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The Relationship Maternal Support and The Habit Of Prone In Children Aged 0-3 Months

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ABSTRACT

Children aged 0-3 months represents a critical period for child development, especially in the acquisition of gross motor skills. One recommended form of early stimulation during this stage is the prone position or tummy time, which plays an essential role in strengthening the neck, back, and shoulder muscles and supporting the achievement of subsequent developmental milestones. The successful implementation of tummy time is strongly influenced by maternal support as the primary caregiver, encompassing emotional, instrumental, informational, and appraisal support. This study aimed to examine the relationship between maternal support and tummy time habits among infants aged 0-3 months in Mekarjaya Village, North Sumedang District. A quantitative approach with a correlational design was employed. The study sample consisted of 72 mothers with infants aged 0-3 months, selected using a total sampling technique. Data were collected using validated and reliable questionnaires measuring maternal support and tummy time habits. Statistical analysis was conducted using Pearson's correlation test. The findings revealed that most mothers demonstrated a very high level of support, while infants' tummy time habits were predominantly categorized as good and very good. Bivariate analysis indicated a significant and very strong positive relationship between maternal support and tummy time habits ($p < 0.001$; $r = 0.797$), suggesting that higher levels of maternal support are associated with more optimal tummy time practices. These results highlight the crucial role of maternal involvement in promoting early motor stimulation. Therefore, it is recommended that healthcare professionals enhance educational and guidance programs for mothers regarding the importance of regular and appropriate tummy time practices to support optimal motor development in early infancy.

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Introduction

A child is often defined as an individual undergoing a developmental period, from birth to adolescence. During this period, children experience various stages of development, including cognitive, emotional, social, and physical development.

During this development, children pass through several stages: the golden period, the window of opportunity, and the critical period (Soetjiningsih, 2013; Barokah et al., 2024).

The first three years of a child's life are a very important golden phase, because during this period there is rapid development in physical, cognitive, mental and emotional aspects, in which case brain growth and development also occurs most rapidly (Kemenkes RI, 2015; Barokah et al., 2024). Growth and development play a role in enhancing a child's individual abilities. Brain development in early life supports a child's skills, enabling them to remember and analyze problems. Between 0 and 3 months of age, a child begins to develop memory and analytical skills, while hand and foot development supports the ability to move and grasp objects.

In early life, prone positioning is an important activity for a child's development. It plays a crucial role in stimulating gross motor skills, particularly strengthening the neck, back, and shoulder muscles, and helps prevent flat heads from occurring due to excessive back lying (Sihura et al., 2023). In addition, prone positioning is also useful for developing coordination of movement and vision, gripping skills, and preparing children to be able to crawl and sit.

It's important for parents to provide routine, planned, early stimulation through activities such as the prone reflex to optimize a child's overall growth and development. If a child doesn't receive adequate stimulation during the crucial developmental period of 0-3 months, it can lead to delays in motor, cognitive, and social-emotional development. Lack of stimulation can also hinder sensory integration, making the child less active and putting them at risk for postural and motor impairments (Kemenkes RI, 2015; Barokah et al., 2024; Soetjiningsih, 2013).

Gross motor activity is movement that uses the coordination of the large muscles in the body. Stimulating the development of children's motor skills is crucial for honing their psychomotor abilities. Children's psychomotor development plays a significant role in supporting their cognitive and affective abilities. Through motor activity, children demonstrate increased activity, progress in their thinking, and maintain physical health. Children's development will be more optimal if they receive regular and targeted stimulation, compared to children who receive little or no stimulation (Ramadhania, N., & Sriwenda, D. 2022).

During the growth stage, children require a variety of positive stimulations to ensure their abilities develop optimally. Optimal child development can be achieved if each stage, even from the time they are in the womb, provides them with appropriate social interactions. Parents, especially mothers, play a crucial role in supporting their child's growth and development. Therefore, parents need to provide stimulation for all aspects of their child's development, including gross motor skills, fine motor skills, language skills, and social-personal aspects. This stimulation should be carried out routinely, continuously, and accompanied by affection through various methods, including play. Lack of parental stimulation can lead to developmental delays in children (Hardika MD, 2018).

One of the villages located in the North Sumedang region, namely Mekarjaya Village, is one of the areas that has become the focus of researchers because based on the preliminary study conducted, the results of interviews and discussions with the researchers' posyandu cadres and midwives in the Mekarjaya Village area showed

that most mothers in the village do not understand the importance of gross motor stimulation through simple activities such as the prone reflex, due to limited information, time, and the still strong influence of traditional parenting patterns passed down from generation to generation. In addition, some mothers also have limitations in providing quality time with their children because they are busy with work. Data from filling out the preliminary study questionnaire and direct interviews with mothers with children aged 0-3 months showed that 10 out of 15 mothers had not provided stimulation to their children because they did not really understand the benefits of prone itself, then 5 out of 15 mothers interviewed had provided prone stimulation.

This makes research very important to conduct because the mother's support can guarantee the success of the prone reflex, where prone activities are the main form of stimulation that mothers need to do for their children, especially when they are in the age range of 0-3 months.

Objective

The objectives of this study are:
1. To identify maternal support.
2. To identify habit of prone in children aged 0-3 months.
3. To identify the relationship between maternal support and habit of prone in children aged 0-3 months.

Method

Types of research: This study uses a quantitative approach with a correlational design, which aims to examine the relationship between two or more variables without providing intervention to these variables (Sugiyono, 2024). Research location: This research was conducted in one of the village areas located in North Sumedang, namely Mekarjaya Village. Population: The population subjects in this study involved 72 parents, namely mothers who have children aged 0-3 months who live in the Mekarjaya Village area.

Research sample criteria: Mothers with children aged 0-3 months, Mothers who are willing to participate as respondents and provide information through a questionnaire prepared by the researcher, Mothers who are able to communicate effectively in Indonesian or the Sundanese language, Mothers who live with their children in the same household, Mothers who own personal devices/cell phones, and Mothers who personally care for their children without the assistance of close relatives or caregivers. Sampling Technique and Sample Size: This study used a non-probability sampling technique with total sampling, a sampling method in which all members of the population are included in the sample.

Research procedures: Identifying and formulating problems through observation and review of relevant literature, accompanied by the preparation of a theoretical framework and formulation of hypotheses, Formulating research objectives, designing research designs, conducting surveys to select research locations, determining research methods, and determining the samples to be taken, Creating a research questionnaire using Google Forms, Creating a permit letter from the campus

as a research guideline, Coordinate with village cadres to reach the population to be respondents and determine the research time, Conduct door-to-door research at each home, accompanied by cadres in each neighborhood unit (RW), The researcher is directly present at the research site, Provide an explanation of the purpose of the research to each respondent, including how to complete the questionnaire, and provide an explanation of the options provided in the questionnaire, Collect data through an online questionnaire. Each respondent will be given a barcode image that they can scan directly using Google Lens on their personal device/phone, which will then automatically connect them to the provided questionnaire page. The questionnaire will take 5-10 minutes to complete, Analyze the research data using the Pearson test using JASP version 16.02, adjusted to the inclusion criteria, using Microsoft Excel, Prepare results and discussions based on the data analysis, and Draw conclusions from the final data analysis results.

Research Tools and Materials: The instruments used in this study were two types of questionnaires that had been tested for validity and reliability. This study used a questionnaire with a Likert scale measurement.

Data Analysis Techniques: Univariate analysis is the initial stage in the statistical analysis process, which aims to provide a detailed picture of one variable without considering other variables. Univariate analysis analyzes the frequency or percentage of each category and analyzes descriptive statistics such as the mean, median, standard deviation, and range. Bivariate analysis is a type of statistical analysis that involves two variables simultaneously to determine whether there is a relationship or connection between them. Bivariate analysis was used in this study to determine the relationship or correlation between maternal support and prone positioning habits in children aged 0-3 months. This study used the Pearson correlation method, as this method is more suitable for parametric statistical analysis. Parametric statistics were used because the data were normally distributed.

Results

TABLE 1. Frequency distribution of respondent characteristics by child's gender (n=72)

Gender	f	%
Male	41	57%
Female	31	43%
Total	72	100%

TABLE 2 Frequency distribution of respondents' characteristics by child's age (n=72)

Age	f	%
1 Month	18	25%
2 Months	29	40%
3 Months	25	35%
Total	72	100%

TABLE 3 Levels of Maternal Support (n=72)

Score Level	f	%
Very High	40	56%
High	31	43%
Moderate	1	1%
Low	-	-
Total	72	100%

TABLE 4. Levels of prone sleeping habits (n=72)

Score Level	f	%
Excellent	36	50%
Good	36	50%
Fair	-	-
Poor	-	-
Total	72	100%

TABLE 5 Relationship Between Maternal Support and the Habit of Lying on the Stomach

Variable	Pearson	p-value
Maternal Support And The Habit of Lying on the Stomach	0,797	< 0,001

Based on Table 5, the results of the hypothesis test using Pearson's correlation coefficient indicate a relationship between maternal support and the habit of sleeping on the stomach, with a p-value of <0.001 and a correlation coefficient of 0.797. This positive correlation indicates a unidirectional relationship: the higher the level of maternal support, the higher the frequency of the habit of sleeping on the stomach. This indicates that maternal support is associated with the prone sleeping habit in infants aged 0–3 months. The strength of this relationship is classified as very strong; however, other factors may still play a role in this relationship.

Discussion

Maternal Support Variables

Based on research conducted on 72 mothers with children aged 0-3 months, the results showed that the majority of respondents were in the category of very high maternal support for the habit of prone lying. This result indicates that most mothers are very involved in providing support to their children, especially in the prone reflex activity. The finding of high maternal support in this study aligns with the results of an ongoing study conducted by Black *et al.,* (2021) which states that consistent maternal involvement from the early developmental period plays an important role

in establishing early motor stimulation routines through responsive and directed interactions.

High maternal support is reflected in the fulfillment of all four aspects of support: emotional, instrumental, informative, and appraisal support. Mothers are not only physically present but also provide attention, encouragement, and a safe and comfortable environment for their children when practicing tummy time. This aligns with the opinion of Ramadhania and Sriwenda (2022) which states that optimal parental support plays an important role in the success of stimulating children's motor development, especially in the early stages of life.

Emotional support shown by mothers, such as giving attention, pleasure, and praise when children practice lying on their stomachs, can increase the child's sense of security and comfort, as explained by Britto *et al.,* (2020) which confirms that the quality of early care is crucial for the effectiveness of motor stimulation in early childhood. This positive emotional state is essential for children to be willing and able to perform tummy time routinely. Stimulation provided with love will have a more optimal impact on a child's motor development than stimulation provided without emotional involvement. Another study conducted by Jeong *et al.,* (2021) shows that mothers with high levels of involvement tend to be more sensitive to their child's readiness signals, so that stimulation such as prone positioning can be provided in a timely manner and according to the child's abilities.

In addition, instrumental support can also be seen from a mother's willingness to provide time, place, and safe tools for her child to practice the habit of lying on his stomach, in line with the findings Madigan *et al.,* (2022) which states that a supportive home environment significantly increases the frequency and quality of children's prone-prone activities. Adequate facilities allow children to engage in prone-prone activities more comfortably and safely, thereby minimizing the risk of injury.

The informative support mothers receive, whether through healthcare professionals, media, or personal experience, contributes to the high level of support. Mothers who have a good understanding of the benefits of prone positioning tend to be more consistent in implementing it. Hidayah *et al.,* (2024) explained that increasing mothers' knowledge about prone sleeping habits is related to increasing motor stimulation practices in children.

Thus, the results of this study indicate that strong maternal support is a crucial factor in developing the habit of prone positioning in children aged 0-3 months. This support serves as the primary foundation for providing stimulation appropriate to the child's developmental needs.

Variables Related to the Habit of Sleeping on One's Stomach

The results of the study showed that 36 children (50%) aged 0-3 months had tummy time habits that were categorized as very good and good at each level. This finding indicates that almost all children have received optimal tummy time stimulation. This research aligns with the results of other studies Hewitt *et al.,* (2020) which states that children who receive routine prone reflex stimulation from an early age show faster improvements in head control and postural stability.

This excellent tummy time habit reflects that the child has been practicing tummy time routinely, according to the recommended frequency and duration.

Regularly practicing the tummy time reflex can help strengthen the neck, back, and shoulder muscles, as well as support the child's gross motor development. This aligns with the opinion of Sihura *et al.*, (2023) who stated that consistent tummy time significantly improves a child's gross motor skills.

Furthermore, habit of prone also plays a role in preventing flat head syndrome, which can occur due to prolonged back sleeping. Varied body positions can optimize the development of a child's head shape. Carson *et al.,* (2022) emphasized that children's motor activity, including prone sleeping, is closely related to their physical and neurological development in early life. Good prone sleeping also depends on the mother's active involvement throughout the process. Maternal involvement during tummy time stimulation activities is also an important factor, as research by Rosenberg *et al.,* (2023) found that maternal verbal and visual interaction during tummy time stimulation increases the frequency and duration of the activity. Mothers who accompany, interact with, and pay attention to their child's comfort during tummy time can increase the child's positive response to the activity. Fitriyani *et al.,* (2022) stated that mother-child interaction during tummy time can increase the success of motor stimulation while strengthening emotional bonds.

Based on the bivariate test using the Pearson test, a p value <0.001 and a correlation coefficient value of 0.797 were obtained, which indicates a very strong and significant relationship between maternal support and the habit of lying face down in children aged 0-3 months. This is indicated by one of the results of the maternal support indicator in the form of an assessment explaining that the mother feels happy if her child succeeds in doing the prone reflex well and the indicator of prone habits in the form of knowledge and education explaining that the mother always changes the position of the child's head when lying face down to train the left and right neck muscles.

Conclusion

Based on the analysis and discussion of the data, the author concludes that the mother's support for the habit of lying on her stomach in children aged 0-3 months can be concluded as follows. Maternal support for prone-laying in children aged 0-3 months was very high. This indicates that parents, particularly mothers as respondents, were optimally involved in providing attention, motivation, information, and facilities to support tummy-laying in children, although other factors beyond the research also played a role. In this study, the prone position of children aged 0-3 months was categorized as very good and good. This reflects that the children have received gross motor stimulation appropriate to their developmental stage, both in terms of frequency and quality of implementation. There is a very strong and statistically significant relationship between maternal support and tummy time in children aged 0-3 months. This positive relationship indicates that the greater the maternal support, the better the child's tummy time.

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