

Your Child Has the Right to Grow: The Importance of Exclusive Breastfeeding to the Infants' Gross Motor

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Abstract

Breast milk is the best nutrient for infants because it contains ideal nutritional value for infants. Unmet nutritional needs of infants can pose a risk of chronic diseases, impaired cognitive development of children, and inhibition of the infant's gross motor development. The study aims to prove how much influence exclusively breastfeeding affects the gross motor development of infants aged 7– 12 months. Methods: The research design used was a descriptive method, with a case study approach. The data source was selected by purposive sampling technique. Result: Result of research in the field at the last visit, it is found that 10-month-1-day-old infant who was given breast milk exclusively by her mother in gross motor development occurred according to her age, shown to be able to maintain the neck rigidly, sit alone for 60 seconds without being denied pillows, chairs or walls, and learned to stand with both feet refute some of her weight. While infant is 9-month-28-day-old who was not exclusively breastfed, gross motor development was not yet appropriate for his age, where the infant was only able to maintain his neck rigidly, but had not been able to sit alone for 60 seconds without being denied pillows, chairs or walls and learned to stand with both feet refuting some of his weight. Discussion: The result of the study can be used as motivation and a source of educational reference for breastfeeding mothers to provide breast milk exclusively to the infant because exclusive breast milk is proven to affect the gross motor development of the infant. Researchers are next expected to conduct a thorough study on factors that can affect the growth and development of the infant.

Keywords

breast milk, exclusive; gross motor development; infant



I. Introduction

Quality human resources are an indicator of the success of a nation's national development. Quality human resources are demonstrated by being physically resilient, mentally strong, and an optimal health status in addition to mastering science and technology. Improving the quality of human resources starts from infancy, one of the important factors in improving the quality of infant's growth and development is the fulfillment of the infant's nutritional needs through exclusive breastfeeding (Dukuzumuremyi et al., 2020). Human Resources (HR) is the most important component in a company or organization to run the business it does. Organization must have a goal to be achieved by the organizational members (Niati et al., 2021). Development is a change towards improvement. Changes towards improvement require the mobilization of all human resources and reason to realize what is aspired (Shah et al, 2020). The development of human resources is a process of changing the human resources who belong to an

organization, from one situation to another, which is better to prepare a future responsibility in achieving organizational goals (Werdhiastutie et al, 2020).

Breast milk is the best nutrient for babies needed for the first 6 months for early growth and development because breast milk contains ideal nutritional values, one of which is the content of minerals that can help the infant's growth and development, immune system, and protect the infant against various diseases. Exclusive breastfeeding of the infant during the first 6 months will help the infant's nutritional needs to be met properly and can support their growth and development (Mamo et al., 2020). If the infant's nutritional needs are not met, it will pose a risk of chronic diseases or non-communicable diseases, impaired cognitive growth of children, and physical growth and motor development will be hampered, especially the infant's gross motor development (Chowdhury & Yasmeen, 2018).

Previous research conducted by Nurlaila stated that there was a relationship between exclusive breastfeeding and gross motor development in infants aged 6-18 months because researchers still found the results of abnormal category gross motor development as many as 2 respondents (5.7%) who were babies with exclusive non-breastfeeding (Nurlaila & Nurjanah, 2017). Meanwhile, other research succeeded in revealing a relationship between exclusive breastfeeding and rough development in infants aged 6-12 months as evidenced by the results of gross motor development in the abnormal category as many as 22 respondents (23.9%) and the suspect category as many as 9 respondents (25.7%) who were babies with non-exclusive breastfeeding (Partipasari & Salam, 2017).

In pre-study observations, it was found that 3 out of 5 children aged 7–12 months had late gross motor development compared to children their age. Such delays, including: having not been able to maintain his neck stiffly when both hands are pulled in the supine position, has not been able to turn from supine to face down or vice versa at least twice, and has not been able to sit on his own without being propped up by a chair, cushion, or wall. This is because the mother of these children does not provide exclusive breastfeeding.

Exclusive breastfeeding is not fully realized by breastfeeding mothers. Based on data from the Ministry of Health's Performance Report in 2020, the scope of exclusive breastfeeding in Indonesia in 2020 was reached 66.1% and has exceeded the national strategic plan target of 40%, which has decreased compared to 2019 (67.74% with the national strategic plan target of 50%). The coverage of exclusive breastfeeding in East Java in 2019 was 68.2% and decreased in 2020, namely 61.0%. This study aims to describe the effect of exclusive breastfeeding on gross motor development of infants aged 7–12 months (Dinas Kesehatan Provinsi Jawa Timur, 2020).

II. Research Method

The research design used in this study is a descriptive method, with a case study approach. This method is a research procedure that presents descriptive data in the form of written or spoken words that can be observed as they are. Case studies are used to understand a case, a specific person, or a deep situation (Creswell, 2016). In this study, a case study approach was used to obtain an in-depth and comprehensive picture of exclusive and non-exclusive breastfeeding shedding of gross motor development of infants aged 7–12 months. Structured and in-depth interviews are used to dig up as much information as possible from respondents. The results of the interview were also combined with observations to get an idea of the respondents' feelings, attitudes, views, and

behaviors. The data source was selected by purposive sampling technique (Sugiyono, 2020).

The duration of this study was carried out within a period of 1 month, with the number of visits as many as 5 times. The details of the visit are as follows:

1. The first visit aims to explain the researcher's purpose in meeting respondents, requesting respondents' willingness by filling out informed consent and questionnaires that have been prepared, weighing the infant's weight, conducting observations and in-depth interviews to evaluate the infant's gross motor development.
2. The second visit aims to conduct a physical examination of the research subjects by weighing weight, observing gross motor development of the research subjects with the Pre-Development Screening Questionnaire according to the age of the research subjects, and explaining the observation results and comparing them with the observation results in the first visit.
3. The third visit aims to conduct a physical examination of the study subjects by weighing weight, observing the gross motor development of the research subjects with the Pre-Development Screening Questionnaire according to the age of the research subjects, and explaining the observation results and comparing them with the observation results in the first and second visits.
4. The fourth visit aims to conduct a physical examination of the research subjects by weighing weight, observing gross motor development of the research subjects with the Pre-Screening Development Questionnaire according to the age of the research subjects, and explaining the observation results and comparing them with the observation results in the first to third visits
5. The fifth visit aims to conduct a physical examination of the research subjects by weighing body weight, observing the gross motor development of the research subjects with the Pre-Development Screening Questionnaire according to the age of the research subjects, explaining the observation results then comparing them with the observation results in the first to fourth visits, and conducting education about follow-up that can be taken by respondents.

Data reduction activities are carried out by summarizing and analyzing data by selecting important parts, then looking for themes and patterns. Data obtained from the field are further written in the form of transcripts or detailed reports.

III. Result and Discussion

In field studies, the effect of exclusive breastfeeding on gross motor development can be seen in the observation results of infants aged 9 months at the 1st visit, where infants who are given exclusive breastfeeding aged 9 months and 3 days are already able to carry out 1 of the 3 stages of gross motor development, which can maintain the neck stiffly. The results are different from those of a 9-month-old infant who is not exclusively breastfed, who has not been able to perform 3 stages of gross motor development according to his age, ranging from maintaining the neck stiffly, learning to stand with both legs partially supposing of body weight, to sitting alone for 60 seconds without being refuted by a pillow, chair or wall. On the 2nd visit, babies who were given exclusively breast milk aged 9 months and 10 days experienced the development of gross motor abilities. At this stage, babies who are given exclusive breastfeeding in addition to being able to maintain their neck stiffly, are also able to sit alone for 60 seconds without being refuted by pillows, chairs or walls. While infants who are not exclusively breastfed aged 9 months and 7 days have not experienced gross motor development. On the 3rd visit, the exclusively breastfed

infant aged 9 months and 17 days is able to perform all gross motor stages, from stiffly maintaining the neck, sitting alone for 60 seconds without being refuted by a pillow, chair or wall, to learning to stand with both legs debunking some of the body weight. Meanwhile, infants who are not given exclusive breastfeeding aged 9 months and 14 days, still have not experienced gross motor development. Gross motor development was only encountered on the 5th visit (infants who were not exclusively breastfed aged 9 months and 28 days), that is, infants were able to maintain their necks stiffly, but had not been able to sit on their own for 60 seconds without being refuted by pillows, chairs or walls and learned to stand with both legs partially buffering the body weight.

During data collection in the field, researchers also conducted in-depth interviews about the complementary food obtained by each infant. Based on the results of the interview, the provision of complementary food to babies who are given exclusive breastfeeding begins when the infant is 6 months old. Meanwhile, infants who are not given exclusive breastfeeding are given complementary food starting from 7 days old infants, namely by formula feeding. Infants who are given exclusive breastfeeding and who are not exclusively breastfed begin to eat at the same age, that is, at the age of 6 months each infant begins to be introduced to foods that have a smooth texture, such as fruit that is mashed and given porridge from vegetables, fruits, and meat with an initial portion of 3-4 spoons, where the portion of food given is always increased every day up to half a bowl, the frequency of feeding given to each baby is 2–3 times / day and is given intermittently 2–3 times / day.

Exclusive breastfeeding is a form of breastfeeding as early as possible after going through the delivery process, breast milk is given without a schedule and is not given other foods until the infant is 6 months old (Sabbah et al., 2022). After 6 months, infants begin to be introduced to other foods and remain breastfed until the age of 2 years. Breastfeeding of babies is recommended every 2-3 hours or 8-12 times a day. A more frequent frequency of breastfeeding will prevent the infant from becoming dehydrated and lacking calorie intake.

Breast milk is a nutrient that contains antibodies or immune system that plays a role in protecting infants from various infectious diseases, such as diarrhea, Acute Respiratory Infections, and so on. Breast milk also lowers and prevents the risk of non-infectious diseases, such as allergies, obesity, stunting, and asthma. Breast milk contains the best DHA and lactose which serves for the brain myelinization process so that it can increase the infant's IQ and EQ. The process during the exclusive feeding of breast milk to the infant is able to create psychological and affection between the mother and the infant. Through skin contact, mothers and babies can stimulate psychomotor development and the formation of emotional intelligence of the infant. Breast milk also has a fairly large selenium content and is able to prevent dental caries. Exercise activities from breastfeeding in mothers can increase lung capacity and air rotation in the lungs (Kazaura, 2016).

Gross motor is related to the infant's ability to perform movements and postures involving the infant's large muscles, for example sitting, standing, walking, and others. While fine motor is related to the infant's ability to perform movements involving certain parts of the body and is carried out by small muscles and requires proper and careful coordination, for example writing, pinching, grasping, moving objects from one hand to another, and others. Aspects of cognitive development are characterized by feelings of curiosity, the infant seeks to understand the outside world, besides the infant learns to think through motor sensory experiences. Aspects of language development relate to the infant's ability to respond to sounds, speak, communicate, follow given commands, and so on. At first the emotions of joy and displeasure arise due to physical stimulation, as we age the emotions of pleasure and displeasure arise due to the presence of psychic stimuli, then

there will be variations of emotions such as fear, anger, disappointment, hatred, sadness, and so on. With age, the social world of babies becomes wider. The child's skills and mastery in physical, motor, mental, and emotional aspects are increasing and developing which causes the infant to increasingly want to do various activities and more willing to socialize with his environment.

Early development monitoring in children can detect developmental delays early in children. Progress is measured using the Development Pre-Screening Questionnaire. The Indonesian Pediatric Association together with the Ministry of Health compiles the use of the Pre-Developmental Screening Questionnaire until the age of 6 years, the examination is carried out every 3 months for the age under 2 years and every 6 months until the child is 6 years old. There are four aspects of development that can be measured using the Pre-Screening Development Questionnaire, namely socialization and independence, speech and language, fine motor, and gross motor (Departemen Kesehatan RI, 2016).

IV. Conclusion

The effect of exclusive breastfeeding on gross motor development can be seen in the observation results of infants aged 9 months at the 1st visit, where infants who are given exclusive breastfeeding aged 9 months and 3 days are already able to carry out 1 of the 3 stages of gross motor development, which can maintain the neck stiffly. The results are different from those of a 9-month-old infant who is not exclusively breastfed, who has not been able to perform 3 stages of gross motor development according to his age, ranging from maintaining the neck stiffly, learning to stand with both legs partially supporting of body weight, to sitting alone for 60 seconds without being refuted by a pillow, chair or wall. On the 2nd visit, babies who were given exclusively breast milk aged 9 months and 10 days experienced the development of gross motor abilities. At this stage, babies who are given exclusive breastfeeding in addition to being able to maintain their neck stiffly, are also able to sit alone for 60 seconds without being refuted by pillows, chairs or walls. While infants who are not exclusively breastfed aged 9 months and 7 days have not experienced gross motor development. On the 3rd visit, the exclusively breastfed infant aged 9 months and 17 days is able to perform all gross motor stages, from stiffly maintaining the neck, sitting alone for 60 seconds without being refuted by a pillow, chair or wall, to learning to stand with both legs supporting some of the body weight. Meanwhile, infants who are not given exclusive breastfeeding aged 9 months and 14 days, still have not experienced gross motor development. Gross motor development was only encountered on the 5th visit (infants who were not exclusively breastfed aged 9 months and 28 days), that is, infants were able to maintain their necks stiffly, but had not been able to sit on their own for 60 seconds without being refuted by pillows, chairs or walls and learned to stand with both legs partially supporting the body weight.

The growth and development that occurs in children takes place in a regular, interrelated, and continuous manner starting from conception to adulthood. When viewed in terms of nutritional aspects, breast milk contains nutrients for brain growth and development, namely *arachidonic acid* (AA) and *docosahexanoic acid* (DHA) which function in influencing the structure and function of cell membranes. The best AA and DHA are found in breast milk, where DHA plays a role in optimizing the development of neural tissue, brain, and vision tissue in infants. This greatly affects all brain performance, in particular the infant's ability to aspects of gross motor development.

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