

# **ROLE OF OCCUPATIONAL THERAPY WHILE WORKING WITH CEREBRAL PALSY CHILDREN USING ORTHOPEDIC ASSISTIVE DEVICES**

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## **ABSTRACT**

The main aim of the following research paper is to identify and interpret the preconditions and instructions for the implementation of effective Occupational Therapy intervention during the use of orthopedic assistive devices. In trying to highlight the role, professional skills, and perspectives of the occupational therapist, it will be possible to identify the key provisions that, if applied, will encourage the maximum participation of a child with Cerebral Palsy in several activities that are meaningful to him/her, thereby improving his/her quality of life and well-being.

The methodology of data collection, processing, and analysis of the research is based on a combined method approach, which allows combining quantitative data collection and use of quantitative methods to later conclude the data obtained through certain numerical patterns. Structural interviews and designed questionnaires were used with 50 children having Cerebral Palsy and their parents or caregivers.

The results showed that today in Armenia, due to the problems of obtaining and using orthopedic assistive devices, as well as the lack of professional supervision and monitoring, it is limited or does not ensure the maximum independent participation of children with Cerebral Palsy in community life, self-care, and professional activities.

**Key words:** orthopedic assistive devices, Occupational Therapy, Occupational Therapy intervention, children with Cerebral Palsy (CP), assessment, participation, rehabilitation.

## **INTRODUCTION**

The problem of child development disorders is addressed in almost all spheres of health and public life, requiring a systematic approach, close cooperation, and an effective combination of resources (Babloyan, 2010).

Orthopedic rehabilitation is aimed at providing rehabilitation or orthopedic assistive devices that are important to the integration of families and children with special needs in the process of inclusion in community life.

In trying to highlight the role, professional skills, and perspectives of the occupational therapy intervention in this regard, it might be possible to identify the key provisions that, if applied, will encourage independence and participation of a child with Cerebral Palsy (CP) in several daily activities that are important to him/her, thereby improving his/her quality of life and well-being.

## **LITERATURE REVIEW**

There are several orthopedic conditions that a child might have or might be developed over time, including all disorders that directly affect small-large movements, balance, muscle tone, mouth function, posture, reflexes, and coordination. Orthopedic conditions refer to everything related to the musculoskeletal system: bones, muscles, tendons, ligaments, joints, or their articulations. It is the system of the body that allows a person to move. When one component in this combined work is damaged or disrupted, as a result, movement limitation and discomfort may occur. All this, in turn, has a direct impact on the performance of the child, the child is not able to fully participate not only in all the activities that are significant, meaningful for his well-being, but also is unable to perform several daily activities vital to his life (Turner, 2014). Orthopedic assistive devices include aids that feature to compensate for or eliminate barriers to community participation in self-care or professional activities (Andreyeva, 2014). They must be necessary from a medical point of view and meet the following criteria: serve any medical

purpose; resist continuous use; be helpful to the person for any illness, injury, physical disability, or birth defect; not be useful to anyone who does not have an illness, injury, physical disability or birth defect, as well as to be suitable for use both indoors and outdoors (Wielandt & Strong, 2000).

One of the urgent issues of the state policy of the Republic of Armenia in the field of protection and promotion of population health is to ensure full participation in daily living activities and community life of persons with disabilities. This is mainly because the number of people with disabilities, including children, is growing every year. In this regard, the processes of socialization, adaptation, and rehabilitation of children with disabilities in modern society are becoming more urgent, actual, and significant (Nizova & Pirogova, 2013).

The main goal of rehabilitation is to improve the quality of life of people who have temporarily or permanently lost their ability to work through special actions, and specialized multilateral approaches (Tutarishev, 2012).

According to the statistical data provided by the Medical-Social Expertise Agency (ESIA) of the RA, there are 192.411 registered persons with disabilities in Armenia, as of 01.06.2021. 8861 out of this number are children having different types of disabilities (<https://hhbsp.am/>). Among children with disabilities, a large group consists of children with various disorders of the nervous system, sensory organs, mental disorders, autism spectrum disorder, as well as CP. Considering the CP from the orthopedic condition point of view, it is seen that CP holds a leading position and occurs in the ratio of 1.6: 1000 (Shipitsina & Mamaychuk, 2004). Assistive devices and technical rehabilitation aids play an important role in the integration of children with disabilities in community life, especially those with CP. Several rehabilitation therapies developed today aim to enable the child to reach his maximum potential. Children with CP may grow up to become adults and be able to work and live as independently as it is possible (Babloyan, 2010).

Persons with disabilities following the procedure established by the Government of the Republic of Armenia, have the right to free order of special prosthetic orthopedic shoes, all kinds of prosthetic items (except for prostheses made of precious metals) at the expense of the state budget (RA Governmental Decision N 1035-N, 10.09.2015). Still, this decision includes more information about providing particular devices and not the sufficient

number and quality of intervention services that are required for persons with disabilities.

Children with CP are required to receive Occupational therapy services throughout their lives: from early childhood to adulthood. Occupational therapy with these groups of clients pursues the following goals:

- the intervention aimed at improving the activities of daily life and recovery (eating, dressing, washing, using the toilet, etc.);
- positioning (lying down, sitting, standing) to prevent deformities, contractures, correct positioning of the body or any part of it for therapeutic purposes, promoting functionality and mobility;
- ensuring the normal development of the child, through the provision of assistive devices, accessories, aids with a simple structure that supports the function of the body;
- using therapeutic exercises aimed at preventing muscle atrophy, improving healing, restoring muscle and joint function, etc.
- using orthosis and splinting with immovable functions to help to restrict movement or support body function (Varlamov, 2016).

In this regard, it is important to state, that many researchers emphasize not only the role of Occupational Therapist in the process of preparation and provision of the orthopedic supplies but also the need for consultation, prescription, and further supervision (Korshikova-Morozova, Trukhacheva & Zablotskis, 2018; Varlamov, 2016; Hansen & Atchison, 2000).

Besides all this, the evaluation and assessment of orthopedic conditions are very important, as it is directly related to the child's ability to walk and move, which in turn is directly related to the child's development. Otherwise, the absence of necessary assessment and further intervention can lead to limited mobility, discomfort, and in some cases pain in the child.

Many authors consider the involvement of the client in the process of choosing orthopedic assistive devices, determining the ways of use, advising to evaluate the person's functional abilities, medical condition, diagnosis, socio-emotional needs, home conditions, daily habits, values, and goals before prescribing the particular assistive devices. An assessment of all these components can provide a complete picture of a person's unique needs about orthopedic support requirements. And the authors see the guarantee of all this

effective process only in the presence of expert supervision (Saratikyan & Harutyunyan, 2017; Hansen & Atchison, 2000).

Based on the following review the purpose of this study is to identify and analyze what are the main preconditions and key features for the use of assistive devices necessary for the effective organization of Occupational therapy intervention.

## METHODOLOGY

The methodology of this study is based on the quantitative methods approach, which allows using quantitative data collection methods, later having the opportunity to conclude certain numerical patterns (Kielhofner, 2006). A specially designed questionnaire was used with 50 children with CP and their parents/caregivers.

The participants of the study are 50 children and their parents/caregivers from Yerevan, the capital of Armenia, and Gyumri and Artik cities in Shirak region with whom a survey has been conducted using a specially designed structural questionnaire. The age limit of children varies from 3 to 18 years old (boy, girl). Table 1 and Table 2 presents detailed information about the children who have participated in the study and their parents.

**Table 1.**  
*Participants – children with CP.*

Gender		Age			Cities			Visits school or kindergarten			
M	F	3-5 y.o.	6-12 y.o.	13-18 y.o.	Yerevan	Gyumri	Artik	Yes	No	Not school age	Home study
31	19	13	25	12	15	20	15	29	14	3	4

Before completing the questionnaire each of the 50 parents/caregivers has been provided a content letter with information related to the research. The permission to participate in the study was gained from each of the participants.

**Table 2.*****Participants – parents/caregivers.***

Number of participants		Age		Education	
Mother	40	20-30	13	Secondary	20
Father	7	30-40	31	Secondary professional	18
Grandmother	3	40 and older	6	Higher	12

**Data collection and analyses**

In this study, a standardized survey method belonging to a series of quantitative methods was used, the process of which is formal, the researcher interacts with the respondent to a minimal extent to have as little effect on his answers as possible. That is, in this case, the purpose of the study is to measure and interpret the phenomenon through numbers (Kielhofner, 2006).

A designed structural questionnaire included 7 open-ended and close questions. It has a purpose to understand the main difficulties and problems experienced by children with CP while using orthopedic assistive devices and challenges experienced by the parents in the process of obtaining this aids. Survey also gave a possibility to assess the possible impact of orthopedic aids on children's daily activity, participation, and independence in daily life.

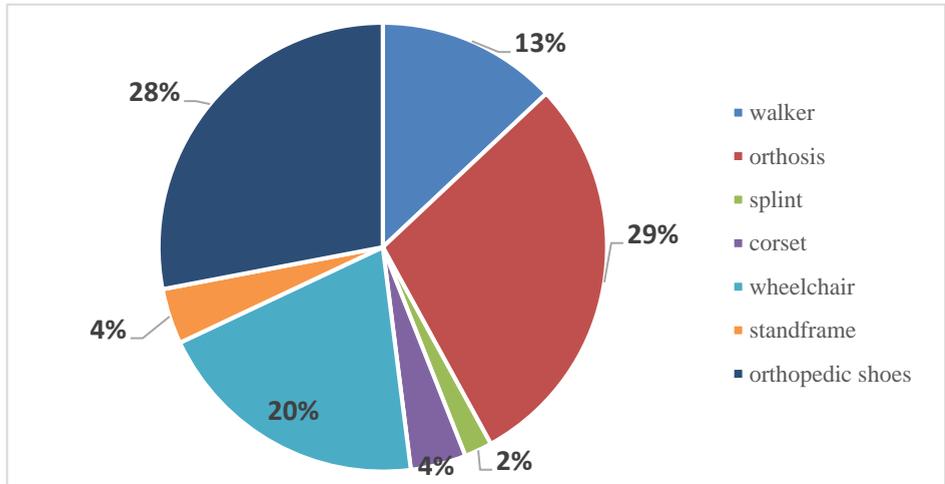
All the answers received from the questionnaire were downloaded into the appropriate software database (Microsoft Excel), where the stored data was analyzed using the FX function in the program, the method of obtaining the numerical and the percentage has been chosen.

**RESULTS**

Results of the current research have shown that all children – participants of the study have or use assistive orthopedic devices. The detailed analyses of the types of aid are described below in Picture 1.

**Picture 1.**

*Types of assistive devices used by children.*



The second question was related to the difficulties that parents/caregivers might have while purchasing assistive orthopedic devices or accessories, as well as to the process of purchasing orthopedic accessories, in particular, it was necessary to find out what problems parents/caregivers face in this process, even if the devices are provided by the state. The answers of 50 interviewed parents/caregivers were distributed as shown in Picture 2. To the question – “do you know where to apply for assistance to get” 25 (50%) of the parents/caregivers answered that yes they know exactly where to apply for the assistive device provided by the state for their child; 25 (50%) of participants are aware that the child receives the appropriate support item by the governmental decision of the country, but, at the same time they are not informed where to apply, what documents are needed to be provided, most importantly, they are not informed that the item is provided free of charge, which is often an obstacle for the parent to avoid from being involved in the process of item purchasing. As total, 25 (50%) of the participants mentioned that they were not familiar with the process of obtaining items related to their children's rights and legislation, in particular, the parents interpreted this omission as the result of incorrect and even "unfair" organized awareness work of the relevant bodies.

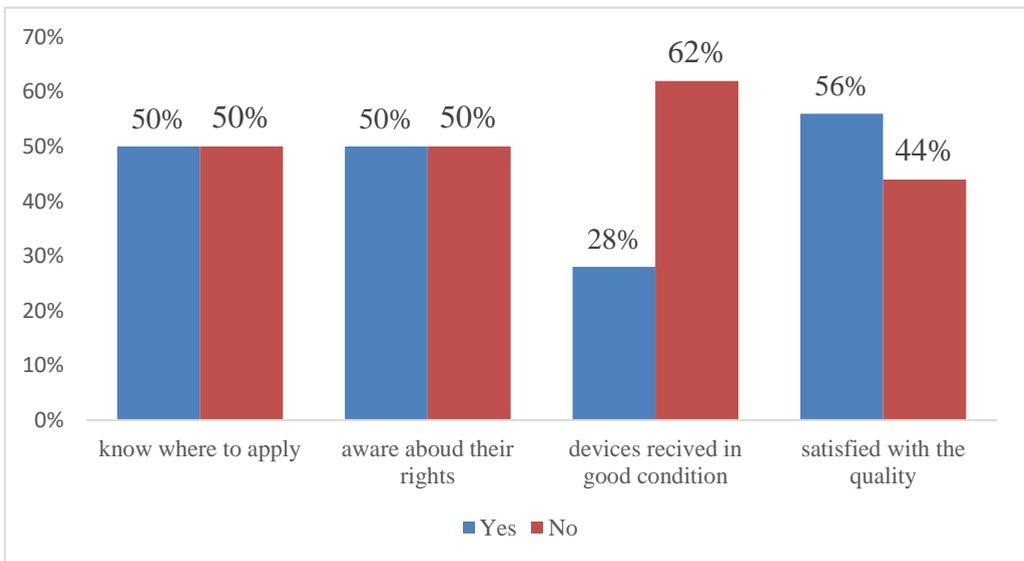
To the other question regarding whether they receive the assistive devices in proper condition, 19 (38%) of participants have mentioned that

they receive orthopedic accessories in good condition, 31 (62%) the parent was not satisfied with the quality of device, justifying that it was damaged or did not fit the child’s needs.

While talking about the quality of orthopedic accessories, 28 (56%) participants were satisfied with it, while 22 (44%) were not satisfied, giving the following explanations: the too big size of the wheelchair, wrong size and not comfortable or thesis, etc. In this regards only 2 parents (4%) have mentioned that they do not have any problems with the above-mentioned issues.

Thus, the data obtained show that exactly half of the surveyed parents/caregivers are not aware of their rights from the global perspective.

**Picture 2.**  
*Parents' awareness and satisfaction.*

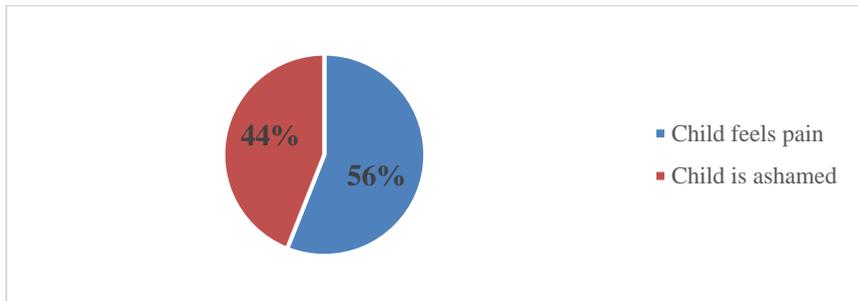


While talking about the difficulties and problems that children experience while using orthopedic assistive devices in school or outside, special attention was given to the answers of children. 28 children (56%) mentioned that they do not want to wear any assistive devices because they cause them pain, this of course can be the result of incorrect orthopedic accessories (wrong size, improperly prepared condition). It should be noted that there are cases when the child continues to wear or use the orthopedic

device for more than the prescribed time, sometimes the device does not correspond to the child’s age and structure, which in turn can cause pain and anxiety. In addition, 22 children (44%), participants of the study, pointed that they did not want to use the assistive devices. They were ashamed, especially outside, at school, because they thought that their friends and teachers would make fun of them. Regarding the situation whether the parents need the help of a specialist, 5 (10%) of parents/caregivers mentioned that they need the help of a specialist, in particular, to know how long the child should wear it, how often, how to help the child in daily routine, etc.

**Picture 3.**

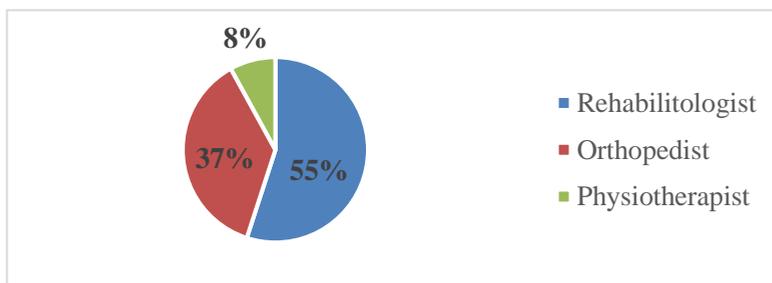
*Difficulties experienced by children while using assistive devices.*



Reflecting on the inquiry “Which specialist has prescribed the assistive orthopedic device to your child?” it became clear that doctors or rehabilitologists have prescribed it (11 parents, (55%)), 7 parents (37%) have mentioned the orthopedist and only 2 (8%) mentioned physical therapist.

**Picture 4.**

*Specialist prescribing orthopedic assistive devices.*



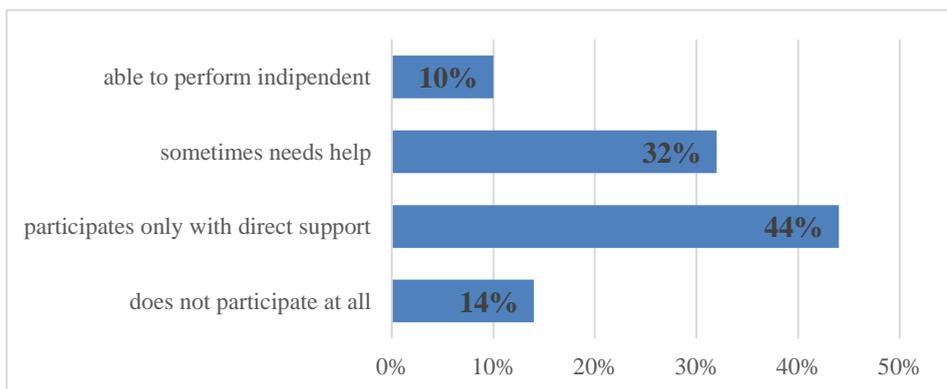
While talking about the introduction of the usage methods and principles after receiving an orthopedic item, in particular, how to wear or use it, how many hours a day can be worn, how to avoid injuries, swelling, how to clean, etc., 25 (50%) of parents/caregivers mentioned that the specialist showed how to wear/take off or use the item, they have also explained the aim and the schedule of wearing orthopedic items. These results show that a significant proportion of parents surveyed were unaware of the orthopedic assistive device's usage rules, which can lead to several problems, such as pain, injury, swelling, misuse.

At the same time, the other 25 participants (50%) has mentioned that they didn't receive any guidance at all. Still, the participants from both groups have mentioned that they turn to for counseling to a physiotherapist while attending a rehabilitation center.

To the question related to child's independence and participation in daily activities, 22 (44%) of parents/caregivers pointed that child can participate only with parent's assistance, 16 (32%) have answered that sometimes child needs assistance, and only 5 (10%) of participants mentioned that the child can participate in self-care activities independently, while 7 parents/caregivers (14%) answered that they are not able to participate in the self-care activity at all.

**Picture 5.**

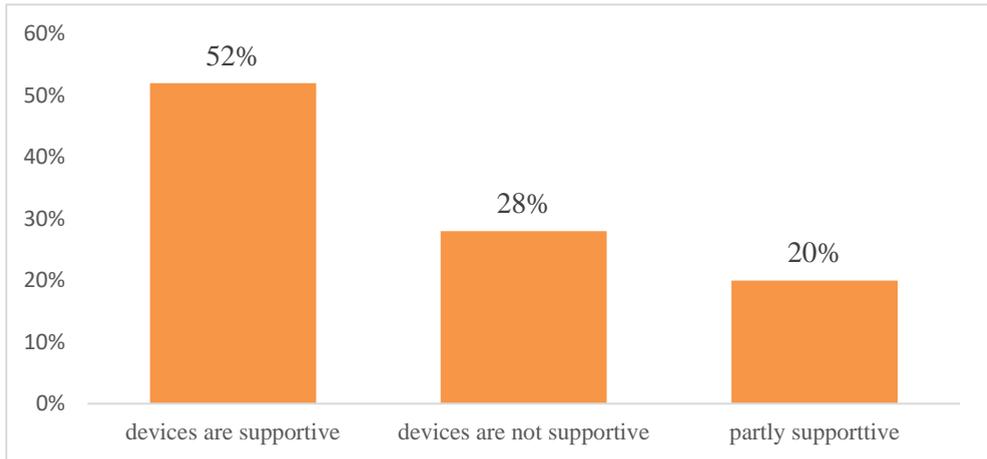
***Children's participation in activities of daily living.***



Results of the inquiry regarding the meaning and usefulness of assistive devices are described below in Picture 6. Picture 6a shows the answers of parents/caregivers, while Picture 6b reflects children's point of view.

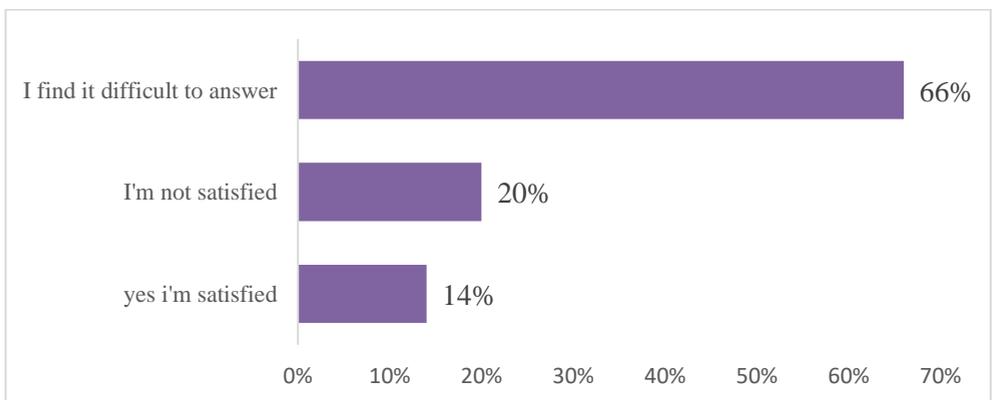
**Picture 6a.**

*Parents' satisfaction with the usage of assistive devices.*



**Picture 6b.**

*Children's satisfaction with assistive devices.*



Quantitative analysis of the collected data allowed us to summarize and come to the following conclusion:

1. The most widely used orthopedic assistive devices among 50 children with CP, participants of the research are orthopedic shoes, orthoses, and wheelchairs.
2. Exactly half of the parents/caregivers who took part in the survey are not aware of their children's rights, in particular, where to get the assistive devices, on what grounds it is provided by the state, etc.
3. Most of the children surveyed refuse to use orthopedic assistive devices because they cause pain while using them, but of course, the source of the pain must be clarified, which can also be the result of incorrect measurement or preparation of the device.
4. Half of the participants (parents/caregivers) of the survey were not informed about the assistive orthopedic device's usage rules, which obviously can lead to several problems, such as pain, long-term injury, swelling, misuse, premature use, etc.
5. The rate of self-involvement in child self-care activities is relatively low, with the majority engaging in self-care activities only with full or partial support or assistance.
6. According to the parents/caregivers, the orthopedic assistive devices used by their children do not always allow them to be more independent in their daily life. Half of the participants in this regard think that their existence is either completely ineffective or partially supports their children's participation.
7. Further study of the answers given by the children will allow identifying all the obstacles that the child has while using an assistive orthopedic device so that their further use will help the child to be more independent while performing activities of daily living.
8. The vast majority of parents/caregivers surveyed need professional guidance, especially on what to do if the item hurts the child, how many hours a day to use it, especially at what hours, when to do or not to use the item. Often they feel the need to visit a specialist, study on the spot, and get sufficient guidance and assistance.

## **DISCUSSION**

The process of providing the necessary assistive devices to people with disabilities has been going on since the Soviet years. The distribution of

needed devices was carried out as social assistance, among other financial, material and in-kind assistance, people with disabilities were provided with wheelchairs, hearing aids, and other orthopedic aids. Later, along with the study of international experience, the adoption of several international documents, and the development of NGO activities in the field, the process of providing items was based on the individual need of a person with a disability (Wielandt & Strong, 2000).

According to the results of the study, 52% of parents/caregivers surveyed believe that orthopedic assistive devices that their children use or wear allow them to be more independent in their daily lives, while 48% believe that their impact is either completely ineffective or partially supports their children's participation in daily living activities. This may be due to the following reasons:

- 1. Orthopedic assistive devices do not meet the individual needs of children with CP.**

This may be because the person did not choose himself the most convenient, most effective supply or device, but several organizations provide it to the person without pre-measurement, for example, large wheelchairs, orthopedic shoes, crutches, walkers. Referring to the current procedure for the provision of orthopedic assistive devices, the existing types, it is important to note that RA Government Decision N 1035 - N of September 10, regulates the relations related to the provision of rehabilitation assistance, which also includes the procedure of providing rehabilitation services, technical means, and other assistive devices. The complete list of supplies provided is listed in the same document (as a total of 19 groups of equipment, tools, and accessories) (RA Government Decision N 1035 - N of September 10, 2015). It should be noted that in the past, hearing aids and wheelchairs were provided based on certificates, the person could choose a hearing aid suitable for him and a wheelchair of suitable size within the amount set by the state, while the companies providing prosthetic orthopedic assistive devices provide only the existing items. Those items were provided to the citizens without prior adjustment, and there were many cases when the item simply did not meet the needs of the person, and thus didn't serve its main purpose (large wheelchairs, uncomfortable orthopedic shoes, etc). And the new law already states from January 1, 2019, in addition to wheelchairs, hearing aids, prostheses, orthoses,

walkers, crutches, canes, eye prostheses will be provided based on state certificates (RA Government Decision N 1516 - N of December 20, 2018). Based on this new legislation the number of organizations providing assistive devices to persons with disabilities through the issuance of certificates will increase in the country, which will also help increase the selection and improve the quality of items and provided services. If in the past the devices could be purchased by a limited number of companies that won the competition, today the person is free in his choice and many other organizations will spare no effort to be constantly competitive and to provide quality items and services. Thus, it is possible to prove that the state has already solved this issue.

**2. Due to the small variety of assistive devices provided by the state, they do not provide compensation or eliminate barriers that hinder a person's participation in the community, self-care, or professional activities.**

Quantitative analysis of the data obtained as a result of the current research showed that orthopedic shoes, orthoses, and wheelchairs are the most widely used orthopedic items among the 50 children with CP who participated in the study. It is important to state that the orthopedic assistive devices by their very nature, provide compensation or remove barriers that hinder a person's participation in the community, self-care, or professional activities. If we compare the types of devices provided to children with disabilities in Armenia, in general, with the types of devices included in the Assistive Technology Act (known as the Technical Act) approved by the United States Congress in 2004, it could be stated that people with disabilities in the United States have possibilities to receive very wide variety list of aids. In particular, the assistive devices provided to children with disabilities provide maximum compensation or eliminates the obstacles to the participation of the person in the community, self-care, and professional activities (ATA, 2004). The same situation can be observed in Russia as well, where persons with disabilities receive a large and broader scope of services and devices (RF Government Decision N 86- N of February 13, 2018).

Thus, it can be concluded that the presence of orthopedic assistive devices' types of accessories in Armenia does not ensure the maximum independent participation of people with disabilities in the community, self-care, and professional activities.

**3. There is a lack of awareness regarding the purchase of orthopedic assistive devices.**

Exactly half of the parents/caregivers who took part in the survey are not aware of their children's rights, in particular, where to get the orthopedic assistive devices, on what grounds it is provided by the state, etc. This problem is most pronounced in the most rural communities in the regions, where there is a serious lack of awareness about social services provided by the state. Relevant employees of village administrations, municipalities, marzpetarans (Regional govern structures), NGOs, and state agencies responsible for disability determination should have their role in this matter. The low level of awareness leads to the fact that these children are generally deprived of the opportunity to receive necessary orthopedic assistive devices and live independently.

**4. When providing orthopedic assistive devices, the person is not provided with relevant information regarding its use and care issues.**

The RA Government Decision N 1035-N of September 10 (2015) clearly states that the assistive devices are provided by the organization to a person with a disability after individual adjustment and training on how to use them. While 36% of the surveyed parents were not at all aware of the orthopedic assistive device's use's rules and regulations, 38% were only aware of how to use it, which of course can lead to several problems such as pain, injury in case of prolonged use (for example, swelling), misuse, premature loss of usefulness, etc. In other words, not only is the child unable to participate in activities of daily life, which directly hinders the goals set by the Occupational therapist, but this also directly affects the emotional state of the child. Many authors argue that client's involvement is one of the most important components of the process; the use of orthopedic assistive devices should be in line with the

client's lifestyle, especially if they are intended for long-term use (Korshikova-Morozova, Trukhacheva & Zablotskis, 2018; Varlamov, 2016; Andreyeva, 2014; Turner, 2014). Orthopedic assistive devices that are fully developed with the direct involvement of clients can change a person's life, reducing pain, ensuring safety, joint stability, and as result participation in meaningful activities.

**5. There is a lack of monitoring and control.**

During the survey, 80% of parents/caregivers stated that they needed professional help, in particular, with matters related to using, caring for, preventing pain, as well as assessing the child's condition and recording changes. Here the need for monitoring and control seems to be vital. Monitoring and assessment of orthopedic conditions are very important, as it is directly related to the child's ability to walk and move, which in turn is directly related to the child's development and quality of life (Wielandt & Strong, 2000). At the same time, it should be noted that the procedure for monitoring and further control is not reflected in the Governmental decision and is not regulated in any other document.

The study found that the rate of self-involvement in children's self-care activities is relatively low, with the majority engaging in self-care activities only with the direct, sometimes partial, assistance of a parent or caregiver. This may be because there is no control over the usage period of the device, there are no intermediate assessments performed to determine if the device serves properly. Here it is possible also to state that the prescription of devices is not a long-term intervention mean, but just a presence or existence of the device, never watched after by the specialist who has prescribed it (Oskoui Coutinho, Dykeman, Jetté & Pringsheim, 2013). And each specialist carrying out the intervention is responsible for monitoring, situational assessment, teaching optimal methods of application, as well as defining the results. Several international studies have concluded that some policymakers and employers seem to be inclined to think that orthoses/splints are purely technical, do not require professional skills and competence. On the other hand, Occupational therapists, during their work, have the right and responsibility to assess the need for

orthopedic assistive devices for the client, and, if necessary, to measure and prepare them (Saratikyan & Harutyunyan, 2017; Nizova & Pirogova, 2013).

#### **6. The importance of personal involvement in the selection of orthopedic supplies as well as in the process of its preparation or prescription.**

The studies argue that a client's participation and engagement is one of the most important components in the process of assistive device selection. The use of orthopedic accessories should be in line with the client's lifestyle, especially if they are intended for long-term use (Tutarishev, 2012; Hansen & Atchison, 2000). Orthopedic items that are fully developed with the direct involvement of clients can change a person's life, reducing pain, ensuring safety, joint stability, and participation in meaningful activities (Oskoui Coutinho, Dykeman, Jetté & Pringsheim, 2013). Many authors point out that orthopedic assistive devices are often used as a means of intervention. The main aim of their prescription by an Occupational therapist is to improve the functional abilities of the clients and ensure their participation in activities of daily living (Babloyan, 2010; Shipitsina & Mamaychuk, 2004). From this point, of course, the opinion of a specialist should be taken into account, and the specialized needs to be authorized to assess the child's condition based on his/her professional skills and knowledge.

Taking into account the existing situation in regards to providing the necessary assistive devices to people with disabilities in Armenia, and in particular to children with CP it is highly recommended:

- to expand the scope of the research and to study the situation of the related process of orthopedic assistive devices provision in all regions in Armenia, especially in rural communities, as well as in the border communities;
- to activate and expand the maximum participation of beneficiaries in the selection process and provision of orthopedic assistive devices;
- to raise the awareness of people with disabilities, mostly in rural areas, in border areas, regarding the procedures for obtaining, repairing, exchanging, orthopedic assistive devices provided free of charge by the

state;

- to expand orthopedic support services to other regions of Armenia besides the capital Yerevan, delegating such services to private organizations operating in the regions, as there is a clear difference in both the awareness of the beneficiaries and the distance issues;
- to organize a short "training meeting-discussion" when providing orthopedic assistive devices and provide relevant information regarding the use of the accessories and its care on regular basis;
- to develop a special assessment questionnaire (which will include functional and pain assessment components), in some cases self-assessed questionnaires for assistive devices users, to monitor daily performance while using the device;
- to provide state-financed Occupational therapists for rehabilitation centers, medical-social expertise agencies, resource centers, or NGOs in the provinces, who will not only be competent to assess the need for orthopedic assistants based on their professional skills but also to participate in their prescription, measurement, and training, as well as final monitoring.

## **CONCLUSION**

Thus, this work was aimed at identifying all the necessary preconditions that are necessary for the Occupational therapist to plan and carry out an effective intervention in the use of orthopedic assistive devices while working with children with CP. The small number of participants might be considered as a limitation within the frame of this study, as the data received from a bigger number of participants could have been more comprehensive, more reliable, and more inclusive of information related to the research.

The research showed that today in Armenia, due to the problems of obtaining and using orthopedic assistive devices, as well as lack of professional supervision, the monitoring is limited or does not ensure the maximum independent participation of children with CP in community life, self-care, and professional activities. In this regards Occupational therapy intervention and supervision is highly recommended.

And the solutions to these existing problems and obstacles are the essential preconditions for effective Occupational therapy intervention planning, implementation, to maximize the functional capabilities of the person, to ensure his/her safety, and to participate in activities of daily life.

## REFERENCE LIST

1. Andreyev, O.S. (2014). Metodicheskie rekomendacii po ustanovleniyu medicinskih pokazaniy I protivopokazaniy pri naznachenii specialistami medico-socialnoy ekspertizi tekhnicheskikh sredstv reabilitacii invalida I metodika ih racionalnogo podbora, Ministerstvo truda i socialnoy zashiti Rossiyskoy Federacii, 15-17.
2. Assistive Technology Act, (ATA) 2004.
3. Babloyan, A. (2010). Yerehaneri zargacman khangarumneri ev verakanganman himunqneri. Usumnametodakan dzernark, Yerevan.
4. Hansen, A.R., & Atchison, B, (2000). Conditions in occupational therapy, Effect on occupational performance, Lippincott Williams & Wilkins, p 8-21.
5. Kielhofner, G. (2006). Research in occupational therapy: methods of inquiry for enhancing practice, F.A. Davis.
6. Korshikova-Morozova, A.E., Trukhachova, A.V., & Zablockis, E. Yu. (2018). Reabilitaciya detey s DCP: obzor sovremennikh podkhodov i pomosh reabilitacionnim centram/ – M.: Lept, Moskva, 50-55 s.
7. Medical-Social Expertise Agency (ESIA) of the RA (2021), <https://hhbsp.am/>
8. Nizova, L.M., & Pirogova, M. V. (2013). Problema detskoj invalidnosti I reabilitacii detey-invalidov na primere respubliki Mariy, El. Gumanitarnie nauchnie issledovaniya, (10), s.19.
9. Oskoui, M., Coutinho, F., Dykeman, J., Jetté N., & Pringsheim T. (2013). An update on the prevalence of cerebral palsy: a systematic review and meta-analysis// Developmental medicine and child neurology.
10. RA Government Decision N 1035, September 10, 2015 on setting the procedure and conditions of provision of rehabilitation aid:

11. RA Government Decision N 1516, December 20, 2018 regarding changes in RA Government Decision N 1151, September 7, 2017 and RA Government Decision N 1035, December 20, 2015.
12. RF Government Decision N 86- N of February 13, 2018 "On the approval of the classification of technical means of rehabilitation (products) within the framework of the federal list of rehabilitation measures, technical means of rehabilitation and services provided to a disabled person, approved by the order of the Government of the Russian Federation of December 30, 2005 N 2347-R".
13. Saratikyan, L. & Harutyunyan, M. (2017). Hogefizikkakan zargacman khangarunner unecogh erekhaneri hogebanakan ajakcutyun Yerevan, heghinakayin hratarakchutyun, Asoghik, 61 ej.
14. Shipicina, L.M., & Mamaychuk, I.I. (2004). Psikhologiya detej s narusheniyami funkciy oporno-dvigatel'nogo apparata: Ucheb, posobie dlya stud. Vissh. Ucheb. Zavedeniy, M.; Gumanit. Izd. Centr VLADOS. - 368.
15. Turner C. E (2014). Common Orthopedic Conditions, Casper, Wyoming.
16. Tutarishev, A. K. (2012). Opit rehabilitacii detey-invalidov (na primere raboti reabilitacionnikh centrov respubliki Adigeya). Vestnik Maykopskogo gosudarstvennogo tekhnologicheskogo universiteta.
17. Varlamov, R.K. (2016). Detskiy cerebralniy paralich, innovacionnie processi v nauchnoy srede, s. 133-135.
18. Wielandt, T., & Strong, J. (2000). Compliance with Prescribed Adaptive Equipment: A Literature Review. British Journal of Occupational Therapy, 63(2), 65–75.