

The Effectiveness of Traditional Indonesian Massage for Reducing Fever in Babies

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ABSTRACT

Traditional Indonesian massage is a form of physical therapy and part of cultural identity and ancestral heritage that is maintained and passed on from generation to generation. The phenomenon of traditional Indonesian massage is an important part of the culture and healing tradition, which includes various massage techniques passed down from ancestors and has roots in beliefs, traditional healing practices, and the local heritage of the Indonesian people. Fever in babies can cause anxiety in the mother. A safe solution that minimizes drug side effects is non-pharmacological therapy. This research aimed to determine the impact of traditional massage on reducing fever in babies. This type of research is quantitative research. Sampling was carried out using a purposive sampling technique with a total of 60 babies who had fever criteria. Data analysis used the t-test. The study's results showed that the average temperature measurement for babies before the traditional massage was 38.15 degrees Celsius (low fever), while the average temperature measurement for babies after the traditional massage was 36.78 degrees Celsius (normal). The results of the statistical hypothesis analysis show that traditional massage has a significant effect on reducing fever in babies. This means traditional massage can significantly reduce fever in babies, with an average reduction of 1.37 degrees Celsius. This research contributes to providing information to mothers and midwives about the benefits of baby massage for treating fever, baby growth and development.

Keywords: Traditional Massage, Baby Care, Health Care, Fever, Holistic care



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1. INTRODUCTION

Massage is a technique that has been around since ancient times and is found in many cultures around the world (Mrljak et al., 2022; Naruse & Moss, 2021; Tague et al., 2021). The main goal is to relieve muscle tension, increase blood circulation, relieve pain, and improve overall body function (Dakić et al., 2023; Heidari et al., 2022; Lestari et al., 2021). In recent decades, massage has become increasingly popular in many countries as part of spa and wellness treatments and as a complementary therapy to conventional medicine. Although massage has been practised for centuries, scientific evidence about its benefits is still developing. Some studies show that massage can reduce pain (Fitri et al., 2021), improve blood circulation (Fatmawati et al., 2021), stimulate the immune system (Wada-Takahashi et al., 2020), and improve mood (Mitchinson, 2022). Massage as a phenomenon illustrates how practices as simple as touch and manipulation of the body can significantly impact a person's physical and mental well-being (Da Rocha Rodrigues et al., 2021; Micillo et al., 2020).

Traditional Indonesian massage is an important part of the archipelago's rich culture and healing traditions (Rachmayanti et al., 2023). This phenomenon includes various massage techniques passed

down from generation to generation and has roots in beliefs, traditional healing practices, and the local heritage of Indonesian society. Although modern massage and medical techniques are increasingly popular, traditional Indonesian massage continues to survive and is developed by its practitioners and loyal fans. Increased interest in holistic health and alternative treatments has helped maintain the sustainability of these practices.

Traditional baby massage is a practice carried out to care for and improve the health and well-being of babies using gentle and targeted massage techniques (Kurniadi, 2020; Mrljak et al., 2022). This practice has a long history in various cultures worldwide, including Indonesia. Some traditional baby massages involve the use of natural oils such as coconut oil or almond oil (Caglar et al., 2020; Karkhaneh et al., 2020; Vishali et al., 2023). This oil is used to help make hand movements softer and more comfortable on the baby's skin and provide a relaxing effect. Traditional baby massage aims to strengthen the bond between parents and babies, relieve tension or anxiety in babies, stimulate physical and motor development, and improve overall health (Hwu et al., 2023; Mokaberian et al., 2022; Puspita et al., 2022). The techniques used in baby massage are usually very gentle and adapted to the baby's needs (Bernstein et al., 2021). This includes gentle rubbing, massaging, and movements stimulating the baby's muscles and nervous system.

Fever in babies is when their body temperature rises above normal, usually considered a temperature above 37.5 degrees Celsius (99.5 degrees Fahrenheit) when measured rectally (Grodzinsky & Sund Levander, 2020; Liu et al., 2022). If fever is not treated quickly and appropriately, it can endanger the child's safety and cause other complications (seizures and decreased consciousness). Seizures that last more than 15 minutes can cause apnea, hypoxia, hypoxemia, hypercapnia, lactic acidosis, and hypotension, causing anatomic abnormalities in the brain, resulting in epilepsy and disruption to the child's growth and development. Apart from temperature changes, fever in babies causes changes in the baby's behaviour, such as becoming fussy, not wanting to eat, or being weaker than usual (Kurniawati et al., 2021). Physical changes can also be seen in the baby's skin, which is redder than normal, especially on the face or chest. Sometimes, fever is accompanied by symptoms such as vomiting, diarrhea, or nasal congestion, depending on the cause (Rose, 2021).

The first treatment for fever can be in the form of pharmacological therapy and non-pharmacological therapy (Dibu et al., 2022; Turan et al., 2020; Yu et al., 2023). The pharmacological treatment used usually takes the form of administering fever-reducing drugs (Hussain et al., 2020; Scavone et al., 2020). However, administering certain medications must be done using the correct dosage and following recommendations from the doctor. Non-pharmacological therapy that can be done is wearing thin clothing, drinking more often (Kurniawati et al., 2021; Moch et al., 2023), getting lots of rest, bathing with warm water, compressing (Krafft et al., 2023; Lismayanti et al., 2021; Raak et al., 2022) and massage (Meliati et al., 2021).

Based on the description above, the aim is to determine the effect of traditional massage on reducing fever in babies. This research is expected to provide information and evidence to mothers and midwives about the benefits of traditional massage for babies in treating fever, baby growth and development.

2. METHOD

This type of research is quantitative research. Sampling was carried out using a purposive sampling technique with a total of 60 babies who had fever criteria. Data collection uses observation sheets. The research location is in Sei Renggas sub-district, Asahan district, North Sumatra, Indonesia. The statistical hypothesis proposed by this research is that traditional massages significantly reduce fever in babies. The statistical hypothesis test analysis used is the t-test. Table 1 below is a guide for researchers in carrying out research.

Table 1
Guide to Operational Definitions and Measuring Scales

Variables	Definition	Measuring Tools	Measure Results	Measuring Scale
Traditional baby massage	Traditional massage is performed by traditional birth attendants who have skills in massage	Questionnaires	1. Yes, traditional massage has an effect on treating fever in babies 2. No, traditional massage has an effect on treating fever in babies.	Ordinal
Fever in babies	Pathogens that attack humans	Thermometer, Observations.	1. Normal: 36-37 2. Low fever: 37.2-38.3	Ordinal

3. Medium fever:
38.3-39.5
4. High fever:
>39.5

3. RESULTS AND DISCUSSION

3.1. Results

Table 2 below shows the results of measuring fever data in babies before and after traditional massage.

Table 2
Results of Baby Fever Measurement Before and After Traditional Massage

Fever in Babies	Before Traditional Massage		After Traditional Massage	
	Frequencies	Percentage	Frequencies	Percentage
Normal	0	0.0	38	63.3
Low fever	34	56.7	22	36.7
Medium fever	26	43.3	0	0.0
High fever	0	0.0	0	0.0
Total	60	100	60	100

Based on Table 2, it is known that of the 60 respondents studied before the traditional massage was carried out, most babies had a low fever, numbering 34 respondents (56.7%) and babies with a moderate fever, numbering 26 respondents (43.3%). After the traditional massage, most babies no longer had a fever or were normal, amounting to 38 respondents (63.3%) and babies who still had low fever totalling 22 respondents (36.7%).

Next, statistical hypothesis testing and analysis of data on giving traditional massages to reduce fever in babies uses the t-test. The results of the t-test analysis before and after traditional massage on reducing fever in babies can be seen in Table 3.

Table 3
Hypothesis Testing of Providing Traditional Massage on Reducing Fever in Babies

Fever in Babies	N	Mean	Mean Difference	T-count	P-value
Before Traditional Massage	60	38.15			
After Traditional Massage	60	36.78	1.37	12.569	0.000

Based on Table 3, the average temperature measurement for babies before traditional massage was 38.15 degrees Celsius (low fever), while the average temperature measurement for babies after the traditional massage was 36.78 degrees Celsius (normal). The average decrease in temperature in babies before and after traditional baby massage was 1.37. The analysis results obtained a t count of 12.569 with a value of $p=0.000$ ($p<0.05$), so the statistical hypothesis of this research was accepted. This means that providing traditional massage has a significant effect on reducing fever in babies. These results prove that giving traditional massages effectively reduces fever in babies.

3.2. Discussion

Although the baby fever treatment in this study was based on traditional methods, Saeed et al. (2020) stated handling baby fever must be supported by the mother's education level. Mothers with high education are often associated with knowledge and the ability to respond to the problem of baby fever (Haryani et al., 2023). A high level of mother education correlates with a better understanding of fever symptoms in babies. This may allow mothers to identify and treat fever in their babies more quickly. Mothers with extensive knowledge about appropriate treatment for fever will better understand the importance of traditional massage to reduce the effects of medicine on their babies.

Handling baby fever is also correlated with the mother's employment status (Gulo et al., 2023). Mothers who do not work have limitations in receiving information regarding the correct treatment methods when a toddler has a fever without ignoring culture. In contrast to working mothers, they have many external information networks. It is easy for mothers to access information on how to treat toddlers with fever correctly and appropriately.

The results of this study show that traditional Indonesian massage has a significant effect on reducing fever in babies. This proves that traditional massage, which has a gentle and skilled massage character, can help babies feel more relaxed and comfortable. A mother's handling of fever is influenced

by the culture and behavior of the environment where the mother is. Mothers' behavior towards children also differs according to the child's development, family structure, parental expectations, supervision, and childcare practices (Li et al., 2020; Yaffe, 2023; Yang et al., 2021). The massage method can form an emotional bond between mother and baby (Fatmawati et al., 2021; Khuzaiyah et al., 2022). A mother's gentle touch can give the baby a sense of security and comfort.

The results of this study show that traditional massage helps reduce baby fever. However, some researchers have different assumptions. According to Sari et al. (2023), one must be careful when massaging a baby when it has a fever because it is believed to spread the virus. According to Budiarti & Yunadi (2020), if traditional baby massage is not hygienic and the management is not good, it can cause itching, heat, and pain in the baby's skin.

Apart from being able to reduce baby fever, based on a cultural and traditional perspective, traditional massage has cultural value as a family legacy or tradition passed down from generation to generation. While it is necessary to consider modern medical approaches, respecting traditional practices can be vital to maintaining a nation's cultural identity.

4. CONCLUSION

Indonesian traditional massage effectively reduces fever in babies. In other words, traditional massage has a positive effect on reducing fever in babies. Babies show an improvement in sleep quality after massage. In general, massage can have a positive impact on a baby's health. The effect of baby massage is to control stress hormones so that the baby falls asleep quickly and makes the baby feel comfortable. Additionally, from a cultural perspective, respecting traditional massage practices can be essential to maintaining a nation's cultural identity.

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