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Implementation of Early Intervention with Family Resourced to Improve Development of Expressive Language in Children with Cerebral Palsy

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ABSTRACTS

The purpose of this study was to determine the implementation of early intervention with family resources to improve expressive language development in children with cerebral palsy. Early intervention with family resources is carried out on children with cerebral palsy who have problems in the development of their expressive language, so the communication method used is augmentation using alternative and augmentative communication tools called ASIK (I'm Ready to Communicate). This research method uses experiments, starting from modelling, transfer by parents, so that parents can independently intervene with their children. The results showed that children can express their desires by showing pictures that are in accordance with the wishes of their parents, so that parents can understand what their children want. Based on these results, the implementation of early intervention with family resources using ASIK communication tools can improve the development of expressive language in children with cerebral palsy.

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1. INTRODUCTION

Early intervention is one of the ways parents due to their children who have problems or special needs (Romski, *et al.*, 2015). Early intervention is usually carried out in young children, to find out the child's developmental conditions that are not appropriate for their age or various other special needs. Parental sensitivity is very important in identifying problems from an early age in children to build optimal quality development.

According to the ecological theory developed by Bronfenbrenner, the main focus is on the social context in which children live and the people who will influence children's development. Ecological theory is Bronfenbrenner's socio-cultural view of development, which consists of five environmental systems, ranging from direct interaction input with well-developed social agents to broad-based cultural input (Santrock, 2009). The potential for cognitive development and learning was based on the transition between the Zone of proximal development (ZPD).

In his book Wardoyo (2015) "ZPD describes the difference in that someone has the opportunity to learn supported by people who are more experienced". Zone of proximal development is a process of development from actual abilities to potential abilities that require mentors with certain media and programs, then potential abilities will become actual abilities if they have implemented certain programs and media. Actual abilities are abilities that individuals do independently without the need for assistance. Potential abilities are abilities that cannot be done by an individual but are actually capable of being done and need help. The assistance referred to in the ZPD is scaffolding.

According to Wardoyo (2015) "Scaffolding is a support in the learning process carried out by individuals for learning organisms. This means that guidance or assistance provided by interventionists to children in the learning process. In the development of the proximal zone, of course, there must be someone who helps children to be able to move from actual abilities to potential abilities. Optimizing the family at home is very important because the family is the closest environment to the child.

Children with special needs are children who have different abilities, obstacles and needs. The development that every child goes through is different, but it must be a concern, for children who experience obstacles, they must be handled quickly. Therefore, the development that is left behind can be handled (Maryanti *et al.*, 2021a). Early intervention is a stimulus provision for early childhood (0-6 years) that is tailored to their abilities, obstacles and needs with the aim of a change for the better so that the earlier intervention is carried out, the possibility of reducing the obstacles that the child has will be greater. Early intervention is carried out by parents to children who are assisted by experts as interventionists. Experts must have the ability to provide understanding to parents about the condition of children who experience obstacles, so that the collaboration between experts, parents and children has a positive impact on their development. Before the implementation of the intervention, what must be done is an assessment of the parents to determine the abilities, weaknesses and needs in the preparation of an early intervention program with family resources. Family assessment is the process of collecting data regarding the condition of children and families, which consists of birth, health, family protection, quality of family relationships, parenting, acceptance, expectations and efforts of parents towards child development. Child assessment consists of developmental assessments (Santrock, 2009) in term of cognitive, language, motoric aspects and social emotions (Hurlock, 2014).

Therefore, the aim of this study was to determine the implementation of early intervention with family resources to improve the development of expressive language in children with cerebral palsy. The subjects of this study were children with physical impairment. We used an experimental method. In the intervention process we use a tool called ASIK. The results showed that with ASIK media, the communication skills of children with physical impairment had increased.

2. METHODS

The research method used was a qualitative method. In this study, the researchers obtained data on the effect of early intervention with family resources in improving the development of expressive language in children with cerebral palsy. This research was conducted in Garut Regency, Indonesia the research subject with the initials NAA, who was 4 years old, female and the child was recorded as following therapy under the SLBN B Garut Resource Center. The data obtained in this study through in-depth interview techniques, documentation study, and observation. The data obtained will be described and analyzed. The method of implementing early intervention consists of observation, interviews, assessment of children, assessment of parents, and development and implementation of early intervention program with family resources (parents), as well as evaluation of conditions before and after.

3. RESULTS AND DISCUSSION

3.1. Students demography

Implementation of early intervention with family resources is carried out for families whose children have developmental disorders under the age of 6 years, this is because the intervention that is carried out as early as possible will have a quick effect because it is still in the development stage, especially that period is called the golden age (Wang & Astruc, 2015). The field of study in this research problem was children with motor impairments, and one of them was a child with cerebral palsy who have obstacles in the development of her language. The child's family condition, the parents have a job, so that the child was with the caregiver and his aunt on a daily basis the subject was a 4 year old female child with cerebral palsy. Cerebral palsy is a child who has damage to a brain-centered motion control center that occurs before, during or after birth (Hutzler & Barak, 2017). With the different abilities, obstacles, and needs from children in general, children with cerebral palsy have the opportunity to optimize their abilities.

3.2. Augmentative-alternative communication

Communication is a process of delivering messages from the communicator to the communicant so that there is reciprocity, namely the communicant can understand the message conveyed by the communicator (Achyar & Mandasari, 2019). The communication process run well if there are no interruptions. Whereas for children with cerebral palsy who have disorders of the speech organs, the child cannot express their wishes verbally, so that it becomes an obstacle in the communication process. The communication method used in this research was augmentation using alternative and augmentative communication tools called ASIK (Aku Siap Berkomunikasi). ASIK communication tools consist of four series, namely the family series, the favorite food series, the goods/places series at home and the goods/places series outside. ASIK was in the form of pictures in ring cards and posters

tailored to the needs of the subject's daily activity. The images are taken of objects and items belonging to the subject.

3.3. Intervention process

There are seven meetings for taking care the process for intervention process. The process must be done sequentially.

The first meeting was understanding parents. The initial activity carried out by the interventionist was to ask parents, then explain the results of the child's assessment of the child's abilities, obstacle and needs. Then the interventionist showed a program that would become a benchmark for implementing early intervention with family resourced while showing examples of AAC (Augmentative Alternative Communication) tools to parents. Then the interventionist explained the design of the tools to be made, namely a combination of her favorite images, namely "Islamic Cartoon Nussa & Rara" in the middle there was a picture of the subject "N". The tool was called ASIK (Aku Siap Berkomunikasi) in which there are pictures that are divided into family members, places to visit, food and drinks and toys. All pictures must be adapted to the original item so that the child can recognize it (Pinto & Zuckerman, 2019). With various additions to vocabulary and favorite subject "N", the parents agree with the development of children's expressive language using the AAC tools.

The second meeting was a modeling program and testing communication tools. The interventionist showed several pictures to express the desire to eat, drink, etc. using picture cards to the child. The child still looks embarrassed when the interventionist shows the card, but over time the child gets used to the situation and conditions with the interventionist team. After that, the interventionist took the card again and asked the child to show a picture of a glass, milk teat, ball, etc. Then, visually, the child was able to distinguish the objects instructed by the interventionist visually. There are additional pictures of family members, namely grandmother, grandfather, cousin and aunt, so that vocabulary about family members is added. The results of the implementation of the modeling program went well, because the AAC tools that the team created was able to attract children's attention and added vocabulary. Concrete and interesting media made it easier for children to understand information (Maryanti *et al.*, 2020a).

The third meeting was a modeling program seen by parents. The initial activity of the interventionist was to invite child to play. The child looks excited when shown the ASIK card in the ring bound and on the cover, there is her face with Nussa & Rara. The evaluation of the third meeting was that the media used meaningfully for child was shown by a sense of belonging and not being torn by the child. Because according to the parents, usually the cards were always torn by the child, but the ASIK card media was not torn by the children. Media must be adapted to the needs of children (Maryanti *et al.*, 2020b).

The fourth meeting was a modeling program seen by parents. At this meeting the child was expected to show her desire by showing the desired image. Interventionists require children to be able to associate images with real forms. ASIK media was not torn, very guarded and should not be handled by other people. When the child sees this media being held by another person, the child will be angry by seizing ASIK media from the person holding it. Students needed concrete and attractive media to understand information (Maryanti *et al.*, 2020c). Evaluation at this meeting the child really appreciates the media, and can show her desire when she wants to take a shower, play with balls and school bags.

The fifth meeting was a modeling program seen by caregiver and aunt. The interventionist showed a picture of a ball then asked the child to show the ball in its original form. So, at this fifth meeting, caregiver and aunt know how to use ASIK media.

The sixth meeting was transferring by parents. This meeting was to carry out an early intervention program in the aspects of expressive language development using ASIK media. Child still look shy when meeting with an interventionist, so that the evaluation of this meeting, that the child was able to express the desire to play, but for toileting activities, namely urinating, she was still embarrassed, because the child bows her head when caught urinating openly.

The seventh meeting was transferring by caregiver and aunt. This meeting was to carry out early intervention programs in the aspects of expressive language development using ASIK media. The evaluation of this meeting, that the child was able to show a desire to draw by showing a drawing book.

3.4. Analysis data

The evaluation of program implementation by parents and caregivers was carried out by means of direct observation and interviews. According to his mother, the media used for the first time was used by children every day. Then, the reason for revising the first media was because the media was too large and could not be carried everywhere, so it had to be lined up one by one, making it less efficient.

Concrete and interesting media was needed by children to understand information (Maryanti *et al.*, 2021a). Thus, at the third meeting the interventionist changed the size of the media to be smaller and in the ring-bound, so that the child was able to find the desired image while exercising fine motor skills.

Apart from parents, her aunt revealed that the media was always used every day so that child was able to learn to communicate to express what she wants. The media was used every day not only when the interventionist goes to the house.

Evaluation of independent transfer by parents and caregiver can run well. Therefore, the improvement of the competence of parents and caregiver can run optimally, although not directly.

At the eighth meeting, the child wants chocolate in a package then the child opens the ASIK communication tool by showing a picture of chocolate to her aunt so that the child's desire to eat chocolate is fulfilled.

The current condition regarding the competence of parents and caregiver, there was a desire to intervene in children regarding aspects of communication development through ASIK media. They also understand that ASIK media does not hinder the development of children's expressive language but can increase children's vocabulary along with examples of verbal pronunciation that were trained every day. Media must be adapted to the needs of children (Maryanti *et al.*, 2021b).

The condition before the intervention, which becomes the child's actual ability, namely the child has good receptive language and non-verbal expressive language by pulling the hand and pointing (Putri, 2021). The parents already know that their child has delays in development (Palma *et al.*, 2021). Meanwhile, the potential ability was that children can express her desires by pointing to images that match her wishes, so the other people can understand.

Increasing parental competence by optimizing child's abilities in the aspect of expressive language development, so that parents can understand the desires of child. So that after the intervention, child was able to use ASIK communication tools when expressing her desires at home. Then, parent, aunt and caregiver understand when the child shows her wish by showing the pictures on the ASIK communication tools.

Everyday interventions were carried out by parent, caregiver and aunt at home. Thus, evaluating the condition before and after the intervention, child can express her desires by using ASIK communication tools, and parents can understand when their children show the pictures on the ASIK communication tool (Qotrunnada & Nurani, 2021).

Children's abilities have increased because the media is in accordance with children's needs. children with special needs have difficulty understanding something abstract. Concrete media helps children understand information (Maryanti *et al.*, 2020b).

4. CONCLUSION

Based on the results of the research above, the condition of the family was that the parents have a job, so that the child was with their caregiver and aunt on a daily basis. The aspect of developing children's expressive language becomes the main focus for optimization and increasing the competence of parents, caregiver and families, regarding expressive language was the goal.

Early intervention program in optimizing aspects of expressive language development using AAC (alternative and augmentative communication) media named ASIK (Aku Siap Berkomunikasi) which consists of four series, namely family series, favorite foods, goods/places at home and goods/places outside.

All pictures are taken from objects belonging to the child, making ASIK media meaningful to her, because there was a sense of belonging to the media, especially with the pictures of "Nussa, Rara and N". Based on field observations that has been made, by modeling the program, the results are going well. Parents were involved in the modeling program so that the objectives of parental transferring could be implemented. Thus, the evaluation of the implementation of the early intervention program with family resources can be seen when the child wants something by showing a picture using the ASIK communication tools to parent, caregiver and family. Thus, it can be concluded that the implementation of early intervention with family resources can improve the development of expressive language in children with cerebral palsy by using ASIK communication tools.

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7. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

8. REFERENCES

- Achyar, N., and Mandasari, M. (2019). Interpersonal communication patterns of health education lecturers in guiding practical clinical training of nursing students in Padang city. *Malaysian Journal of Medical Research (MJMR)*, 3(1), 60-66.
- Hurlock, E B. (2014). *Perkembangan Anak Jilid 1*. Jakarta: Erlangga
- Hutzler, Y., and Barak, S. (2017). Self-efficacy of physical education teachers in including students with cerebral palsy in their classes. *Research in Developmental Disabilities*, 68, 52-65.
- Maryanti, R., Nandiyanto, A. B. D., Hufad, A., & Sunardi, S. (2021a) science education for students with special needs in indonesia: from definition, systematic review, education system, to curriculum. *Indonesian Journal of Community and Special Needs Education*, 1(1), 1-8.
- Maryanti, R., Hufad, A., Nandiyanto, A.B.D., Tukimin, S. (2021b). Teaching the corrosion of iron particles in saline water to students with special needs. *Journal of Engineering Science and Technology*, 16(1), 601–611
- Maryanti, R., Hufad, A., Sunardi, Nandiyanto, A.B.D., Al-Obaidi, A.Sh.M. (2020a). Understanding Covid-19 particle contagion through aerosol droplets for students with special needs. *Journal of Engineering Science and Technology*, 15(3), 1909–1920
- Maryanti, R., Hufad, A., Tukimin, S., Nandiyanto, A.B.D., Manullang, T.I.B. (2020b). The importance of teaching viscosity using experimental demonstration from daily products on learning process especially for students with special needs. *Journal of Engineering Science and Technology*, 15 (Special Issue),19–29
- Maryanti, R.; Hufad, A.; Sunardi,; Nandiyanto, A.B.D.; and Manullang, T.I.B. (2020c). Understanding coronavirus (covid-19) as a small particle to students with special needs, *Horizon*, 2(1), 121-130.
- Pinto, M., and Zuckerman, S. (2019). Coloring book: A new method for testing language comprehension. *Behavior Research Methods*, 51(6), 2609-2628.
- Palma, M.C., Escucha, T.N.V., Distor, Z.B., Tuyao, B.V., Malaco, A., Estrellan, J. (2021) Parental academic support in online and modular learners amidst pandemic: A comparative study *Indonesian Journal of Community and Special Needs Education*, 1(1), 31-36.
- Putri, R. M. The Effect of Understanding Student Mental Health in Indonesia on Psychological First Aid. *Indonesian Journal of Community and Special Needs Education*, 1(1), 9-10.
- Qotrunnada, Q., & Nurani, A. S. Teenagers Knowledge About Traditional West Java Cakes. *Indonesian Journal of Community and Special Needs Education*, 1(1), 15-18.
- Romski, M., Sevcik, R. A., Barton-Hulsey, A., and Whitmore, A. S. (2015). Early intervention and AAC: What a difference 30 years makes. *Augmentative and Alternative Communication*, 31(3), 181-202.

- Santroek, J. W. (2009). Masa Perkembangan Anak Buku 2 Edisi 11. Jakarta: Salemba Humanika.
- Wang, D., and Astruc, D. (2015). The golden age of transfer hydrogenation. *Chemical Reviews*, 115(13), 6621-6686.
- Wardoyo, S M. (2015). Pembelajaran konstruktivisme (teori dan aplikasi pembelajaran dalam pembentukan karakter. Bandung: CV Alfa Beta.