

## DESCRIPTION OF MOTHER'S KNOWLEDGE ABOUT STIMULATION IN CHILDREN AGED 3-6 YEARS WHO ARE GIVEN BRAIN GYM AT HARAPAN BANGSA PLAYGROUPS AND MASYITHOH KAUMAN KINDERGARTEN BANTUL

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### ABSTRACT.

Stimulation can excite brain cells and is crucial for enhancing a child's sensory, emotional, social, linguistic, cognitive, independent, and creative abilities. For the proper development of their behavioral and mental health, children must also receive enough stimulation from an early age, in both quantity and quality. Youngsters who grow up with lots of encouragement will mature more quickly than those who don't. Parents can stimulate their child's growth in a fun way, such as by participating in brain gym. This study was to find out the description of mothers' knowledge about stimulation for children aged 3rd-6th years who were given brain gym. This type of research is quantitative cross sectional with the sample at Harapan Bangsa playgropus and Masyithoh Kauman Kindergarten was 106 mother of students. It was known that the age of the majority of respondents was between 25th–35th, most of their was senior high school, income was minimum wage, most of respondents cared for themselves and time spent with children per day was > 12hours. The majority of respondents had good knowledge. This study suggests that parents—particularly mothers—should provide their children more stimulation through Brain Gym in order to enhance their development.

**Keywords:** brain gym, knowledge, stimulation, mother.

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### INTRODUCTION

The growth and development of toddlers is something that needs great attention because during this period growth and development takes place very critically and rapidly, which is known as the golden age (Muhammad Fadillah, 2020). WHO data for 2022 shows that 52.9 million children under the age of 5 were recorded, 54% of children had developmental disorders in 2020. The majority of children with neurological disabilities, around 95% of whom live in low-income countries. The prevalence of developmental deviations in children under 5 years of age in Indonesia reported by WHO in 2020 was 7,512.6 per 100,000 population (7.51%). About 10% of children experience

developmental delays. Although exact statistics regarding the prevalence of developmental delays in general are not yet available, developmental delays are more likely to occur in 1-3% of children under the age of five (Rohmawati, Si, & Kes, 2016).

Based on data from the Yogyakarta Province Health Profile in 2022, the percentage of Early Growth and Development Intervention Detection Stimulation (SDIDTK) services for children under five in Yogyakarta in 2022 was 93.9%. There are 5 districts/cities with a service percentage for children under five reaching 100 percent, namely Yogyakarta, Sleman, Bantul, Kulon Progo, Gunung Kidul and the district with the lowest percentage of services for children

under five is Bantul (81.9%) (Profil Kesehatan Daerah Istimewa Yogyakarta, 2022). Based on preliminary study with teachers at Harapan Bangsa playgropus and Masyithoh Kauman Kindergarten, it shows that as many as 8 out of 10 children still have difficulty participating in activities that involve fine motor skills such as cutting, sticking and coloring activities.

In a child's development, stimulation is a basic need for parents to help the child's development. Stimulation also plays an important role in improving sensory functions, motor, emotional, social, speech, cognitive, independence, and creativity and can stimulate brain cells. Babies and children also need adequate stimulation in quantity and quality from the start for their psychosocial mental development. Children who receive a large amount of encouragement will mature more quickly than those who receive little or no stimulation. The earlier and longer the stimulation is carried out, the greater the benefits will be on the child's development. Stimulation should be carried out every time you interact with toddlers (Andari, Amin, & Fitriani, 2018).

Children's development can be developed with fun stimulation by the child's parents, namely by doing brain gym exercises for children. Light movements with games using the hands and feet can provide stimulation that can improve fine motor skills (Dikir, Badi'ah, & Fitriana, 2016).

This can certainly be helped by brain gym stimulation carried out by parents. In providing education in classes for mothers of toddlers, especially in delivering growth and development material, the brain gym method has not been introduced to parents, so information regarding this matter is still quite limited (Sulis Diana, Ferilia Adiesty, & Elyana Mafiticha, 2017). The research results showed that information on children's growth and development is material that is really needed by parents. Everyone wants their children

to grow up healthily, so that all positive information that supports their hopes is responded to well (Al Istiqomah & Sadarmanah, 2018). Based on a preliminary study of 10 mothers with toddlers, it was explained that educational activities to stimulate growth and development at Harapan Bangsa playgropus and Masyithoh Kauman Kindergarten using the brain gym method had never been implemented, the implementation of education was not optimal and did not involve the active participation of parents. Health education is carried out to maximize mothers' knowledge about the purpose, benefits and procedures for brain gyms by using demonstration techniques and video media, therefore education is needed about the benefits of brain gyms as stimulation for the cognitive development of children aged 3 years to 6 years.

## **METHOD**

The type of quantitative research is cross-sectional. The population of the study was all mothers who have children aged 3-6 years in Harapan Bangsa playgropus and Masyithoh Kauman Kindergarten with a sample size of 106 students. Using a questionnaire of mothers' knowledge about child stimulus adopted from Eva Fitri's research (Eva Fitri Listihana, 2019). Univariate analysis was used to measure frequency distribution, size of spread and average value.

## RESULTS

### Respondent Characteristics

Respondent characteristics are the identity attached to the respondent. The following table 1 shows the characteristics of the respondents.

**Table 1 Frequency Distribution of Maternal Characteristics (n-106)**

Mother's Characteristics	f (n:106)	(%)
<b>Age</b>		
< 25 Years	35	33,02
25 – 35 Years	48	45,28
> 35 Years	23	21,70
<b>Education</b>		
Junior High School	11	10,38
Senior High School	79	74,53
Bachelor	16	15,09
<b>Income</b>		
< Minimum Wage	19	17,92
Minimum Wage	67	63,21
> Minimum Wage	20	18,87
<b>Caregiver</b>		
Grandparents	5	4,72
Parents	89	83,96
Baby sitter	12	11,32
<b>Time spent</b>		
≤ 12 hour	45	42,06
> 12 hour	62	57,94
<b>Informant Source</b>		
Social media	58	54,72
Mass media	5	4,72
Health workers	43	40,57

Based on table 1, the results of the study show that the age of the majority of respondents is in the age range of 25-35 years 45.28%, the majority of the last education is senior high school, Most respondents have income according to the minimum wage, Most respondents raise their own children, Most spend more than 12 hours with their children, Most respondents get information sources from social media.

**Table 2 Frequency Distribution of Child Characteristics**

Child's Characteristics	f (n:106)	(%)
<b>Education</b>		
Playgroup	53	50,00
Kindergarten	53	50,00
<b>Siblings</b>		
Fisrt	26	25,00
Second	43	41,35
Thirs	35	33,65
<b>Birth Weight</b>		
≤ 2500 g	36	33,96
2500 – 4000 g	55	51,89
> 4000 g	15	14,15

Based on table 2, the results of the analysis show that 50% of children in the playgroup and kindergarten education groups, most of the children are the second child and most of the children are born with a weight category range of 2500 - 4000 g.

### Sitmulus Knowledge

The following table 3 shows the descriptive statistical results of sitmulus knowledge as shown in the following table.

**Table 3 Frequency Distribution of Stimulation Knowledge**

Knowledge	f (n:106)	(%)
Less	11	10,38
Sufficent	41	38,68
Good	54	50,94

Based on table 3, it is known that the majority of respondents have knowledge and 10.38% of mothers have less knowledge.

## DISCUSSION

Optimal child growth and development is influenced by several factors, one of which is stimulation. Stimulation is important in a child's growth and development. Stimulation is stimulation given to children by the environment, especially the role of the mother so that children

can grow and develop optimally (Sopiah, 2022). Children who are regular and have received early targeted stimulation will develop faster than children who lack or are late in getting stimulation (Andari et al., 2018).

The role of the mother is very important in child development. The lack of mother's role in fulfilling the basic needs of toddlers will certainly have a negative impact on their growth and development, because the role of a mother is very important to fulfill the basic needs of children, namely ASAH, ASIH, and ASUH (Yuniartika, 2020a). Children will get their first influence in the family environment, especially with a mother. All children have access to high-quality early childhood development, care, and education so that they are ready to enter basic education, reflecting widespread recognition of the importance of early childhood education and child development (Musonah et al., 2023).

To get targeted stimulation, knowledge is an important dominant factor in shaping a person's behavior, parents' knowledge about stimulation and in providing stimulation so that the child's development is in accordance with its stages and in accordance with its developmental tasks. Previous research conducted in his research stated that the better the parents' knowledge about stimulation, the better the level of development of their children. Stimulation or encouragement is really needed in order to maximize all the potential that the child has since he was still in the womb, when the child is born the stimulation must be carried out continuously, varied, as well as an atmosphere of play and affection because, stimulation provided by parents in many ways can stimulate all the potential possessed by children, when parents try to provide optimal stimulation, it is important for parents to know when and how to provide stimulation to children (MA Mansur, 2021).

The mother's role is very important in child development. The lack of a mother's role in fulfilling the basic needs of toddlers will certainly have an adverse impact on their growth and development, because the role of a mother is very important in fulfilling children's basic needs, namely ASAH, ASIH, and ASUH (Yuniartika, 2020b). Children will have their first influence in the family environment, especially with a mother. all children have access to high-quality early childhood development, care and education so that they are ready to enter primary education, reflecting widespread recognition of the importance of early childhood education and child development (Musonah et al., 2023).

Good knowledge will form a positive attitude in a person. Good knowledge will be in line with increasing positive attitudes and behavior (Dian Ayuningrum et al., 2024). Education can simply be understood as a learning process experienced by someone to know, understand and be able to practice it in everyday life (4). The mother's education level greatly influences the mother's knowledge regarding stimulating child development. This is because the mother's level of education is assumed to influence their ability to transform the knowledge they have, especially regarding stimulating child development. Thus, maternal education is an important factor that influences child development. This is proven by the results of previous research which explains that the knowledge of mothers of toddlers about stimulating toddlers' intelligence with brain gym is relatively good (Noviyani Noviyani, Fatimah Fatimah, Taufik Rahman, Lia Dian Ayuningrum, & Amanah Rahma Delia, 2022).

Work is a necessity that must be done, especially to support the lives of a person and his family. Work is generally an activity that takes up time and will affect family life. Working parents have broader relationships and knowledge

compared to non-working parents. So that mothers who do not work will have good knowledge and insight regarding stimulating children's development. In accordance with the results of research using the cross-sectional method and Chi Square hypothesis testing, the results showed that there was a relationship between age, education and employment and the ability to stimulate children's development. So the characteristics of the mother greatly influence the stimulation of development in children.

Families with poor financial status will think more often about how to meet basic needs, so there is no more attention to optimizing child development. The better the parents' economy, the better the quality of the child. Although there are other factors, the most influential thing based on various literature analyzed is in the field of parental income (Aisyah, 2024).

Based on the results of this research, it was explained that the majority of respondents were less than 35 years old, the majority of mothers' education was at secondary level, and the majority of mothers did not work. The characteristics of these respondents greatly influence the stimulation carried out by mothers on their children's development, which is proven by research results. Most mothers have good knowledge about stimulation. In child development, it is explained that there are several influencing factors other than stimulation, namely genetics, prenatal environmental factors, and postnatal environmental factors (Arifudin et al., 2021). This is shown by the results of research which explains that mothers have knowledge in the good category, while most toddler children have appropriate development, but there are still children who have less development. This is in accordance with the results of research using the Chi Square statistical test with the results of a significant relationship between knowledge and

the mother's role in child development (Astuti, 2020).

The success of a family in implementing the concept of good and quality parenting really depends on the parenting patterns implemented by parents. Parenting patterns can be defined as patterns of interaction between children and their parents which include fulfilling physical needs (such as eating, drinking, etc.) and psychological needs (such as feeling safe, affection, etc.), as well as socializing norms applicable in society so that children can live in harmony with their environment. In other words, parenting also includes patterns of interaction between parents and children in order to shape the child's personality.

To increase parental participation in parenting, fathers and mothers must set clear goals in caring for children so that children grow and develop optimally. Father and mother need to discuss and agree on parenting goals according to the child's condition and the father's and mother's expectations. Parenting patterns that accept, make children feel loved, protected, considered valuable, and given support by their parents, are very conducive to supporting the formation of children's personalities who are prosocial, confident, independent, and really care about the environment. Meanwhile, a rejecting parenting style can make children feel unaccepted, unloved, discouraged, or even hated by their parents. Children who experience rejection from their parents will become individuals who are not independent, or appear independent but do not care about other people. Apart from that, this child will quickly become irritated, and have a negative view of other people and of their life, be very aggressive towards other people, or feel inferior and not feel worthy. Parents are the first and main caregivers for children. Under certain conditions, other people can temporarily replace the role of parents as

child caretakers (grandfathers, grandmothers, uncles, aunts, household assistants, etc.) who are tasked with looking after the children.

Knowledge can also be influenced by a person's culture and experience, this experience includes personal experience and the experience of other people who see or hear about developmental stimulation. This experience will increase the mother's understanding of developmental stimulation so that knowledge will increase. However, this research did not examine the factors that influence a person's level of knowledge, only limited to the respondent's knowledge about developmental stimulation. However, it was not studied how respondents learned about stimulating the development of children aged 1-3 years (Andari et al., 2018).

Parents are role models for children in all aspects of development. Therefore, parents need to understand the concept of good parenting to apply to children, such as the concept of authoritarian, permissive, democratic and neglected parenting, so that parents can correctly apply the parenting concept according to the child's needs. 3. A father also has a very important role in raising children. Father's involvement in child care will be beneficial for the quality of the child's development in several aspects including: physical development, cognitive development, and social emotional development. There are things that fathers do to be involved in child care, such as accompanying the pregnancy, taking part in caring for the baby, and doing activities with the child. This can create and maintain good communication with children.

This good knowledge shows that respondents received a lot of information about the developmental stimulation given to their children and also the normal development of children aged 3 - 6 years according to their age. The information obtained by respondents regarding the stimulation and development of

children aged 3 - 6 years was obtained from various information sources such as KIA books, leaflets, counseling, mass media, electronic media, and so on. The more information the respondent obtains, the better the level of knowledge the respondent has regarding stimulating the development of children aged 3-6 years and the development of children aged 3-6 years themselves according to their age. As stated by experts, society, groups or individuals gain knowledge about better health by providing information or health messages (Martínez Abad, Fernando, Chaparro Caso López, & Alicia A., 2020).

A good overview of knowledge about children's stimulation is shown from the research results that mothers understand the benefits of stimulation for children, mothers understand one way to stimulate and how to motivate them for optimal growth and development. Parents also provide developmental stimulation to children from an early age or from the womb. The way parents stimulate is by giving love to their children. Parents also provide refraction to children through daily activities, such as drawing, cutting, singing, playing puzzles or playing with blocks, playing with friends, and wearing their own clothes (Pramestya Amelia, Dian Ayuningrum, & Dwiarini, n.d.). These activities can be a stimulus for children so that their skills develop further.

## **CONCLUSION**

Based on the analysis results, it shows that most of the research respondents have good knowledge (50.94%), respondents with their own caregivers (83.96%) most of them have a minimum wage income (63.2), they care for their own children (83.96%), and the amount of time spent with children every day is more than 12 hours (57.94). The recommendation from this

study is that mothers can implement knowledge through stimulation practices for children.

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