people - I focused on the support from the Department of Empowerment of Persons with Disabilities which is a main policy maker in this matter. The strength of this point is the mechanism of the Department of Empowerment of Persons with Disabilities' committees. There is a main committee for national operations and provincial subcommittees

Table 3. The test results of the draft rehabilitation service standards for Cerebral Palsy children in general service center and the service networks (2nd edition), divided into each component.

| Component | Scores (percentage) | | | |
|----------------------------------------------------------------|---------------------|-------------|-------------|-------------|
| | Agency 1 | Agency 2 | Agency 3 | Agency 4 |
| 1. Service providers' qualification (Total score: 65) | 65 (100) | 60 (92.31) | 40 (61.54) | 30 (46.15) |
| 2. Location, tools and facilities (Total score: 60) | 60 (100) | 60 (100) | 45 (75) | 40 (66.67) |
| 3. Access to service (Total score: 30) | 30 (100) | 30 (100) | 25 (83.34) | 20 (66.67) |
| 4. Privileges for children with disabilities (Total score: 30) | 30 (100) | 30 (100) | 25 (83.34) | 25 (83.34) |
| 5. Rehabilitation service (Total score: 35) | 35 (100) | 35 (100) | 25 (71.43) | 25 (71.43) |
| 6. Data recording system (Total score: 35) | 35 (100) | 35 (100) | 15 (42.86) | 5 (14.29) |
| 7. Coordination system (Total score: 25) | 25 (100) | 25 (100) | 0 (0) | 0 (0) |
| 8. Evaluation / measurement (Total score: 45) | 45 (100) | 45 (100) | 25 (55.56) | 0 (0) |
| Average total score | 325 (100) | 320 (98.46) | 200 (61.54) | 145 (44.62) |
| Standard quality | Very good | Very good | Acceptable | Failed |

for each province. However, there is a weakness in terms of specific standards of general service center for physically challenged people. Now, the regulations of general center establishments are tied to the standards of organizations for physically challenged people. If the service standards are developed in the future, it will help control the quality of the operations and service arrangements of the center with the Department of Empowerment of Persons with Disabilities controlling and supporting them.

4.2 Rehabilitation service standards for Cerebral Palsy children in general service center and the service networks

1. Drafted the rehabilitation service standards for Cerebral Palsy children in general service center and the service networks - I used data in Item 1 to draft the first edition of the standards. It comprises 7 components, 25 indicators and 82 evaluation guidelines. The total scores are 325 as seen in Table 1.

2. Called for a meeting with experts to receive suggestions for the draft standards - The experts have suggested revising the draft according to the authority and mission of the general service center for physically challenged people as approved by the government's policy [11]. They also pointed out the amendment in evaluation guidelines as there was some redundancy in word choices, and some statements were not clear. For another thing, the scoring criteria needed to be revised to follow the common standard, which uses 100% as the total score. Each center must get no less than 60% to pass the evaluation in that certain aspect (out of 8 aspects). The evaluation scores can be divided into three levels: very good (81-100%), good (71-80%), and acceptable (60-70%). If the score is below 60%, it means that aspect does not pass the standard.

3. Developed the draft rehabilitation service standards for Cerebral Palsy children in general service center and the service networks - After reviewing the suggestions from the experts and applying to the draft, I have finished the second edition. It is composed of 8 components, 25 indicators and 65 evaluation guide-

lines. The total scores are 325 as seen in Table 2. The evaluation scores can be divided into three levels: very good (81-100%), good (71-80%), and acceptable (60-70%). If the score is below 60% (0-59%), it means that aspect does not pass the standard.

4. Tested the draft standards - I used an external evaluation method and conducted the evaluation myself. The test results are shown in Table 3.

From Table 3, we can see that Agency 1 has an average total score of 325 (or 100%), so it receives a very good ranking and passes the standards of all 8 components. Agency 2 has an average total score of 320 (or 98.46%), so it also receives a very good ranking and passes the standards of all 8 components. Agency 3 has an average total score of 200 (or 61.54%), so it receives an acceptable ranking. This agency does not pass the tests of the 6th (data recording system) and 7th (coordination system) components. Agency 4 has an average total score of 145 (or 44.62%), so it does not pass the standards. It can be concluded that Agencies 1 and 2, which are the certified service center for people with disabilities and have been in service for at least three years, have passed the standard tests. However, the other two agencies are two of the centers in the service networks. They have not been certified and registered as formal service center. The results show that Agency 3 still has acceptable standards while Agency 4 does not pass the standard tests.

I have asked the opinions of the stakeholders about the draft standards. They totally agreed on having the service standards as they are important tools to measure the service quality of each center, and the interviewees agreed that this draft is appropriate. The first two agencies have experiences on the quality assessment before they were certified as formal service center, so the tests were not new to them. They even helped them keep their quality standards. The other two agencies have never had experience with the standards assessment. This was the first time for them, so they found the tests to be very challenging, and they were motivated to develop their operations to meet the

standards. The test results can be guidelines to develop their operations, and they have learned their strengths and weaknesses of each component as the tests specify the indicators clearly. There is also a suggestion to the Department of Empowerment of Persons with Disabilities and/or other expert or authorized agencies. These organizations should provide coaching to any centers that want to standardize their practice and process the registration to be a certified Disability Services Center for people with disabilities.

5. Conclusion of the standards - In Item 2.3, there are 8 components, 25 indicators and 65 evaluation guidelines. The total score is 325 (as shown in Table 2). The table consists of (1) service providers' qualifications with 4 indicators and 65 points, (2) location, tools and facilities with 5 indicators and 60 points, (3) access to service with 3 indicators and 30 points, (4) privileges for children with disabilities with 2 indicators and 30 points, (5) rehabilitation service with 3 indicators and 35 points, (6) data recording system with 3 indicators and 35 points, (7) coordination system with 2 indicators and 25 points, and (8) evaluation and measurement with 3 indicators and 45 points. The evaluation of the total average score can be divided into 3 levels: Very good (81-100%), good (71-80%) and acceptable (60-70%). If the total average score is below 60%, it means that the center does not pass the test.

5. Discussion

In this research, I focused on 2 issues: 1) The situations of the rehabilitation services given to Cerebral Palsy children in general healthcare center and service networks for physically challenged people, and 2) the development of rehabilitation service standards for Cerebral Palsy in those center.

5.1 Situations of the rehabilitation services given to Cerebral Palsy children in general healthcare center and service networks for physically challenged people - I have found four main services concerning the rehabilitation of Cerebral Palsy children in general service center for people with disabilities. They are to 1) provide information and updates relating the rights and welfare, 2) provide knowledge and skills for the rehabilitation, 3) provide social skills to Cerebral Palsy children and their families, and 4) empower the children with a self-help group. The services conform to the Empowerment of Persons with Disabilities Regulations Concerning Principles, Methodology and Conditions of Service Center for Persons with Disabilities, B.E. 2556. This announcement specifies five duties of service center for people with disabilities. The first out of five duties specified in this announcement is to provide information, updates, privileges and welfare as requested by people with disabilities. In terms of the activities for the rehabilitation of Cerebral Palsy children in general service center for people with disabili-

ties, the centers arrange integration activities including physiotherapy (big muscle training), traditional Thai massage, movement training, occupational therapy or learning activities and recreational therapy for Cerebral Palsy children and their families. They assess the development and disabilities of each child to design an individual education program (IEP) that conforms to the rehabilitation program for Cerebral Palsy of Christine Thorogood (2556) [12]. She has studied Cerebral Palsy and designed a rehabilitation program comprising four main activities: physical therapy, speech and language therapy, occupational therapy, and recreational therapy. The program should consider the differences of each patient and specific need of his/her family. It should be supported by people who are close to the children, especially the guardians (the caregivers). They should take part in the designed rehabilitation program. Moreover, the operation model and principles that the general healthcare center and service networks for physically challenged people use pay attention to the guardians (the caregivers). This conforms to the research of Bennett (2012) [13] which is a qualitative research concerning the guardians' participation in an assistance program in the first stage of development of children with disabilities. The research shows that continual participation of the parents and regular rehabilitation sessions at home are beneficial to the children. The results show visible improvement in their development.

5.2 Development of rehabilitation service standards for Cerebral Palsy children in general healthcare center and service networks for physically challenged people - From the research results, I can conclude 8 components, 25 indicators and 65 evaluation guidelines as presented in Table 3, Items 2.4 and 2.5. If we compare this conclusion to the concept of rehabilitation service standards of Cerebral Palsy Association of Tasmania, Australia, which mentions 12 components, we can find some similarities such as access to services, privacy and confidentiality and protection of benefits. However, the essence of the standards depends on context, conditions and regulations of each task and/or operation. This research emphasizes the operational standards which are in accordance with the concept of Meesuttha and Sachukorn (1999) [14]. They explained the benefits of the operational standards which can lead to more visible results from the operations and guide the service providers to operate correctly. The management levels can use the standards to evaluate the staff's performance with clear purposes and criteria, and the staff will be able to accept the evaluation better.

In addition, this research has found that there was no formal service standards for the rehabilitation of Cerebral Palsy children in general healthcare center and service networks for physically challenged people; even the Empowerment of Persons With Disabilities Regulations Concerning Principles, Methodology

and Conditions of Service for Persons With Disabilities B.E. 2556 specifies that there must be a working committee to design a service system for service center for people with disabilities and define mission and duties on planning, operational model, guidelines, establishment method and operation of the center, especially in Section 4 - Operation and service standards of service center for people with disabilities. Item 20 specifies that each service center must have operations and service standards for people with disabilities as specified by the regulations of the department. Item 21 specifies that the department must support each center in terms of academic matters, budget, staff, and other necessary and appropriate matters. And it must have a process to track, verify and control each center's operation and ensure it meets the standards. From the data collected from the interviewees, it was found that they agreed on having specific service standards for specific disabilities. The results are similar to the stakeholders who also agreed that the standards are necessary. But each agency must study and develop its operations to meet standards, and it has to understand that the standards are important tools to measure the service quality. This opinion aligns with the research of Methawikul et al. (2014) [15], who studied the development of operational models and guidelines of service center for people with disabilities. They found that in the Empowerment of Persons with Disabilities Regulations Concerning Principles, Methodology and Conditions of Service Center for Persons With Disabilities B.E. 2556, Item 20 specifies that each service center must have operations and service standards for people with disabilities as specified by the regulations of the department. And they proposed to the policy makers of the Department of Empowerment of Persons with Disabilities that there should be regulated criteria to measure specific service standards of general center for people with disabilities.

For another thing, the sampling stakeholders suggested that the Department of Empowerment of Persons with Disabilities and/or expert agencies should provide coaching to any centers that are trying to standardize the practice to register as a certified service center. This aligns with the research of Sukonthawit et al. (2016) [16], who studied the developmental guidelines for center for independent living to upgrade to be certified service center for people with disabilities. The research has found that:

The qualifications of the service providers are the main feature that can upgrade each service center to be a certified one. The service providers must be committed and keep developing their capacity to maintain basic knowledge and skills as a service provider. The management of the organization, staff, work plan, budget and service standards is also the key. Sukonthawit et al. (2016) even suggest that the Department of Empowerment of Persons with Disabilities, as a directly responsible government agency, should provide

coaching to any agencies or organizations wishing to develop themselves to be certified as a formal service center for people with disabilities and standardize their practice.

6. Conclusions

This research is a qualitative research aiming to study the situation of rehabilitation services given to cerebral palsy children in general healthcare center and service networks for physically challenged people and to develop the rehabilitation service standards for Cerebral Palsy.

I used field research to study the situation of rehabilitation services given to cerebral palsy children in general healthcare center and service networks for physically challenged people. An in-depth interview was used with a purposive sampling group selected from 5 general service center and service networks for physically challenged people in Bangkok that provide rehabilitation services for Cerebral Palsy children. I conducted interviews with management levels, heads of the service teams, service providers and clients, totaling 37 interviewees. Eight important aspects have been identified: 1) Rehabilitation services for Cerebral Palsy children in general service center for physically challenged people, 2) Cerebral Palsy Children families' contexts relating to the rehabilitation, 3) Strengths and weaknesses of the provided services in the five targeted service center, 4) Qualifications of the service providers to Cerebral Palsy children in general healthcare center and service networks for physically challenged people, 5) Suggestions for the development of general healthcare center and service networks for physically challenged people, 6) Service system for the rehabilitation of Cerebral Palsy children in general healthcare center and service networks for physically challenged people, 7) Per-unit capital of the rehabilitation services for Cerebral Palsy children in general healthcare center and service networks for physically challenged people, and 8) Support to build standards of the rehabilitation services for Cerebral Palsy children in general healthcare center and service networks for physically challenged people. These 8 aspects were applied to the analysis, and the first edition of the rehabilitation service standards for Cerebral Palsy children in general service center and the networks is drafted. Next, I called for a meeting with an expert team to review the draft and apply the recommendations to the second edition of the standards. The next step was the test of the draft standards and data collection for synthesis. Lastly, I concluded the results into the final draft of rehabilitation service standards for Cerebral Palsy children in general service center as shown in 2.3. There are 8 components, 25 indicators and 65 evaluation guidelines. The total score is 325 points (Table 2). The 8 components are 1) service providers' qualifications with

4 indicators and 65 points; 2) location, tools and facilities with 5 indicators and 60 points; 3) access to service with 3 indicators and 30 points; 4) privileges for children with disabilities with 2 indicators and 30 points; 5) rehabilitation service with 3 indicators and 35 points; 6) data recording system with 3 indicators and 35 points; 7) coordination system with 2 indicators and 25 points; and 8) evaluation and measurement with 3 indicators and 45 points. The evaluation of the total average score can be divided into 3 levels: very good (81-100%), good (71-80%) and acceptable (60-70%). If the total average score is below 60%, it means that center does not pass the test.

Recommendations for future studies

1. There should be a study on per-unit capital of the rehabilitation services for Cerebral Palsy children in general service center and networks for people with disabilities. This is another main issue that requires a specific study and it takes time to collect the data as a system.

2. There should be a study on the development of various service standards to treat other types of disability in children at general service center and networks for people with disabilities. There should be standards for other types of disability as well. ?

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