

## DETERMINANTS OF INFANT MASSAGE THERAPY IN OPTIMIZING TODDLER DEVELOPMENT

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### ABSTRAK PENENTU TERAPI PIJAT BAYI DALAM OPTIMASI PERKEMBANGAN BALITA

Latar Belakang : Pijat bayi sudah lama dilakukan oleh masyarakat di seluruh dunia, khususnya di Indonesia. Pijat bayi secara teratur akan meningkatkan hormon katekol (epinefrin dan norepinefrin) yang memiliki manfaat untuk menstimulasi tumbuh kembang sehingga dapat meningkatkan nafsu makan, menambah berat badan, serta merangsang perkembangan struktur dan fungsi otak. Salah satu faktor yang mempengaruhi terapi pijat bayi adalah dukungan keluarga.

Tujuan : Untuk menganalisis hubungan dukungan keluarga dengan terapi pijat bayi di PMB Nur Khasanah Amd.Keb .

Metode : Penelitian kuantitatif dengan jenis penelitian observasional analitik. Desain penelitian cross sectional. Uji Fisher Exact menggunakan tingkat signifikan 0,05. Populasi sebanyak 85 responden dan menggunakan sampel sebanyak 54 responden. Pengumpulan data melalui kuesioner dan lembar observasi.

Hasil : Hasil penelitian menunjukkan bahwa sebagian besar (74,1%) ibu mendapat dukungan keluarga dan sebagian besar (72,2%) ibu melakukan pijat bayi, dan terdapat hubungan yang signifikan. meningkatkan pelayanan atau penyuluhan pijat bayi, sehingga diharapkan terapi pijat bayi menjadi tindakan yang rutin dilakukan sebagai salah satu upaya pencegahan stunting.

Kesimpulan : Terdapat hubungan yang signifikan antara dukungan keluarga dengan terapi pijat bayi pada ibu yang memiliki bayi usia 0-12 bulan di PMB Nur Khasanah Amd.Keb.

Saran : Bagi ibu dan keluarga ibu sebagai referensi stimulasi tumbuh kembang dan tambahan wawasan tentang pentingnya pijat pada bayi agar bayi mengalami pertumbuhan yang optimal

Kata kunci : Dukungan Keluarga, Pijat Bayi, Perkembangan

### ABSTRACT

Background: Infant massage has long been practised by people around the world, especially in Indonesia. Regular infant massage will increase catechol hormones (epinephrine and norepinephrine) which have the benefit of stimulating growth and development to increase appetite, gain weight, and stimulate the development of brain structure and function. One of the factors that influence infant massage therapy is family support.

Objective: To analyze the relationship between family support and infant massage therapy at PMB Nur Khasanah Amd.Keb.

Methods: Quantitative research with analytic observational type of research. Cross-sectional research design. Fisher Exact test using a significant level of 0.05. The population was 85 respondents and used a sample of 54 respondents. Data collection through questionnaires and observation sheets.

Results: The results showed that most (74.1%) mothers received family support and most (72.2%) mothers did baby massages, and there was a significant relationship. improve baby massage services or counselling, so it is hoped that baby massage therapy will become a routine action as one of the efforts to prevent stunting.

Conclusion: There is a significant relationship between family support and baby massage therapy in mothers who have babies aged 0-12 months at PMB Nur Khasanah Amd.Keb.

Suggestion: For mothers and their families as a reference for growth and development stimulation and additional insight into the importance of massage in infants so that babies experience optimal growth.

Keywords: Family Support, Baby Massage, Development

### INTRODUCTION

Baby massage is the oldest and most popular

touch therapy known to man. It is said to be touch therapy because through baby massage there will be comfortable and safe communication between the mother and her baby. (Kurniati & Indasari, 2018). Baby massage is very important for the baby's health. Especially when done by the parents themselves to create communication between parents and babies through a touch massage that contains elements of affection, voice, eye contact, and movement. Infant massage can involve the closest family members to bring the emotional connection closer, such as the father, grandmother, or grandfather. A baby's instincts can respond to touch from its mother as an expression of love, protection, and attention (Bandar, Kab, & In, 2022).

Baby massage has long been practised by people all over the world, especially in Indonesia. Regular baby massage will increase catechol hormones (epinephrine and norepinephrine) which have the benefit of stimulating growth and development so that they can increase appetite, gain weight, and stimulate the development of brain structure and function. The problem that might occur is that the implementation of infant massage at this time is the family's assumption that infant massage is not a form of therapy and is natural for infants which can provide many benefits. (Ericha Merammis BR Sembiring et al., 2022). In addition, baby massage can also improve blood circulation and increase the body's metabolism, thereby increasing the baby's weight. Baby massage is an expression of affection between parents and children through skin touch (Lestari et al., 2021; Mrljak et al., 2022).

According to the World Health Organization (WHO) 2017, globally around 20-40% of infants aged 0-12 months experience developmental delays. The prevalence of child development problems in various developed and developing countries includes 12-16% in the US, 22% in Argentina, and 23% in Hong Kong. Several studies have been evaluated based on the impact of failure and even shortening life span (Bhandari, 2017).

According to the Indonesian Ministry of Health (2006), states that 16% of infants experience saraf and brain development disorders ranging from mild to severe (Departemen Kesehatan Republik Indonesia, 2006). The lack of stimulation given to infants adds to the delay in infant development, Experts at the University of Miami School of Medicine since 1986 have researched the benefits of infant massage and proven that the weight development of premature babies who are massaged has increased by 20-40% compared to babies baby massage and 1 mother did not receive family support about baby massage (Hutasuhut, 2018). Mothers need support

from the family in performing infant massage therapy or when choosing a massage practitioner for their baby. If the mother does not understand how to massage the baby properly, the mother should seek information through the media that discusses the correct baby massage and is expected to provide information to the mother, then the mother applies it herself. Health workers should provide counselling on the importance of proper infant massage to mothers, fathers, and the baby's closest family (Putri et al., 2020)

The Indonesian Pediatric Association (IDAI) of East Java (2012) examined 2,634 children from the age of 0-3 years old. The results of the examination for development were found to be normal according to age as much as 53%, doubtful (requiring deeper examination) as much as 13%, and developmental deviations as much as 34%. Based on the data above, it can be seen that the number of doubts and developmental deviations is still quite large in Indonesia (Krisdiantini, 2015).

Several other studies have explained that infant massage can significantly increase weight in preterm infants when compared to the control group. This research is in line with research conducted by Dasuki (2010) which states that baby massage can increase baby's weight. The same study was conducted by Purnamasari (2011) explaining that in babies 4 months there is a significant increase in baby weight. (Krisdiantini, 2015)

## RESEARCH METHODS

The type of research is observational analytic research, which is a study to find facts with proper interpretation and the results of the study are processed using statistical tests. Researchers want to analyze family support with infant massage therapy using a cross-sectional approach method. Cross-sectional research is a type of research that emphasizes the time of measurement or observation of independent and dependent variable data only once (Windadari Murni Hartini, Cristina Roosarjani, 2019). Independent variables are variables that affect or determine the value of other variables. The independent variable in this study is family support. The dependent variable is the variable whose value is determined by other variables (A Nasir, 2011)

The participants in this study are a. Children aged 1-5 years and b. Children who have gone to kindergarten. The univariate analysis produces data in the form of frequency distribution and percentage of each research variable. The univariate analysis aims to describe the characteristics of the sample by making a distribution table for each independent and dependent variable. Univariate analysis was

conducted on each research variable, both independent and dependent variables. The variables analyzed were family support

The bivariate analysis produces data in the form of observation results. Bivariate analysis was carried out using the Exact Fisher test, namely analyzing the relationship between family support and infant massage therapy using a computerized system, namely the criteria for testing the hypothesis is  $H_1$ , accepted, if  $p < \alpha$ , with  $\alpha = 0.05$ . (Mastang Ambo Baba, 2017)

## RESEARCH RESULTS

Quantitative analytic research with a cross-sectional approach, namely the collection of exposure and results at one time to describe the characteristics of the subject and the relationship between variables. The independent variable is family support, and the dependent variable is baby massage. The study population was all pregnant women who gave birth from 2020 to 2021 at the Roichah clinic, totalling 85 people. The sampling technique used a simple random sampling technique of 54 people. Data processing was carried out univariate, bivariate and multivariate. The instruments in this study are observation sheets and secondary data from medical records. Bivariate analysis with Chi-square test with 95% confidence level ( $\alpha=0.05$ ).

**Table 1**  
Frequency Distribution of Respondents by Age

Age	Frequency (f)	Percentage (%)
At Risk (<20th and >35th)	5	9.3
Not at Risk (20-35 years old)	49	90.7

Source: Primary Data

**Table 2**  
Frequency Distribution of Respondents Based on Education

Level	Frequency (f)	Percentage (%)
SD	2	3.7
SMP	14	25.9
HIGH SCHOOL	24	44.4
PT	14	25.9

Source: Primary Data

**Table 3**  
Frequency Distribution of Respondents Based on Occupation

Level	Frequency (f)	Percentage (%)
Housewife	11	20.4
Private	35	64.8
Not Working	8	14.8

Source: Primary Data

**Table 4**  
Frequency Distribution of Respondents Based on Family Support

Family Support	Frequency (f)	Percentage (%)
Positive	40	74.1
Negative	14	25.9

Source: Primary Data

**Table 5**  
Frequency Distribution of Respondents Based on Infant Massage

Baby Massage	Frequency (f)	Percentage (%)
Doing	39	72.2
Not Doing	15	27.8

Source: Primary Data

**Table 6**  
Relationship between family support and infant massage therapy

Family Support	Baby Massage Therapy				Total
	Doing	%	Not Doing	%	
Support	35	64.8	5	9.3	40
Not in favor	4	7.4	10	18.5	14

Source: Primary Data

## DISCUSSION

### Family support

Family support in this study from mothers

visiting PMB Nur Khasanah Amd.Keb is divided into 2 groups, namely supportive and non-supportive groups. It is known that the total sample of 54

respondents, most (64.8%) who received family support were 35 respondents and a small proportion (7.4%) who did not receive family support were 4 respondents. Mothers who received family support were more than mothers who did not receive family support. For more than three decades, this theory has been one of the most widely used psychosocial approaches to explain healthy behavior by looking at the health beliefs that individuals have. (To be able to support understanding and understanding in line with this study, researchers use the HBM approach to explain the meaning of health beliefs. Health beliefs according to HBM are: an individual's assessment of the threat that occurs due to health problems that may develop (perceived threat of injury or illness) which includes: perceived susceptibility and perceived severity and consideration of the advantages and disadvantages (benefits and costs) in displaying healthy behavior (Bart, 1994). In the research results obtained and reviewed with several family support theories and health belief model theories. Most mothers who receive family support are influenced by healthy behavior. Factors that influence family support are instrumental support, information support, assessment support, emotional support. These factors will be carried out with the influence of healthy living behavior (Health Belief Model).

### **Baby Massage Therapy**

Of the 54 samples of mothers who had babies aged 0-12 months at PMB Nur Khasanah Amd.Keb 39 respondents (72.2%) did baby massage more than mothers who did not do baby massage as many as 15 respondents (27.8%). Massage is the oldest touch therapy known to man and the most popular. Massage is an art of health care and medicine practiced since centuries ago (Roesli, 2016). Through massage, the baby will feel pressure, stretching and relaxation with gentle pressure then the baby will feel calm massage is also accompanied by a soft voice and affectionate touch. Most babies will fall asleep for a long time once the massage is done to them. Through massage, blood circulation will flow smoothly throughout the body, including to the brain (Harun et al., 2023). One of the important substances carried is oxygen. The fulfillment of sufficient oxygen in the brain makes the baby's concentration and alertness better (Deri Rizki Anggarani & Yazid Subakti, 2013). Baby massage is an expression of affection between parents and children through the touch of skin, the benefits of baby massage include increasing weight and growth, increasing endurance, increasing baby's concentration and making baby sleep well, fostering

the bond of love between parents and children, increasing breast milk production (Ho, Lee, Chow, & Pang, 2010; Lestari et al., 2021; Vicente & Pereira, 2021). Infant massage provides positive biochemical and physical benefits such as reducing stress hormones in infants, positively altering brain waves, improving blood circulation and breathing, increasing baby's weight, relaxing the baby while sleeping, curing colic and bloating, and increasing the bond of affection between mother and baby and increasing milk production (Priyadarshi, Kumar, Balachander, Gupta, & Sankar, 2022; Roesli, 2001). Massage for infants and children requires unique approaches (e.g. manipulations, frequency, locations, strength, permission of children), which determine the effects of this intervention (Chen et al., 2021a; Lestari et al., 2021). Some factors that have a relationship with infant massage therapy at PMB Nur Khasanah Amd.Keb are age, education, and occupation. In the age category, it is divided into 2 groups, namely at-risk age (<20th and >35th) as many as 5 respondents (9.3%) and non-risk age (20-35th) as many as 49 respondents (90.7%). At the age of women who are not at risk tend to be more than women of risky age. Educational data obtained by mothers with a history of high school education being the largest percentage of 24 respondents (44.4%), junior high school and PT amounted to 14 respondents each (25.9%) and elementary education had the smallest percentage of 2 respondents (3.7%). The division of employment is divided into 4 types, namely private as many as 35 respondents (64.8%) more than housewives as many as 11 respondents (20.4%) and not working as many as 8 respondents (14.8%). These results can be seen in appendix 9. The results of the study illustrate that mothers who have known the benefits of infant massage, most (72.2%) mothers do infant massage. This is in line with the theory according to Bastian et al (2014), the factor that influences the massage of infants is the existence of healthy behavior (Health Belief Model) in one component is perceived benefit, namely beliefs related to the effectiveness of various behaviors in an effort to reduce the threat of disease or the benefits perceived by individuals in performing healthy behavior the theory is in line with the results of the study (Farida, 2018; Sri Agus Setyaningsih, Wahyuni, Keperawatan, & Keperawatan Dustira, 2021). Field conducted a narrative review to summarize the literature on massage therapy in the last decade and showed that this intervention may have beneficial effects on many pediatric conditions and may improve gross and fine motor development in children (Field, 2019; Gürol & Polat, 2012; Jeong, Franchett, Ramos de Oliveira, Rehmani, &

Yousafzai, 2021).

### **Relationship between family support and infant massage therapy**

The results of bivariate and univariate analysis of the relationship between family support and infant massage therapy obtained the following results from 54 samples of mothers who have babies aged 0-12 months at PMB Nur Khasanah Amd.Keb there were 40 respondents (74.1%) received family support (positive) more than respondents who did not get family support as many as 14 respondents (25.9%). Of the 54 samples of mothers who received family support to do baby massage were 35 respondents (87.5%), mothers who received family support but did not do baby massage were 5 respondents (12.5%). While mothers who did not get family support but did baby massage were 4 respondents (28.6%), mothers who did not get family support and did not do baby massage were 10 respondents (71.4%). Looking at the Asymp.Sig value: If the Asymp.Sig value  $< 0.05$ , then there is a significant relationship between rows and columns. If the Asymp.Sig value  $> 0.05$ , then there is no significant relationship between rows and columns. Analysis of the Relationship Between Family Support and Infant Massage Therapy The result of Asymptotic Significance (2-sided) / p value in this study is 0.000 smaller than 0.05. Statistically  $H_a$  is accepted, which means that there is a significant relationship between family support and baby massage therapy for mothers who have babies aged 0-12 months at PMB Hj. Roichah, S.ST., Bd Taman Sidoarjo.

According to Becker, et al 2011 and 2013, behavior change is influenced by individual characteristics, individual assessment of behavior change, individual experience and individual readiness to take actions that can be beneficial in order to avoid disease or reduce the risks posed (Cristanti, 2013). The Health Belief Model theory in this study focuses on external aspects. Family acceptance of infant massage therapy is influenced by family support.

In this study there was a relationship between family support and infant massage therapy, the number of mothers who received family support and did infant massage was more than mothers who did not receive family support. This is related to factors that influence infant massage therapy, namely family support factors, where one of them is the role of the family in realizing healthy behavior ( Health Belief Model ) in the cues to action component, namely behavior is influenced by something that is a cue to take action, for example family support, husband and

peer support and finally the individual's belief that he will be able to take the action or action (self efficacy)(Satwika, Setyowati and Anggawati, 2021).

External factors on the mother such as family support in deciding to do baby massage or not. Both regarding the magnitude of the benefits of baby massage that can stimulate the growth and development of the baby (Chen et al., 2021; Vicente and Pereira, 2021). In this study, HBM theory is associated with individual beliefs so that they are able to carry out healthy living behaviors, one of which is by doing baby massage therapy, given the great benefits obtained to support the growth and development of babies(Basiri-Moghadam, Basiri-Moghadam, Kianmehr, & Jani, 2015). With the counseling or counseling related to baby massage, it is hoped that it will be able to provide broad insights for mothers who have babies, especially those aged 0-12 months. (Satwika et al., 2021; Vicente, Verissimo, & Diniz, 2017).

This is in line with the results of Oktavianty's research, 2020, which is based on the results of analyzing the relationship between family support and infant massage therapy, with the Chi Square test obtained a p value  $< 0.05$ , which is 0.028. Statistically, it can be said that  $H_a$  in this study is accepted, meaning that there is a significant relationship between family support and infant massage therapy.

### **CONCLUSION**

Almost all mothers (74,1%) of infants aged 0 to 12 months in PMB Nur Khasanah Amd.Keb had family support (up to 40 respondents). There is a significant association between family support and infant massage therapy for mothers delivering babies between 0 and 12 months of age in PMB Nur Khasanah Amd.Keb.

### **SUGGESTION**

Based on the results of research and discussion, there are several suggestions that need to be conveyed to the community, namely as a source of education and knowledge in order to know the relationship between family support and infant massage therapy so that it is hoped that the community will care about the growth and development of their babies. For mothers and mothers' families as a reference for growth and development stimulation and additional insight into the importance of massage in infants so that babies experience optimal growth.

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