

## TRANSFORMATION OF POSTPARTUM MOTHERS' KNOWLEDGE THROUGH INFANT MASSAGE COUNSELING INTERVENTION

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### ABSTRAK : TRANSFORMASI PENGETAHUAN IBU NIFAS MELALUI INTERVENSI PENYULUHAN PIJAT BAYI

Latar Belakang: Perkembangan kesehatan ibu dan anak di Indonesia menunjukkan pentingnya optimalisasi tumbuh kembang bayi melalui stimulasi dini. Pijat bayi merupakan salah satu bentuk stimulasi taktil yang memberikan manfaat bagi perkembangan fisik dan psikologis bayi. Namun, fenomena di masyarakat menunjukkan masih rendahnya pengetahuan ibu nifas tentang teknik pemijatan yang benar dan aman. Pengetahuan merupakan domain fundamental dalam membentuk perilaku praktik perawatan bayi yang optimal. Keterbatasan pemahaman ibu dapat berisiko pada penerapan teknik yang tidak tepat dan berpotensi membahayakan bayi.

Tujuan: Menganalisis pengaruh penyuluhan pijat bayi terhadap peningkatan pengetahuan ibu nifas di Ruang M RSUD Dr. I Tulungagung.

Metode: Penelitian menggunakan desain deskriptif analitik dengan rancangan One Group Pretest-Posttest Design. Sampel dipilih secara purposive sampling sejumlah 30 ibu nifas yang memenuhi kriteria inklusi. Pengumpulan data menggunakan kuesioner untuk mengukur tingkat pengetahuan sebelum dan sesudah intervensi penyuluhan. Penyuluhan dilakukan selama 30 menit menggunakan media leaflet dan demonstrasi dengan boneka. Analisis data menggunakan uji paired t-test dengan tingkat signifikansi  $\alpha = 0,05$ .

Hasil: Sebelum penyuluhan, 73,3% responden memiliki pengetahuan kurang dan tidak ada yang berpengetahuan baik. Setelah penyuluhan, terjadi peningkatan signifikan dengan 26,7% responden mencapai pengetahuan baik dan 46,7% mencapai kategori cukup. Hasil uji statistik menunjukkan  $p\text{-value } 0,000 < \alpha 0,05$  yang membuktikan adanya pengaruh signifikan penyuluhan terhadap peningkatan pengetahuan ibu nifas.

Kesimpulan: Penyuluhan pijat bayi terbukti efektif meningkatkan pengetahuan ibu nifas secara signifikan, dengan peningkatan paling tinggi pada aspek hal-hal yang harus diperhatikan dalam pemijatan bayi.

Kata Kunci: Penyuluhan, Pijat Bayi, Pengetahuan, Ibu Nifas, Stimulasi Taktil

### ABSTRACT

Background: The development of maternal and child health in Indonesia shows the importance of optimizing infant growth and development through early stimulation. Infant massage is a form of tactile stimulation that provides benefits for physical and psychological development of infants. However, phenomena in society show that postpartum mothers' knowledge about correct and safe massage techniques is still low. Knowledge is a fundamental domain in shaping optimal infant care practice behavior. Limited maternal understanding can pose risks to improper technique implementation that potentially endangers infants.

Purpose: To analyze the effect of infant massage counseling on improving knowledge of postpartum mothers in M Ward of Dr. I Hospital Tulungagung.

Methods: This study used descriptive analytical design with One Group Pretest-Posttest Design. Samples were selected using purposive sampling of 30 postpartum mothers who met inclusion criteria. Data collection used questionnaires to measure knowledge levels before and after counseling intervention. Counseling was conducted for 30 minutes using leaflet media and demonstration with dolls. Data analysis used paired t-test with significance level  $\alpha = 0.05$ .

Results: Before counseling, 73.3% of respondents had poor knowledge and none had good knowledge. After counseling, there was significant improvement with 26.7% of respondents achieving good knowledge and 46.7% reaching sufficient category. Statistical test results showed  $p\text{-value } 0.000 < \alpha 0.05$  proving significant effect of counseling on improving postpartum mothers' knowledge.

Conclusion: Infant massage counseling proved effective in significantly improving postpartum mothers' knowledge, with the highest improvement in aspects of considerations that must be observed in infant massage.

Keywords: Counseling, Infant Massage, Knowledge, Postpartum Mothers, Tactile Stimulation

## INTRODUCTION

The birth period of a baby is a critical period that requires special attention to meeting basic needs. Every newborn needs three important aspects for optimal growth and development, including physical and biological needs, affectionate needs, and stimulation needs to optimize the function of the sensory and motor systems (Yazid Subakti, 2018). One form of stimulation that can be provided is through the baby massage technique which is the implementation of touch therapy in health care. Baby massage is defined as a touch therapy-based healthcare art that provides a guarantee of continuous body contact to maintain a feeling of security in the baby (Saragih, 2020). Various benefits have been proven from the practice of baby massage, including creating a sense of comfort, stimulating blood circulation and increasing energy, strengthening the immune system, reducing stress and improving the quality of baby sleep, increasing milk production, and strengthening the emotional bond between parents and children (Roesli, 2021).

Phenomena in the community show that the majority of mothers still choose to use the services of baby shamans to massage their babies, even though in fact parents can do it themselves at home or take advantage of the services of the Baby Massage Poly with trained personnel who have expertise and knowledge about proper massage techniques (Roesli, 2021). The mother's limited understanding of the correct massage technique, coupled with the influence of traditional culture that is still strong, leads to the risk of improper application of the technique. The wrong practice of massage has the potential to harm the baby's bone structure, cause pain, psychological trauma, and can even lead to serious complications such as *Paralytic Illicit* (WHO, 2012). Behavioral theory put forward (Notoatmodjo, 2015) explains that behavior is formed through sequential stages of knowledge (*Knowledge*), attitude (*Attitude*), to practice (*Practice*) or known as the model *K-A-P* (Launiala, 2009). This concept indicates that a person's behavior in performing baby massage is influenced by the level of knowledge they have. Supportive (positive) knowledge has a great chance of being implemented in the form of practical behavior (Green & Kreuter, 2015).

Several studies have proven the effectiveness of infant massage. Hariandja reported that the administration of massage had a significant effect on the development of gross and fine motor skills in babies aged 6-12 months at the Lisu Health Center (Hariandja, 2019). (Hidayanti, 2018) In her research at Polindes Harapan Bunda Sukoharjo showed that 71.9% of respondents who received health education about baby massage had good practice skills. Another study revealed that infant massage on the condition *Down syndrome* provides an improvement in motor function by 44% and an improvement in arm and leg muscles by 82% (Putri, 2019). A preliminary study conducted by Ernawati in October 2021 in Kencong hamlet showed that out of 39 babies, there were 2 massage shamans with an average of 3-5 mothers per day who massaged their babies (Ernawati, 2021). A follow-up study in the M Room of dr. I Tulungagung Hospital on 7 postpartum mothers showed that only 3 people understood baby massage, while the other 4 did not have adequate knowledge.

The massage done by parents themselves has a special meaning because it affects the inner relationship between parents and children (Roesli, 2021). Increasing knowledge about baby massage is expected to change the behavior of mothers so that they want to do massage independently. To prevent unwanted risks, the mother must have adequate knowledge of the correct massage technique. Health workers play an important role in providing counseling and demonstration of proper massage techniques to postpartum mothers. Based on this description, this study aims to analyze the effect of infant massage counseling on the knowledge of postpartum mothers in the M Room of dr. I Tulungagung Hospital, with the hope of increasing the knowledge and ability of mothers to perform baby massage independently and safely.

## RESEARCH METHODS

This study employed an analytical descriptive one-group pretest-posttest design to assess changes in postpartum mothers' knowledge following infant massage counseling, without a comparison group. Knowledge was measured before ( $O_1$ ) and after ( $O_2$ ) the intervention.

The study was conducted from June to July 2024 in the M Room of dr. I Tulungagung Hospital.

The population comprised 60 postpartum mothers hospitalized during the study period. Samples were selected using purposive sampling, with inclusion criteria of postpartum mothers on days 1–2, able to read and write, and willing to participate. Exclusion criteria included mothers with complications, mental disorders, or prior participation in similar studies.

The independent variable was infant massage counseling, and the dependent variable was mothers' knowledge of infant massage. Counseling was provided using leaflets and baby dolls. Data were collected using structured questionnaires administered pre- and post-intervention, and analyzed by comparing pretest and posttest scores to determine changes in knowledge.

#### Variable Operations

The independent variable in this study was infant massage counseling, defined as the provision of information regarding infant massage to postpartum mothers. The counseling was delivered through health education using leaflets and baby dolls as instructional media. Measurement of this variable was conducted using questionnaires and checklists, with data measured on an ordinal scale. Scoring criteria were based on respondents' answers, with correct answers scored as 1 and incorrect answers scored as 0.

The dependent variable was mothers' knowledge of infant massage, defined as the extent to which postpartum mothers understand the definition, benefits, important considerations, and procedures of infant massage. This variable was measured using questionnaires and checklists on an ordinal scale. Knowledge levels were categorized as good (76–100%), fair (56–75%), and poor (<56%).

#### Instruments and Data Collection

The research instrument used questionnaires and *Checklist* to measure the mother's knowledge of baby massage (Notoatmodjo, 2015). Data collection is carried out directly from primary data through the preparation and implementation stages. The implementation of research involves giving *Pretest*, counseling intervention for 30 minutes using the media *Leaflets* and dolls, and *Posttest* for the evaluation of knowledge improvement (Polit & Beck, 2018).

#### Data Analysis

Data processing through stages *Editing*, *Coding*, *Scoring* and *tabulating*. The coding system includes general data (education, age, occupation,

history of baby massage information) and specific data (level of knowledge). *Scoring* using a dichotomy scale with values of 0 for incorrect answers and 1 for correct answers. Data analysis used a descriptive approach with percentage calculation:  $P = (\sum f/n) \times 100\%$ . Interpretation of results using categories: good knowledge (76–100%), adequate (56–75%), and less (<56%) based on classification (Nursalam, 2018).

Statistical analysis using *Univariate Analysis* to describe the frequency and percentage distribution of each variable, and *Bivariate analysis* Using the test *Paired T-Test* to compare knowledge before and after the intervention (Scott, 2016). The significance level is set  $\alpha = 0.05$ , where  $H_1$  accepted if the value of  $p \leq \alpha$ , showing the influence of counseling on increasing the knowledge of postpartum mothers.

#### Ethical Aspects

Ethical principles include *informed consent* (respondent's written consent), *anonymity* (use of anonymous codes), and *confidentiality* (guaranteed data confidentiality). Each respondent received a complete explanation of the purpose of the research and the right to refuse or withdraw from the research without consequences for the health services received (CIOMS, 2016).

## RESEARCH RESULTS

This research was carried out in July 2024 at Dr. I Tulungagung. This hospital has 4 obstetric rooms consisting of 1 VK room, 1 neonatal room, 1 postpartum room, and 1 Midwifery and Obstetrics poly. The researcher took 30 samples according to the inclusion and exclusion criteria by observing in the M Room.

#### Respondent Characteristics

**Table 1**

**Distribution of Respondent Frequency Based on Postpartum Education in the M Room of Dr. I Tulungagung Hospital in July 2024**

Variabels	f	Percentage (%)
Education		
Not in school	2	6,7
SD	4	13,3
JUNIOR	9	30,0
SMA	11	36,7
PT	4	13,3
Work		
IRT	8	26,7
Farm labourers/private employees	15	50,0

Self employed	5	16,7	Less	22	73,3
Civil Servant/TNI/POLRI	2	6,7	Enough	8	26,7
Knowledge			Good	0	0
Less	22	73,3	Knowledge After		
Enough	8	26,7	Less	8	26,7
Good	0	0	Enough	14	46,7
Information			Good	8	26,7
Never	22	73,3			
Ever	8	26,7			
Resources					
Health workers	6	75,0			
Mass media	0	0,0			
Electronic media	0	0,0			
Friends/relatives	2	25,0			
Knowledge Before					

#### Statistical Analysis

The results of the *paired t-test statistical test* showed a significant influence of counseling on improving the knowledge of postpartum mothers. The mean value is -0.733 with a standard deviation of 0.583 and a p-value of 0.000 <  $\alpha$  0.05, indicating that  $H_0$  is rejected and  $H_1$  is accepted.

**Table 8**  
**Paired t-test test results**

The effect of counseling on baby massage knowledge	Mean (pretest - Posttest)	Std. Deviation	P-value
Before-after score	-0,733	0,583	0,000

## DISCUSSION

### Knowledge of Postpartum Mothers Before Counseling

The findings of the study showed that most postpartum mothers (73.3%) had less knowledge about baby massage before being given counseling. This condition is influenced by several interrelated demographic and social factors. The results of the cross-tabulation showed that respondents with high school and college education tended to have better knowledge compared to those with low education. These findings are in line with the theory put forward (Setiadi, 2017) that education affects the learning process, where the higher a person's education, the easier it is for the person to receive information. Higher education makes a person tend to actively seek information, both from interpersonal and mass media. The information obtained is then processed into knowledge that can be applied in daily life (Wawan Dewi, 2011).

The age factor showed interesting results where respondents aged >35 years actually showed less knowledge than the younger age group (Budiman & Riyanto (2013). This is contrary to the theory (Ahmadi & Uhbiyati, 2020) which states that knowledge is influenced by age, where the more mature a person is, the better the level of maturity and power of thought. This inconsistency can be explained by the lack of exposure to information about baby massage in respondents, regardless of age factors. The work aspect showed that respondents who worked as civil servants/TNI/Polri and housewives had relatively better knowledge.

However, overall there is no significant difference between the job categories. Theory (Umrana et al., 2021) mentioned that work has an indirect effect on knowledge through social interaction and information exchange. In the context of this study, busy work can actually reduce access to health information, especially about baby massage.

Prior exposure to information is a factor that greatly determines the level of knowledge of respondents. The results showed that 22 respondents (73.3%) who had never received information had insufficient knowledge, while 8 respondents who had received information had sufficient knowledge. (Nursalam, 2015 Explain that information is an important function to reduce anxiety and increase knowledge. The information obtained can have a short-term effect (*Immediate impact*) that results in a change or increase in knowledge. The most effective source of information is health workers, where 6 out of 8 respondents who get information from health workers have sufficient knowledge. This is in accordance with research (Gunarsa, 1982) which shows that credible news anchors are more successful in influencing the public than their home media.

### Knowledge of Postpartum Mothers After Counseling

Counseling is provided using the *Leaflets* and the baby massage demonstration showed encouraging results. There was a shift in the category of knowledge where the number of respondents with less knowledge decreased from

22 people to 8 people, while those with good knowledge increased from 0 to 8 people. Analysis per parameter shows varying improvements. The parameter that saw the most significant improvement was "things to look out for in baby massage" with a good score increasing from 0 to 18 (60%). This increase can be attributed to the characteristics of the respondents, the majority of whom are >35 years old (Kemenkes RI 2019). Theory (Hidayat, 2018) explained that the more mature a person gets, the process of mental development improves, so that the ability to understand important aspects of an action becomes more optimal. In contrast, the "how to massage a baby" parameter showed the smallest increase, with a good score only increasing from 4 to 4 respondents. This indicates that the practical and technical aspects require a more intensive learning approach than the theoretical aspect. The limited timing of counseling and the complexity of the baby's massage movements may be factors influencing these results. Media use *Leaflets* and demonstrations in counseling have proven to be effective in increasing information absorption. Visual media and hands-on practice help respondents understand abstract concepts more concretely. This is in accordance with the principles of adult learning that prioritize hands-on experience and practical application.

### **The Effect of Counseling on Knowledge Enhancement**

Statistical test results *Paired T-Test* proving that there is a significant influence of counseling on improving the knowledge of postpartum mothers ( $p\text{-value} = 0.000 < 0.05$ ). These findings support the theory (Ahmadi, Uhbiyati, & Nur, 2020) which states that behaviors based on knowledge will be more lasting than those that are not based on knowledge. The success of this counseling is also in line with the concept of health education according to (Walker, 2015) which is a process of change to change individuals, groups, and society towards positive things. The right counseling method is a key factor in achieving optimal results. The results of this study are consistent with the findings of the (Saragih, 2020) About the comparison of increasing maternal knowledge about baby massage which shows that counseling accompanied by audiovisual media is effective in increasing knowledge. The use of media in health counseling has several advantages: making it easier to convey information, avoiding misperceptions, clarifying information, making it easier to understand, reducing verbal

communication, displaying objects that cannot be caught by the eye, and facilitating communication.

The increase in knowledge that occurs shows that a structured educational approach and using the right media can be an effective strategy in increasing the knowledge of postpartum mothers. This has important implications for maternal and child health programs, especially in optimizing infant growth and development through tactile stimulation such as baby massage. The limitation of this study lies in the relatively short duration of follow-up, so it has not been able to evaluate long-term knowledge retention. In addition, the evaluation of knowledge has not been accompanied by an assessment of the ability to practice the baby's massage directly. Further research is suggested to explore the long-term effectiveness and measure the implementation of knowledge in daily practice. The practical implication of this study is the need to develop a systematic and sustainable infant massage counseling program in health facilities. Health workers need to be equipped with the ability to provide effective education by using various learning media that are interesting and easy to understand for postpartum mothers with diverse educational backgrounds.

### **CONCLUSION**

This study proves that infant massage counseling has a significant influence on increasing the knowledge of postpartum mothers in the M Room of Dr. I Tulungagung Hospital. The results of the paired t-test with a  $p\text{-value}$  of  $0.000 < \alpha 0.05$  showed a significant difference between the level of knowledge before and after the counseling intervention. Before the counseling, 73.3% of respondents had less knowledge and no one had good knowledge, but after the counseling there was a positive shift where 26.7% of respondents reached the category of good knowledge and 46.7% reached the category of sufficient. The most significant increase in knowledge occurred in the parameters of things to pay attention to in baby massage (from 0 to 60% of the good category), followed by the parameters of the benefits of baby massage. The success of this counseling was influenced by the use of a combination of leaflet and direct demonstration methods that were in accordance with the characteristics of the respondents. These findings contribute to the development of health science, especially in maternal and child health education strategies, proving that a structured counseling approach with the right media can be an effective intervention to increase postpartum mothers' knowledge of infant

tactile stimulation through safe and correct massage techniques.

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