



EDUCATION ON PREVENTION AND HANDLING OF CEREBRAL PALSY CHILDREN IN BERUA, BIRINGKANAYA DISTRICT, MAKASSAR

Suharto¹, Suriani²

^{1,2}Physiotherapy Health Polytechnic Makassar, South Sulawesi, Indonesia
Correspondent Author:
Email: suhartoft11@gmail.com

Abstract

The main problem for partners is the lack of understanding of the prevention and treatment of children with cerebral palsy. Cerebral palsy is characterized by impaired postural tone in the form of spasticity, impaired coordination, poor postural control, impaired balance of sitting, standing, walking disturbances that cause sufferers to experience impaired daily functional activities. This occurs because of non-progressive lesions on the brain in its developmental period. The implementation of this community service is a participatory approach method by actively involving in every stage and activity through the provision of health education in the form of education and simulations regarding the prevention and treatment of children with cerebral palsy. This activity was held in June 2022 in Berua Village, Makassar City, South Sulawesi, Indonesia with a total of 33 participants consisting of the general public, health workers, Posyandu cadres, teachers and students. The results of the activity obtained that the knowledge and skills of the participants increased. The conclusion of this community service activity is that the knowledge and skills of participants increase after being given education and simulations regarding the prevention and treatment of children with cerebral palsy.

Keywords: Prevention, Treatment, Cerebral Palsy

IMPLEMENTATION BACKGROUND

The main problem with cerebral palsy sufferers is the distribution of postural tone in the form of spasticity, impaired coordination, poor postural control, impaired balance of sitting, standing, walking disorders that cause sufferers to experience disturbances in daily functional activities. This occurs because of non-progressive lesions on the brain in its developmental period. This disorder is accompanied by an inability to control posture and balance, have trunk instability that affects postural control and movement and abnormal muscle coordination patterns when sitting.

The incidence of cerebral palsy is 2 to 3 per 1,000 live births and the most common is spastic diplegia, about 60%. Spasticity has an adverse effect on the muscles and joints of the lower extremities. Children with cerebral palsy have poor trunk balance control, making it difficult for the child to sit up straight. Balance control is important for functional movement and helping the child to recover. Children with cerebral palsy experience delays in reaching the sitting preparation phase and do not even pass the sitting preparation phase because the postural muscles have not adapted well and their stability is not good. If these conditions do not receive adequate intervention, there will be a potential for deformities in the form of muscle contractures and joint stiffness, which will further worsen posture and gait patterns.

In Makassar Special School (SLB) in 2012 there were 24 people with cerebral palsy, in 2013 there were 33 people with cerebral palsy and in 2014 there were 34 sufferers. The prevalence of Cerebral Palsy sufferers in the last three years who have received physiotherapy services at the Makassar

Foundation for Children with Disabilities (YPAC), SLB Parangtambung, and Amel Center Makassar is 138 people.

Cerebral palsy patients often experience failure to provide a return mechanism when learning to sit. To compensate for this problem, there is an elevation movement of the shoulder girdle so that the control of the shoulder girdle itself becomes hampered in its development. The trunk and abdominal muscles become weak and inactive, resulting in a kyphotic posture due to thoraco-lumbar disorders.

The Covid-19 pandemic has made it possible for the number of children with cerebral palsy in Indonesia to increase, so it is predicted that the target of reducing child growth and development disorders is difficult to achieve, considering that the Posyandu is not operating and health workers at the Puskesmas are also not immune from the impact of COVID-19. Posyandu is the spearhead, but currently it is in a pandemic so that all activities are hampered and cannot run normally, so it is feared that the incidence of cerebral palsy will increase.

In Tamalanrea sub-district, children under five with a history of low birth weight and malnutrition, 59 (76.6%) parents of patients with poor education and knowledge with malnutrition, 48 (62.3%) families with socioeconomic status low in nutrition. In Daya Hospital, Biringkanaya sub-district, Makassar city in 2017, 84.8% of low birth weight babies were found.

Cerebral palsy has a long-term impact, namely life dependence, especially daily activities that are difficult to do. Therefore, a programmatic prevention and treatment effort is needed that can be carried out continuously in the community. This activity will certainly be carried out properly and correctly if it gets support from universities and the government, so a policy is needed to implement the Tri Dharma of Higher Education in the form of Community Service. Therefore, the purpose of this Community Service is to increase the knowledge and skills of the community towards efforts to prevent and treat children with cerebral palsy.

PARTNER PROBLEMS

Lack of public understanding of the prevention and treatment of children with cerebral palsy

METHOD AND PROCEDURES

The implementation of this community service uses a participatory approach, meaning that the fostered partners will be actively involved in every stage and development activity that will be carried out through the provision of health education. The process carried out is as follows:

1. Preparation Stage

Administration of permits to the Berua Daya sub-district of Makassar as well as conveying the objectives of the implementation of community service to be carried out.

2. Implementation Stage

This activity was carried out in June 2022. In accordance with the method of approach implemented, community service activities were carried out by providing health education about the prevention and treatment of children with cerebral palsy. The participants of this Community Service activity are:

- a. General public
- b. Health workers and school teachers
- c. Posyandu cadres and d. Student



IMPLEMENTATION

The implementation of community service is carried out by various methods as follows:

1. The educational method is an effort made to improve the knowledge and skills of the community in an effort to provide information to the public about children with cerebral palsy such as the causes and symptoms.
2. Counseling on preventing the incidence of children with cerebral palsy
Delivering material on how to prevent and treat children with cerebral palsy
3. Discussion
Provide explanations to participants who ask questions about the handling of children with cerebral palsy and children with special needs, such as children with autism and hyperactive children (ADHD).



Figure 1 Explanation of the material for the prevention and treatment of children with cerebral palsy

4. Simulation method

This is done by showing directly about the procedures for preventing and treating children with cerebral palsy and children with ADHD

- a. How to prevent cerebral palsy by providing stimulation and early detection when babies are 1 month old to 1 year old.



Figure 2 An explanation of the prevention of cerebral palsy by stimulating infants

- b. How to deal with children with movement disorders due to cerebral palsy and children with behavioral disorders such as autism and ADHD



Figure 3 Examples of handling children with cerebral palsy



Figure 4 Examples of handling children with special needs (ADHD)

RESULTS

The last stage is the evaluation stage which is carried out through a post test. The post test aims to measure the success of the education that has been carried out and identify deficiencies found as a basis for preparing programs for further activities. Evaluation is carried out during simulation and counseling activities by assessing the level of knowledge and skills of participants during the activity. The results of the evaluation can be seen in tables 1 and 2 below.

Table.1. Pre-test and Post-test results Participants' knowledge of Prevention and Treatment of Cerebral Palsy children

Score	Knowledge			
	Pre test		Post test	
	f	Percentage	f	Percentage
0 – 5 (not enough)	30	90.91	0	0
6 – 10 (Enough)	3	9.09	33	100
Amount	33	100 %	33	100 %

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In table 1, the results of the pre-test showed that the participants' knowledge was generally lacking (90.91%) and after being given socialization and counseling all participants increased their knowledge (100%).

Table 2 Results of Pre-test and Post-test Participants' skills in handling children with cerebral palsy and ADHD

Nilai	Skills			
	Pre test		Post test	
	f	Percentage	f	Percentage
0 – 5 (not enough)	33	100	0	0
6 – 10 (Enough)	0	0	33	100
Amount	33	100 %	33	100 %

In table 2, the results of the pre-test of participants' skills are generally lacking (100%) and after being given a simulation, all participants increase their skills (100%).

Table.3. Results of Achievement of Community Service Activities

Activity	Target Achievement	Information
I	Participants' understanding = 100%	Target achieved (100%)
II	Activities Implemented	Target achieved (100%)
III	Participants can do simple treatment for children with cerebral palsy	Target Not achieved because the training time is very short

DISCUSSION

In Tables 1 and 2 there is an increase in knowledge and skills after community service activities in the form of simulations and demonstrations of the prevention and treatment of children with cerebral palsy and children with Attention Deficit Hyperactive Disorders (ADHD). This is in accordance with Notoatmodjo's (2014) statement that after a person receives a stimulus in the form of counseling and demonstrations then conducts an assessment or opinion on what is known, the next process is expected to be able to implement or practice what is known and addressed.

Demonstration training is an intervention activity that leads to the desired change in behavior. This training activity can be regarded as a learning activity while working. The expected results from the training are changes in knowledge, attitudes and behavior or in cognitive, affective and psychomotor aspects (Isyti'aroh et al., 2018). Limited public knowledge, so this activity is a solution to the problems faced in the prevention and handling of children with special needs.

The results of the evaluation of training activities in the community after attending this training, it was found that the material for this training was easy to understand, very easy to do and the

participants were eager to provide information on the results of the training to others and the cadres also gave suggestions for other trainings so that the community know the importance of handling children with special needs.

In community service activities, the priority is the independence of partners in carrying out activities that have been trained. The training program is able to increase knowledge and awareness and concern for implementing a healthy life. Then participants are able to absorb the information provided so that the empowerment of cadres can be optimized.

The results of this community service activity show that education is an effective way to increase community knowledge and skills. This statement is in line with the results of research which states that there is an effect of providing education on increasing parental knowledge (L. Putri et al., 2020). Other studies that also obtained results showed differences in knowledge before and after education was carried out on parents of children with cerebral palsy disorders (Awanis and Astriyana, 2019). Increased knowledge can be influenced by several factors, one of which is the suitability of program content, the more appropriate the content of the training program with the needs of partners, the more likely the training will provide positive and sustainable results.

CONCLUSION

1. Participants in community service activities already understand that preventing the incidence of cerebral palsy is important and beneficial for the community
2. Participants' knowledge and skills increase after participating in community service activities

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