Differences in the Cognitive Development of Children 
Crawl and Don't Crawl 

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Abstract: The purpose of this study was to determine the differences in the cognitive development of children who crawled and did not crawl. This research was conducted in July-December 2022. This research method uses qualitative research. Data was collected in this study using observation and documentation. The conclusion of this study is that children who crawl have cognitive development faster than children who do not crawl, because in processing information and doing activities, children who crawl are faster in responding to the information conveyed because the nervous system in their brain is more connected, thereby developing muscle turned out to greatly affect the development of the child's brain.

INTRODUCTION

Every child has different stages of development, there are children who are fast and there are slow ones, there are those who are complete or not, and there are children who pass through certain stages of development. Children who experience developmental delays at an early age result in subsequent developments. One of the causes of child development delays, namely, cannot be separated from growth where a person's growth will greatly affect his development. Growth and development will be optimal if they get stimulation or stimulation from parents, teachers, and the surrounding environment and get adequate nutrition.

Early age is also known as the golden age where the growth and development of children experience very rapid development. Starting from babies who can’t do anything after the age of two they can talk, walk, get to know the environment and so on. Based on the theory of brain development according to Bloom et al (in the Director General of PAUDNI, 2011: 34), that 50% of a person's intelligence capacity has been formed when a child is 4 years old and the next 30% occurs in the age range of 4-8 years. It can be said that early age is a golden age which is very important for developing aspects of child development. Aspects of child development consists of six aspects, namely; (1) religious and moral values, (2) language, (3) cognitive, (4) physical motor, (5) social emotional and...
One aspect that is very important, namely physical motor, because it affects children's cognitive as well as other aspects of development.

Physical motor is the coordination of movements consisting of gross motor and fine motor. As the child gets older, the child's motor development can already be well coordinated. His every move is aligned with his needs or interests. At the age of 0-12 months, children's motor development is characterized by excess movement or agile motor activities, such as lying on their stomach, sitting, crawling, and walking.

Therefore, this period is an ideal time to learn to develop large muscles or gross motor skills. Normal physical development is one of the determining factors for the smooth learning process, both in the field of knowledge and skills. Therefore, motor development greatly supports the success of student learning, because the motor information system greatly speeds up the network of the nervous system.

One of the gross muscle development activities is crawling. In the process of child development, some are crawling and some are not crawling, such as; creeping and sliding. Crawling is the act of walking on your hands and knees. In moving to reach for an object, a 7-month-old child can already use his hands and knees to pick up toys that are around him.

It can be concluded that crawling is the activity of running the body using the muscles of the hands and knees on the floor, while crawling is the activity of running the body like a snake and not using the knees (crawling). Crawling children affect other aspects of development, such as; cognitive etc.

Cognitive is the ability of knowledge to process information to carry out an activity. The cognitive development of children aged 6 months begins to be able to recognize the surrounding environment and be able to process information. From some of the opinions above it can be concluded that cognitive development is the child's ability to process information conveyed to the brain to provide a response in carrying out an activity.

The writer examines two boys. A birth weight of 2380 grams does not reach the normal threshold of 2.5 kg. One more person birth weight 2.9 kg. The first child was born at 37 weeks and the second child was born at 39 weeks. The reality in the field is that two children have different stages of development, one person crawls and one person does not crawl, so the authors are interested in examining their cognitive development. In accordance with the results of observations about child development, differences in motor physical activity were directly observed by the author. Based on the importance of overcoming the problems above, the authors will conduct a qualitative research on differences in the cognitive development of crawling and non-crawling children in this research in Bengkulu City, 2022.

**METHODS**

The method to be used in this research is a qualitative research. This qualitative research is a research that is telling based on personal experiences that have been experienced. The implementation of this qualitative research involved the researcher directly in its activities and also two children, namely; SA and MA. This research was conducted in Bengkulu City from July to December 2022 for 6 months. Data collection techniques in this study used an analysis of children's daily experiences, namely: observation results, direct observation and documentation.

**RESULTS AND DISCUSSION**

The first child did not crawl, Development (SA) birth 37 weeks, weight 2.3 kg, laugh 2 months, tummy 5 months back and forth, crawl like a snake 6-8 months, sit 8-9 months, creep 9 months, walk 14 months.

The second child crawls, Development (MA) birth 39 weeks, weight 2.9 kg, laughing 2 months, back and forth 5 months on his stomach, sitting 8, crawling 8-11 months, creeping 11-12 months, walking 13 months.

Based on the results of the author's observations, each child has different developmental stages, sooner or later, at different times, some are complete and some are skipped. As parents, we must provide more stimulation to children who are not crawling. Therefore, the importance of normal body weight, because, with normal body weight and growth, the child's muscles become strong and ready to do activities such as crawling. Children who crawl are faster at processing information. Thus cognitive
development is greatly influenced by motor development and thus it is important to maintain body condition during pregnancy, because birth weight greatly affects the strength or weakness of the muscles of the child who will be born later.

A 6 month old child can already recognize the surrounding environment, such as; recognize the faces of their parents, observe moving objects, listen to the responses of sounds and cry to be held. This shows that the cognitive development of children has begun to be coordinated between things that children usually see with the memories that are in the child's brain. By frequently interacting the child will recognize the environment around the child.

When playing with objects children begin to observe objects that are held and then dropped. It is fun, and will be done repeatedly. Children observe game activities by dropping objects, which is a response to activities that are carried out repeatedly. The movement of dropping objects that are held repeatedly will continue to be carried out by children. Responding to turning toward the sound source indicates that the child can hear sounds and responds to sounds. Children aged 9-12 months are beginning to understand simple commands, such as; pointing to parts of the body, imitating animal sounds and taking toys that are near the child.

The child has responded by reacting to turning his head when his name is called. When we call a child's name, the child has responded by turning, nodding or shaking his head, making two or three letter sounds from his mouth, such as ma, num, etc. When a child's toy is hidden, the child looks for the hidden object. The results of this study are in accordance with the theory of early childhood cognitive development. The term cognitive comes from the word cognition or knowing, meaning to know, children can know their surroundings. In a broad sense, cognition is the acquisition, arrangement and use of knowledge, Neiser (Jahja, 2013: 56).

Learn to do something like try to open/close a glass/cup. According to cognitive theory, it can also be interpreted as learning or thinking ability or intelligence, namely; the ability to learn new skills and concepts, skills to understand what is happening in their environment, and skills to use memory and solve simple problems (Pudjiati and Masykouri, 2011: 6).

Meanwhile, Maslihah (2005) states that cognitive itself can be interpreted as the ability to perceive the nature, meaning, or information about something and have a clear picture of it. Cognitive development itself refers to the ability of a child to understand something (Maslihah, 2005: 47). In the Big Indonesian Dictionary, cognitive is defined as something related to or involving cognition based on empirical factual knowledge (Alwi, et al, 2002). Meanwhile, according to Yusuf (2005) suggests that cognitive ability is the child's ability to think more complexly and do reasoning and problem solving, the development of this cognitive ability will make it easier for children to master broader general knowledge, so that they can function normally in everyday social life. Based on the cognitive understanding according to the experts above, it can be concluded that cognitive development is all processes of mental activity related to perception, thought, memory, and management of information that allows a person to acquire knowledge, solve problems, plan for the future, or all cognitive processes related to how individual learns, pays attention to, observes, imagines, predicts, evaluates and thinks about his environment.

Motor perceptual is part of the motor ability that can predict a child's academic ability, as explained by Thomas and Lee quoted by Hari Amirullah Rachman (2004: 29) they suggest the influence of motor perceptual on a person's cognitive function, namely: (1) there are consequences and direct link between perceptual motor skills and academic perception, (2) perceptual motor underlies academic readiness and performance. Although our knowledge is still limited about the direct relationship between perceptual movement development and academic achievement, there is a belief that the development of self-concept can affect other subjects.

Children's physical development is also marked by the development of motor skills, both gross and fine (Mansur; 2011; 78). Based on Mansur's opinion (2011; 78), it was concluded that: early age is a golden age for children's growth and development. According to Amstrong (2003) in Musfiroh
(2009; 6.4), the neurological system of kinesthetic intelligence is centered on the cerebellum (little brain), basal ganglia, and motor cortex. Based on Armstrong's opinion, it can be concluded that the neurological system of fine motor skills is located in the cerebellum, basal ganglia and motor cortex, because fine motor is a component of kinesthetic intelligence.

Stages of cognitive development of children aged 0-2 years, namely; sensomotor. Infants move through instinctive reflex actions from birth to the beginning of symbolic thinking. Infants construct an understanding of the world by coordinating sensory experiences with physical actions, using the five senses. The factors that influence cognitive development, according to (Susanto, 2011: 59-60) a. Heredity Factors or Offspring The theory of heredity or nativism pioneered by a philosopher Schopenhauer, argues that humans are born with certain potentials that cannot be influenced by the environment. b. Environmental Factors Environmental theory or empiricism was pioneered by John Locke. Although the theory is still being debated, this theory, which is called the tabularasa theory, cannot be completely disproved. This theory states that humans are born in a state of purity like a white paper that is still clean, without the slightest writing or stains. According to John Locke, human development is determined by the environment. Based on Locke's opinion, the level of intelligence is largely determined by the experience and knowledge he gets from his environment. c. Maturity Factor. Each organ (physical and psychological) can be said to be mature if it has achieved the ability to carry out its respective functions. Maturity is closely related to chronological age (calendar age). d. Formation Factors Formation is all circumstances outside of a person that affect the development of intelligence. Formation can be divided into intentional formation (formal school) and unintentional formation (the influence of the environment). So that humans act intelligently because to maintain life or in the form of adjustment. e. Interest and Talent Factors Interest directs actions towards a goal and is an encouragement to do more actively and better. Meanwhile, talent is defined as an innate ability, as a potential that still needs to be developed and trained so that it can be realized. A person's talent will affect the level of intelligence. This means that someone will have a certain talent, it will be easier and faster to learn it. f. Freedom Factor Freedom is the freedom of humans to think divergent (spread) which means that humans choose certain methods in solving problems, also free in choosing problems according to their needs. Based on the explanation above, it can be concluded that children's cognitive development can be influenced by certain factors, namely heredity, environment, maturity, formation, interests and talents, and freedom.

**CONCLUSION**

Based on the results of the research that has been described, there are differences in the cognitive development of children who crawl and do not crawl (creeping / crawling). Children who crawl have cognitive development faster than children who do not crawl, because in processing information and doing activities, children who crawl are faster in responding to the information presented because the nervous system in the brain is more connected. It appears that children who crawl have high curiosity, initiative, are active and enthusiastic in carrying out daily activities, and are responsive in receiving the responses given. It can be concluded that muscle development actually greatly influences the development of a child’s brain.

**SUGGESTION**

Parents should pay attention to the growth and development of children so that the child’s development is optimal.

**REFERENCES**


Kurikulum 137 Tahun 2014 Tentang standar nasional PAUD


