



Early Childhood Stimulation in Toddler Twins : a Case Study

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ABSTRACTS

Background : The critical period for children occurs between the ages of 6-24 months. This age group is a period of crucial growth and potential failure to thrive, especially in twins. Stimulation activities such as singing, storytelling, and playing can optimize children's development. **Objective:** This study aims to describe nursing care by providing early childhood stimulation to twins. **Methods:** This research was conducted using a case study approach, observing changes in children's behavior during early childhood stimulation interventions. **Results:** After providing developmental stimuli such as singing, playing, and storytelling for 3 days, it was found that the child's development had changed. Children who initially did not respond now responded, those who were initially passive were now able to follow commands, and there was improvement in the pronunciation of words. **Conclusion:** This study provides evidence to support the importance of stimulating children's development from an early age. Community nurses are advised to educate mothers in their work area on how to stimulate growth and development to prevent developmental delays or failure to thrive in twins.

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1. INTRODUCTION

The toddler years are a time when they experience a period of rapid and very important growth and development, which will later become the foundation that determines the quality of the nation's next generation. According to Agustin (2021), toddlerhood is an important period in the process of human growth and development because growth and development occur quickly. Development and growth during toddlerhood are factors in the success of a child's growth and development in the future.

Toddlers have growth and development patterns (fine and gross motor coordination) (Hidayat, 2022). The toddler age is divided into three stages, namely the period before birth, infancy, and early childhood. From these three phases, many changes occur, both physical and psychological, which will affect the child's growth and development (Hurlock, 1978).

Growth and development experience rapid increases at an early age, specifically from 0 to 5 years. This period is often referred to as the "Golden Age" phase. The golden age is a very important period to pay close attention to a child's growth and development so that abnormalities can be detected as early as possible. In addition, appropriate treatment of disorders during the golden age can minimize abnormalities in children's growth and development, preventing permanent disorders (Khatib, 2020).

The critical period for children is between the ages of 6 and 24 months, as this age group is when the period of critical growth and growth failure begins to appear. Appropriate treatment of abnormalities during the golden age can minimize abnormalities in the child's growth and development, preventing permanent abnormalities (Darmawati, 2021). The results of the Central Statistics Agency (BPS) population projections in 2018 show that 30.1 percent or 79.55 million of Indonesia's population are children aged 0-17 years. This means that it can be said that one in three Indonesian residents are children. In the future, it is projected that the number of children in Indonesia will not experience significant changes.

The World Health Organization (WHO) in 2018 reported that data on the prevalence of toddlers experiencing growth and development disorders was 28.7% and Indonesia was included as the third country with the highest prevalence in the Southeast Asia region. In Banten Province itself, there is one district/city with the highest percentage of services for children under five, 107.5 percent, namely Tangerang City. The district/city with the lowest percentage of services for children under five is Pandeglang District, namely 43.5 percent.

Even though nationally the quality of public health has improved, monitoring of development includes assessing the development of gross movement, fine movement, speech and language, as well as socialization and independence. Examinations are conducted for hearing and vision, and if there are complaints or suspicions about the child, an examination is carried out for emotional mental disorders, autism, and attention deficit hyperactivity disorder.

Children's growth and development, physically, mentally, socially, and emotionally, are influenced by nutrition, health, and education. This has been proven in many studies, including Bloom's longitudinal research on intelligence, which shows that in the first 4 years of a child's life, cognitive development reaches around 50%. By 8 years, it reaches 80%, and it reaches 100% after the child is 18 years old. Other research on brain intelligence shows that to maximize a child's intelligence, stimulation must be carried out from the first 3 years of life. This is because, at that age, the number of brain cells that an adult has is twice as large (Kementrian Kesehatan, 2012).

One of the government's efforts in dealing with growth and development problems in toddlers is conducting training on stimulation, detection, and early intervention of growth and development for health workers. They also publish a guidebook for implementing stimulation, detection, and intervention of early growth and development at the basic service level (Bretani, 2021).

Stimulation is an activity that provides stimulation to children from an early age in the form of basic abilities directed towards achieving optimal child growth and development. Providing growth and development stimulation can be carried out by parents, caregivers, family members, and community groups in a quality manner. It should be done through a partnership between the family and household environment. Activities to stimulate children's growth and development can be increased further by parents, caregivers, family members, the community (NGO posyandu cadres, etc.), and professional staff (health, education, and social) (Kementrian Kesehatan, 2012).

The latest research, conducted by Seyda Ozcaliskan, a professor of psychology at Georgia State University, Atlanta, United States, found that the development of body movements and speech in twins tends to be slower. The role of parents is considered to be able to encourage the early development and growth of twins. These researchers also showed that twins produce fewer movements than other children. This demonstrates that body

movements and speech in the development of twins go hand in hand. The slowness of movement among twins may occur due to the lower stimulatory role of parents in their development, as parents of singletons use a greater number and variety of movements than parents of twins. Therefore, providing stimulation in the early stages of a child's development needs to be done to promote optimal child development. One form of stimulus in the early stages of a child's development is recognizing parents' names (verbal), singing and doing repetitive movements, imitating sounds by looking at pictures, playing looking for sounds, and playing ball. Providing stimulation in a fun way according to the child's age can help stimulate the development of the child's gross, fine, sensory, and balance motor skills.

In the process of caring for twins, especially identical twins, the role of a mother is very necessary for the growth and development of twins. Rakhman (2022) revealed that a mother's care influences child development. In this case, caring for twins is not as easy as caring for single children. When caring for twins, various activities during caregiving are carried out repeatedly so that the mother is expected to be able to treat her twins as fairly as possible. Apart from that, she is expected to be able to differentiate between the twins without making generalizations, because each twin has different characteristics.

In practice, twins tend to be treated by their mothers the same as their twin partners. This allows for similarities in character and behavior between them. The mother's treatment of twins is always the same in everything, from the same name, the same clothes, the same games, the same food, to the same education.

2. METHODS

This study utilized a case report approach to examine the effects of Early Childhood Stimulation on 2 family who have twin toddlers. The intervention followed the nursing process, which involved conducting assessments, identifying nursing diagnoses, implementing nursing actions, and evaluating the outcomes of these actions.

Patient Information

Family 1

At the time of the assessment, the results showed that Family 1 was at risk of developing developmental disorders in their twins, who were currently 13 months old. Both twins were not yet able to say a single specific word, and they also lacked response when spoken to. Mrs. K, as a parent, mentioned that she did not know about the stages of development and the

stimuli that could be given to optimize the development of her twins.

b. Family 2

Mrs. K is An's parent and caregiver. Family 2 parenting style has a significant influence on the development of her children. The study revealed that Family 2 as a parent, lacked knowledge about the stages of child development and how to stimulate it.

Clinical Findings

In both families, it was reported that the twins were not yet chattering and had not uttered clear words. Additionally, the growth of the twins was not the same. The families also expressed that they did not know how to stimulate their children's development. Based on the study, it was found that the twins only chattered, but their meaning could not be understood. Furthermore, the families only provided toys to the twins without engaging in communication. The results from KPSP and Denver II assessments are as follows: Family 1: For personal social skills, the caution value is 2, indicating that there is a suspected issue with children's personal social development. There are no caution values for fine motor skills, indicating normal development. In the language category, there are 2 caution values, suggesting suspect results. There are no caution values for gross motor skills, indicating normal gross motor development. An. B has 2 suspect values, but further study and retesting will be conducted after 1-2 weeks to eliminate temporary factors that may affect the results, such as fear, tiredness, or sleepiness during the initial test.

Family 2: In the language category, there are 2 caution values, indicating suspect results. However, further study and retesting will be conducted after 1-2 weeks to eliminate temporary factors that may affect the results, such as fear, tiredness, or sleepiness during the test. There are no caution values for gross motor skills. The children are able to perform according to their age stage and their development is still normal.

Diagnostic Assessment

The diagnosis for both families, based on the assessment of families 1 and 2, was a risk of developmental disorders and knowledge deficits. The risk of developmental disorders stems from the first child's experience of developmental disorders in family 1 and the lack of knowledge about child growth, development, and how to stimulate it.

In the nursing care provided to family 1, the diagnosis of a risk of developmental disorders was made. This diagnosis was based on the results of the assessment, as well as the pre-screening questionnaire and the Denver developmental screening test. The results indicated a suspicion in the language category.

Therapeutic Intervention

The intervention management providing developmental stimulus was carried out for three consecutive days, with a duration of 30 minutes per meeting. In the diagnosis of the risk of developmental disorders in children 1 and children 2, developmental care will be given, starting from identifying the extent to which the family knows about the child's developmental tasks. This includes observing the behavioral and physiological signals shown by the baby. The family will also provide developmental stimuli for An. B and An. D in the form of playing, singing, and telling stories. Specifically, the following activities will be implemented:

1. Teach children one specific and clear word.
2. Teach children to sing together with age-appropriate songs. The singing method is a popular method that uses artistic elements and has been found to have a significant influence on children's language development. Singing activities indirectly involve hearing, singing, speaking, and pronouncing words. Thus, singing activities can indirectly enhance the language skills of young children.
3. Play ball. Balls are a learning medium that helps various aspects of children's development, especially gross motor development. Ball play encourages active interaction with the physical environment, allowing children to enrich their movements and develop gross motor skills. Research conducted by Lutfi Nur, et al in 2022, showed a significant improvement in children's gross motor skills through the use of ball games.
4. Play peekaboo.
5. Play hide and seek, look for sounds, and identify familiar people. Traditional games such as hide and seek stimulate gross motor skills and contribute to overall physical health and flexibility. In a study by Dian Puspitasari, et al in 2020, the game of hide and seek was found to enhance gross motor skills, including agility, balance, coordination, and accuracy, in children.
6. Look at pictures, tell stories, and imitate sounds. The storytelling method is one of providing

learning experiences through stories. With the storytelling method, children gain experience and knowledge that is conveyed orally. Additionally, the storytelling method can help children develop and practice language skills. It is delivered through interesting stories, with or without the help of media. Learning the storytelling method is an effort to develop language skills in early childhood and improve children's speaking skills. Furthermore, telling stories can also help calm crying children. Reading in a relaxed and comfortable atmosphere, using different tone intonations for dramatization, can make children interested in listening to the story. Over time, children will feel comfortable and their stress levels will be reduced, resulting in the development of their language skills by hearing different sentence structures. Fairy tales can help children learn new vocabulary. Based on research results obtained by Hajrah in the journal "Development of Storytelling Methods for Early Childhood," it can be concluded that the storytelling method for early childhood is valid for use and fulfills practical aspects, making it suitable for implementation.

In the diagnosis of a knowledge deficit, baby/child stimulus education will be undertaken. This includes identifying parents' readiness to receive information, identifying factors that hinder educational success, and providing health education regarding stimuli that can help optimize the development of the baby/child. Families will also be taught how to stimulate the development of gross motor skills, fine motor skills, and language appropriate to the age and developmental stage of the baby/child.

3. RESULTS AND DISCUSSION

From the results of the intervention carried out for 3 consecutive days on both family in the form of development stimulus and health education, changes and good results can be seen

a. Developmental stimulus

On the first day when the developmental stimulus was given to the twins from family 1, both of them looked confused and didn't give any response, and on the second day they has started to respond to developmental stimuli, even if he just smiles without being able to imitate and do what the author teaches. However, on the third day, they responded very well and was able to imitate all the activities given, and they has been babbling words even though they haven't been specific and only heard the last word.

This is in accordance with the results of Raballo (2020) research which found a relationship between providing stimulation and children's language development. The earlier the stimulation is given, the better the child's development will be. The more stimulation provided, the wider the child's knowledge will be so that the child's development will be more optimal. It is also stated that the brain tissue of children who receive a lot of stimulation will develop up to 80% at the age of less than 4 years. On the other hand, if a child is never stimulated, the brain tissue will shrink so that brain function will decrease. This is what causes children's development to be hampered.

Tulasih (2022) explains that stimulating child development aims to help children achieve optimal levels of development according to the child's age. Hurlock (2016) emphasized that stimulation really determines the development of the quality of human brain cells even in the womb. Rossen (2020) added that stimulation plays an important role in children's development. According to Siswanti (2022) Through the five senses, children obtain information about physical conditions and the environment around them. The sensory information received will enter the brain not only through the eyes, ears and nose but also through the entire body. Children can achieve optimal development in vision, hearing, language development, social, cognitive, gross and fine movements, balance, coordination and independence.

According to Utaminingtyas (2019), through tactile, audio and visual and verbal stimulation from an early age, children can explore the natural surroundings and the child's sensory, motoric and hearing development will develop quickly. Weisbecker (2024) explains that factors that influence children's development include stimulation from parents, because this is where parents have their first interactions with children to develop children's abilities according to their developmental age. Stimulation must be provided regularly and continuously with love, play methods, etc., so that the child's development will run optimally. Based on these results, it is best that the stimulation given by parents to their children be carried out routinely and continuously with lots of love so that the child's development can run optimally.

Parenting in the family is very important for children's future development (Desmita, 2015). According to Yuniarti (2015), a reciprocal relationship between children and parents will help children develop the responses given by their parents, where the role of parents is the main focus in providing responses. This collaboration between children and parents is not to

restrain the child from existing responses, but with the response given by the parents, the child is able to think more broadly and directedly, so that there is a pleasant interaction for the child, it is the parent's obligation to respond to their child without coercion. , so that parents and children can provide comfort to each other. The results of Pratiwi's research (2016) found that there was a relationship between parenting styles and child development. Authoritarian parenting styles have a negative relationship with children's language development. The negative relationship here means that the more parents apply an authoritarian parenting style, the more the child's language development will decrease or will not be good.

Fernando (2015) in his research conducted on 86 respondents showed that mothers stimulate their children optimally and their children's speech development is normal so that there is a relationship between stimulation and children's development. Stimulation given at an early age (golden age period) and in accordance with the required growth and development aspects will have an optimal impact on the child's development.

b. Health education

Health education was provided to both family, and this health education is given for 3 days in 30 minutes. On the first day, identification and questions and answers were carried out regarding the child's development, and family 2 looked enthusiastic about listening but still looked confused about the topic given. On the second day, health education was carried out using leaflet media, and Mrs. K has started to ask a lot of questions and understand a little about child development and stimulus. On the third day family 2 is able to practice developmental stimuli and has asked a few questions. At the time of the evaluation, family 2 is able to answer, mention and practice the developmental stimuli taught.

Pitaya (2017) in his research found that respondents who received good stimulation had an appropriate level of development so that there was a significant relationship between developmental stimulation and child development. The mother's influence on a child's life begins during pregnancy, during infancy, and continues until the child enters pre-school age. A mother must know the stages of child development and stimulation so that the child's development is optimal. When a mother finds out that there is a delay in the child's development, if the cause is that the mother is less active in providing stimulation, then the main factor that must be changed is the parent's behavior in providing stimulation.

Therefore, parents need to increase their knowledge about how to provide stimulation to their children so that their children's language development can develop optimally according to their age. The earlier the stimulation is given, the better the child's development will be. The more stimulation provided, the wider the child's knowledge will be so that the child's development will be more optimal, where this aims to help the child achieve an optimal level of development according to the child's age.

4. CONCLUSION

The success of stimulation is influenced by several things, including the length of time the stimulation is given, and also how the stimulation is carried out. What is clear is that the stimulation carried out by the family can ultimately achieve optimal development. Delays in providing stimulation can result in delays in the child's development. Therefore, parents or caregivers must optimize the provision of stimulation in any way that is appropriate to their age and developmental tasks.

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