

The Effect Of Shallot And Garlic Compress On Reducing Fever In Toddlers In PMB W Cianjur Regency In 2024

Widi Mulia Endar Kusuma¹, Fanni Hanifa², Hidayani³

^{1,2,3} Advanced Indonesian Universities

E-mail : ¹widimuliaendarkusuma97@gmail.com, ²fannihanifa070392@gmail.com,
³hidayani.031@gmail.com

ABSTRACT

Fever is a common physiological thing in toddlers, Fever can be caused by infection and non-infection. The joint organization of the United Nations (UN), United Nations International Children's Emergency Fund (UNICEF), World Health Organization (WHO), World Bank Group, Population Division of the United Nations Department of Economic and Social Affairs released an estimated figure of almost 2 million stillbirths each year. Objective To determine the Effect of Red Onion Compresses to Reduce Fever in Toddlers in PMB W Cianjur Regency in 2025 This research method is SCLR, namely Scientific Reference Search to obtain the concept of Midwifery care theory based on previous research results and case studies, namely direct studies of midwifery application based on Evidence Based. Results In An. M intervened by doing red onion compresses with fever while in An. S did garlic compresses with fever. So that giving red onion compresses with fever is more effective in treating fever in toddlers in PMB W. Conclusion There is a difference in the regularity of fever reduction in those who were given red onion compress intervention, the fever went down faster than those who were not given intervention.

Keywords: Fever, Red Onion Compress, Garlic Compress

INTRODUCTION

Fever is a symptom of all types of illnesses, both infectious and non-infectious, and occurs almost worldwide. Some dangerous and potentially fatal diseases exhibit fever as a symptom. Therefore, fever must be managed properly due to its various negative effects, most often occurring in children (Tuti Damayanti, 2020).

The World Health Organization (WHO) reported in 2020 that the number of fever cases worldwide reached 11-20 million people, with an estimated 128,000-161,000 deaths annually. In Indonesia, an estimated 80,000-100,000 people suffer from fever throughout the year (Pariata, I. Komang, 2022). In 2018, the number of fever cases in Indonesia reached 65,602, with 467 deaths. This number decreased from the previous year, which recorded 68,407 cases and 493 deaths. In 2018, the proportion of AEFI (Adverse Events Following Infection) with high fever was 42% (Ministry of Health of the Republic of Indonesia, 2019).

Fever cases in Indonesia are a common occurrence for almost all types of diseases. In 2018, there were 65,602 fever cases in Indonesia, with 467 deaths. This number decreased from the previous year, which had 68,407 cases and 493 deaths. The fever morbidity rate in 2018 decreased compared to 2017, from 26.10 to 24.75 per 100,000 population. In 2017, there were 30 provinces with a morbidity rate of less than 49 per 100,000 population. Meanwhile, in 2018, the number of provinces with a

morbidity rate of less than 49 per 100,000 population decreased to 26 provinces. The provinces with the highest fever morbidity rates are East Kalimantan at 87.81 per 100,000 population, Central Kalimantan at 84.39 per 100,000 population, and Bengkulu at 72.28 per 100,000 population (Ministry of Health of the Republic of Indonesia, 2019)

The 2019 Indonesian Demographic and Health Survey showed an AKABA of 32 per 1,000 live births (Riskesdas, 2019). The 2013 Indonesian health profile revealed that the number of fever patients caused by infection was reported at 112,511 cases of fever with 871 deaths (Ministry of Health of the Republic of Indonesia, 2020). According to the 2020 West Java Provincial Health Profile, there were 17,427 cases of fever of unknown cause. 2 Based on the achievement of the AKABA value at the district/city level, it is known that the lowest AKABA is in Cianjur Regency at 0.86 per 1,000 KH and the highest AKABA is in Cianjur Regency at 12.28 (Cianjur Provincial Health Profile, 2019)

The number of fevers in infants in Cianjur Regency in 2020 reached 121 people. Meanwhile, the number of fevers in toddlers in Cianjur Regency in 2019 reached 145 people. In comparison, the number of fevers in toddlers in Cianjur Regency has decreased. The causes of fever include sore throats (23 people), bladder infections (58 people), neonatal tetanus (6 people), ear infections (3 people), pneumonia (15 people), and meningitis (16 people) (Cianjur Health Office, 2023). The high number of fevers that occur in toddlers indicates a lack of health education from the government to the community, one of which is parents in handling fevers in toddlers. Health education is a way to support health programs that can produce changes and increase knowledge in a short time (Pelealu, A. and Kallo, 2021). Health education needs to be implemented by parents at home to increase knowledge in handling fevers in toddlers. Toddlers who are experiencing fever need proper treatment from parents. Fever is very different from hyperthermia. Hyperthermia in typhoid is a nursing problem characterized by an increase in body temperature above the normal range which is usually caused by acute infection in the digestive tract (Pelealu, A. and Kallo, 2021)

Fever management in children is highly dependent on the role of parents, especially mothers. Mothers are an integral part of household management, and their gentle care is essential for skillfully caring for children so they grow up healthy. Mothers who understand fever and demonstrate a positive attitude toward providing care can determine the best fever management for their children. Research results (Sodikin, 2021)

The effects of a high fever in babies are essentially the same as those of other types of fevers that affect toddlers, children, and adults. However, not all parts of a baby's body are fully grown and developed, including their immune system. Fever is easily transmitted to babies and takes longer to heal. The baby's immature physique also has a significant impact. The dangers of a high fever in babies include dehydration, death, febrile seizures, complications, and stunted growth and development.

Factors that can cause fever include microorganisms, bacteria, or parasites, hot climates or weather, hormonal changes, and incorrect medication. Fever in children requires different treatment and management compared to adults. This is because, if the treatment for fever is not appropriate and slow, it can disrupt the child's growth and development. Fever can endanger a child's life and, if not treated quickly and appropriately, can lead to other complications such as hyperthermia, seizures, and decreased consciousness (Alawiyah, WS, 2021) quoted from (Cahyaningrum, 2020). A fever reaching 41°C has a mortality rate of 17%. At 43°C, a coma occurs with a mortality rate of 70%. At 45°C, death occurs within a few hours (Cahyaningrum, 2020).

Efforts taken for children experiencing fever can be pharmacological, non-pharmacological, or a combination of both. Pharmacological measures include administering antipyretic drugs. Non-pharmacological measures include additional measures to reduce fever. Compresses are one non-pharmacological measure to lower body temperature when a child has a fever. Several types of compresses can be given to lower body temperature, including tepid water sponges, warm water compresses, compress plasters, and traditional remedies such as onion and garlic compresses (Cahyaningrum, 2020), as quoted from (Yunianti, 2019).

One medicinal plant that can be used to control fever is the shallot (*Allium cepa* L.). Scientifically, the sulfur content in shallots, when consumed regularly, can dissolve blood clots, while the flavonoid glycosides function as anti-inflammatories and kill bacteria. To reduce fever, use shallot bulbs, which contain essential oils, methylamine, dihydrolain, starch, peptides, quercetin, saponins, phytohormones, and vitamins (Amarilla, 2021).

There are several ways to reduce and control fever, one of which is by administering antipyretic drugs. However, the use of antipyretic drugs has side effects, namely, it can cause bronchospasm, gastrointestinal bleeding caused by blood vessel erosion, and decreased kidney function (Cahyaningrum & Putri, 2020). In addition to using antipyretic drugs, reducing fever can be done physically (non-pharmacologically), namely additional measures that can be given to reduce fever, such as providing sufficient fluids, placing the child in a room with a normal temperature, wearing light clothing, and applying compresses (Wati et al., 2020). One non-pharmacological treatment for treating fever in children is applying compresses. Compresses do not always have to be warm or cold, but can also use Aloe vera compresses, as Aloe vera has been proven to have antipyretic effects (Wardiyah et al., 2021).

Shallots (*Allium Cepa Ascalonicum* variety) can be used for compresses because they contain organic sulfur compounds, namely Allylcysteine Sulfoxide (Alliin). Sliced onions will release the enzyme allinase which functions to destroy the formation of blood clots so that blood circulation becomes smooth and heat from within the body can be more easily distributed to the peripheral blood vessels and the resulting fever will decrease (Suryono, 2022). According to researchers (Nur Maulita et al., 2022) the warming effect of shallots works by using heat energy through conduction and evaporation methods, namely the transfer of heat from one object to

another through direct contact. When warm skin touches something warm, heat transfer will occur through evaporation, so that the heat transfer turns into gas.

The results of research conducted by Maulita Harnani (2019) entitled "The effect of red onion compresses on reducing body temperature in typhoid fever patients at PKU Muhammadiyah Gombong Hospital" that red onions are very effective in reducing body temperature in children with fever because they contain organic sulfur compounds, namely Allylcysteine Sulfoxide (Allin). The results of the research can be seen that the average body temperature before red onion compresses is 37.8°C and after red onion compresses is 37.4°C. The conclusion is that red onions are effective for use as compresses in children with fever.

A similar study conducted by Nur Maulita et al., 2022, showed that the average body temperature of children after the onion compress was 37.98°C, with the lowest temperature being 36.3°C, and the highest being 37.2°C. Respondents experienced a decrease in body temperature after the onion compress, returning their body temperature to normal. This temperature is in accordance with the theory of Kaneshiro and Zieve, which states that normal body temperature ranges from 36.5°C to 37.2°C.

Garlic can help relieve fever in children due to its antibacterial and antiviral properties. Garlic can be used to treat fevers and colds because it can strengthen the body's immune system. Garlic also has antibacterial and antiviral properties, and is rich in antioxidants that can fight infections in the body. Garlic contains antiviral, antibiotic, and antiseptic compounds known to be able to fight infections that cause fever. According to Heriani, using garlic as a compress to lower the body temperature of a child with a fever can be done by taking and washing the garlic as needed, then slicing or roughly chopping it, and mixing it with lime juice and eucalyptus oil until evenly distributed.

The number of fevers in toddlers at PMB W in January - August 2024 reached 60 toddlers. Based on this background, the author is interested in conducting a direct study on toddlers experiencing fever, namely the Effect of Red Onion Compresses and Garlic Compresses on Reducing Fever in Toddlers at PMB W Cianjur Regency in 2024.

RESEARCH METHOD

This type of research uses a qualitative case study method with a case study literature review. Quantitative research is descriptive, describing phenomena or facts as they are. A case study, on the other hand, is simply defined as an in-depth, detailed, and detailed investigation or examination of a specific event. A case study is limited by place and time, and the case studied consists of an event, activity, or individual. (Sugiyono, 2021)

RESULTS AND DISCUSSION

Tabell 1
HaSil ASuhan Kebidanan Red Onion Compress Intervention for Fever in Toddlers

Intervention 1 (Applying Red Onion Compress)			
Respondent 1	Visit 1	2nd Visit	3rd Visit
Temperature	380C	37.30C	36.80C
Temperature Control		0.7	0.5

Source: Midwifery Care Results, 2025

Based on the results of the examination at visit 1 before the red onion compress intervention was given, the toddler's body temperature was 380C, after observation using the red onion compress intervention at visit 2 there was a decrease in the toddler's body temperature to 37.30C and at visit 3 there was another decrease in the toddler's body temperature to 36.80C.

Tabell 2
HaSil ASuhan Kebidanan Garlic Compress Intervention for Fever in Toddlers

Intervention 2 (Garlic Compress)			
Respondent 2	Visit 1	2nd Visit	3rd Visit
Temperature	380C	37.50C	37.80C
Temperature Control		0.5	0.3

Based on the results of the examination at visit 1 before being given the garlic compress intervention, the toddler's body temperature was 380C, after observation using the garlic compress intervention at visit 2 there was a decrease in the toddler's body temperature to 37.50C and at visit 3 An. S had a fever again, the toddler's body temperature increased to 37.80C.

Tabell 3
HaSil ASuhan Kebidanan Intervention of Red Onion Compresses and Garlic Compresses for Fever in Toddlers

N o	Method	Results		
			Before	After
1	Compress using red onions	Day 1	Fever with a temperature of 38.3oC	Fever down, with a temperature of 37.3oC
		Day 2	Fever with a temperature of 37.3oC	Fever down, with a temperature of 37.0oC
		Day 3	Fever with a temperature of 37.0oC	Fever down, with a temperature of 36.8oC
2	Compress using garlic	Day 1	Fever with a temperature of 38.0oC	Fever down, with a temperature of 37.5oC
		Day 2	Fever with a temperature of 37.5oC	Fever down, with a temperature of 37.0oC
		Day 3	Fever with a temperature of 38.0oC	Fever down, with a temperature of 37.8oC

Source: Midwifery Care Results, 2025

From the results of the comparison of the interventions of red onion compresses and garlic compresses, it was found that the results of the respondents' actions were different, with red onion compresses being more effective in reducing body temperature in toddlers.

DISCUSSION

1. The Effect of Red Onion Compresses on Reducing Fever in Toddlers At PMB W Karegentten Cianjur Tahun 2025

Penel This study shows that there is a significant difference in the decrease in body temperature of toddlers with fever between before and after intervention in toddlers using red onion compresses. At the beginning, before the intervention, the child's body temperature was 38 0C and after the intervention, the temperature changed to 36.80C.

Onion compresses are performed to lower the body temperature of respondents experiencing hyperthermia, with a normal temperature range of 36.5oC-37.5oC. This is because onions contain organic sulfur compounds, which function to break down blood clots and improve blood circulation (Cahyaningrum, 2020). Onion

compress therapy is performed by taking 3 cloves of washed shallots. Thinly slice the shallots using a knife, then add a little eucalyptus oil, and stir until evenly mixed. In making this shallot compress, one batch is for one use only. Then, the researcher measured the temperature of the respondent first using a thermometer. Then, the researcher provides the respondent with a position that is as comfortable as possible, and encourages them to lie down, then the researcher performed a red onion compress on the respondent. Apply the compress for 10 minutes. The compress area is the abdomen and axilla.

Penetration results. This is in line with Penellita (BD et al., 2018) with the title *The Effect of Giving Crushed Red Onions as a Fertilizer on Body temperature in toddlers with fever at the Lubuk Bulaya Community Health Center, Padang City in 2021*. The results of the study showed that the average body temperature before administering crushed red onions was 37.42°C and after administering crushed red onions was 37°C.

According to the researcher's assumption, giving a red onion compress can help reduce hyperthermia and provide a feeling of comfort, with the result being a body temperature of 36.5°C to 37.5°C so that the goal is to achieve a body temperature in the normal range of 36.5-37.5, with no redness, no convulsions, and no allergic reactions.

2. The Effect of Garlic Compresses on Reducing Fever in Toddlers At PMB W Karegenten Cianjur Tahun 2025

In this study, it was found that the average temperature before giving garlic compresses was 38.0°C and after. After applying garlic compresses, the average temperature changed to 37.5°C. This means there was a significant difference in the average temperature before and after applying garlic compresses.

Garlic can help reduce fever in children because it has anti-bacterial and anti-viral properties. Garlic can be used to treat fevers and colds because it can strengthen the body's immune system. Garlic also has antibacterial and antiviral properties, and is rich in antioxidants that can help cloud of disease infection in the body. Garlic contains antiviral, antibiotic, and antiseptic compounds that are known to be able to fight infections that cause fever. The content in garlic can also stimulate blood circulation so that blood circulation is smooth (Tullisilawati, 2020).

According to Herliani (2021), garlic can be used as a compress to lower the body temperature of children with fever. Take and wash the garlic as needed, then slice or roughly chop it, and mix it with lime juice and eucalyptus oil until evenly distributed. The mixed ingredients are then applied or rubbed onto the axillary area.

This is in accordance with Cahyaningrum & Pu Research (Tri (2021) stated that garlic compresses can lower body temperature in toddlers with fever. Garlic can reduce fever because it contains compound sulfur organic that is Allicin (S-allyl cysteine sulfoxide). Crushed garlic will release the enzyme alliinase which functions as a catalyst for allin which will react with other compounds (kullit) so that it functions to destroy blood clots (Utami & Lina, 2021).

This is in line with several research results, including research by Henriani (2019), which shows that based on the research the research that had been done using Uji Wilcoxon obtained a p value of 0.002 so that H1 shows that there is a significant effect of garlic compress therapy on fever in infants. 16-12 year old at the Mojolangu Community Health Center, Malang City. The results of the study showed that the application of garlic compresses which was applied for 7 days, the patient was proven to be effective for application in the Kedungmundu Community Health Center work area, of the four babies were calmer, not fussy, sleep needs were met and bowel movements were smooth.

On the study First, the mother's results were obtained. Mrs. S, her son is a little bit well and his body was still warm. The results of the TTV sulhu thermometer 38°C, on the study of the day three results were obtained. Mom, the toddler climbed into bed with you 37.5°C. This is not the case sulai del with the original and the research from Uti and Lina (2019) Where is the compresses onion pulih before the ngaruh telhadap the sulhu thermometer in toddlers del Mom

3. Comparison of the Effects of Red Onion Compresses and Garlic Compresses on Reducing Fever in Toddlers At PMB W Karegenten Cianjur Tahun 2025

This study showed a difference in body temperature reduction after compresses using shallots and garlic compresses. The shallot compresses decreased the toddler's temperature from the first to the third day of the assessment. However, the garlic compresses did not significantly decrease the temperature. The initial temperature was 38.0°C in the first assessment, 37.3°C in the second assessment, and 37.5°C in the third assessment.

Red onions can also be used as a traditional medicine because they can reduce fever without chemicals and have minimal side effects, even without causing side effects, because the substances contained in traditional medicinal plants can mostly be metabolized by the body. Red onions (*Alium Cepa Ascalonicum* variety) can be used for compresses because they contain organic sulfur compounds, namely Allylcysteine Sulfoxide (Alliin) Another ingredient in shallots that can lower body temperature is essential oil, florogulsyn, cycloalliin, methylene, kaemferol, and quercetin (Cahyaningrum El. D., 2020).

CONCLUSION

Based on the results of the study on the Effect of Red Onion Compresses and Garlic Compresses on Reducing Inflammation in Toddlers in Pmb W, Cianjur Regency in 2025, the following conclusions can be drawn:

1. Respondent 1 who was given a red onion compress. There was a decrease in body temperature for 3 days in toddlers from the first visit where the body temperature was 38°C and on the third visit it decreased again to 36.5°C.
2. Respondent 2, who was given a garlic compress, experienced a decrease in the

toddler's body temperature. On the first visit, the temperature was 38°C, and on the third visit, it decreased to 37.5°C.

3. Comparison of the effects of giving red onion compresses and garlic compresses There was a difference in the increase in body temperature in toddlers. Giving red onion compresses was more effective in reducing fever in toddlers.

REFERENCES

- Afita. (2020). Nursing Care Application. Nuha Medika Yogyakarta.
- Alawiyah, WS (2021). Platini, H., & Adistie, F. . Overview of Mothers' Knowledge Regarding Fever Management in Toddlers at the Children's Polyclinic of Dr. Slamet Garut Regional Hospital. 7(2), 65–77.
- Amarilla. (2021). The Relationship Between Mothers' Knowledge Level About Fever and Fever Management in Children. Undergraduate Medical Education Program, Faculty of Medicine, Diponegoro University. Accessed from: http://eprints.undip.ac.id/37333/1/AMARILLA_G2A008016_LAP_KTI.pdf
- Arvin, AM (2022). Fever. In: A. Samik Wahab. Nelson Pediatrics. Indonesian edition. Edition 15 Vol 2. Jakarta: EGC.
- Cahyaningrum, ED (2020). Management of Children with Fever by Parents at the Kembaran I Banyumas Community Health Center. 09(17), 44–53.
- Cianjur Health Office. (2023). Profile of the Cianjur Regency Health Office in 2023.
- El Mannan M. (2021). Eradicate Daily Health Complaints with Natural Remedies. Jogjakarta: FlashBooks.
- Hardiansyah & Budi. (2020). Water for Health (Second Edition). Jakarta: Centra Communication.
- Jatu Safitri Cahyahati, Apoina Kartini, MZR (2018). RELATIONSHIP BETWEEN FOOD INTAKE (FAT, SODIUM, MAGNESIUM) AND LIFESTYLE WITH BLOOD PRESSURE IN ELDERLY COASTAL AREAS (Study in the Working Area of Tegal Barat Community Health Center, Tegal City). 6.
- Ministry of Health of the Republic of Indonesia (2019). Basic Health Research; RISKESDAS, Ministry of Health of the Republic of Indonesia, Jakarta.
- Ministry of Health of the Republic of Indonesia. (2020). Results of Basic Health Research (Riskesdas) Jakarta: Health Research and Development Agency, Ministry of the Republic of Indonesia.

- Nur Maulita et al. (2022). The Effect of Red Onion Compress on Reducing Body Temperature in Typhoid Fever Patients at PKU Muhammadiyah Gombong Hospital. 361-367.
- Nurarif, A. H & Kusuma, H. (2020). Nursing Care Application Based on Medical Diagnosis and NANDA NIC-NOC. Jogjakarta: MediAction.
- Nurarif, A. H & Kusuma, H. (2022). Nursing Care Application Based on Medical Diagnosis and NANDA NIC-NOC. Jogjakarta: MediAction.
- Pariata, I. Komang. (2022). Anak Agung Putu Agung Mediastari, and Ida Bagus Putra Suta. 2022. The Benefits of Dadap Serep (*Erythrina Sumbukrans*) for Treating Fever in Children. *Health Widya* 4.1 38-46.
- Pelealu, A. and Kallo, V. (2021). The Effect of Providing Health Education on Handling Febrile Seizures in Toddlers on Mothers' Anxiety Levels. *Nursing Journal*, 7(2), 1-5. <https://doi.org/10.35790/Jkp.V7i2.24451>.
- Potter & Perry. (2020). *Nursing Fundamentals Textbook: Concepts, Processes & Practice* (4th Edition). Jakarta: EGC.
- Sodikin. (2021). *Principles of Fever Treatment in Children*. Yogyakarta: Pustaka Belajar.
- Suryono, S. & T. . (2022). The Effectiveness of Red Onions in Reducing Body Temperature in Febrile Children Aged 1-5 Years. *AKP Journal*, (6), 63-68.
- Tuti Damayanti, T. (2020). The relationship between mothers' knowledge level about fever and compress application behavior in the inpatient ward of Dr. Moewardi Regional Hospital. Thesis, Muhammadiyah University of Surakarta.
- Wardiyah, A. et al. (2022). Comparison of the effectiveness of giving red onion and garlic compresses on reducing the body temperature of children with fever in the Alamnda room of Dr. H. Abdul Moeloek Regional General Hospital, Lampung Province. *Holistic Health Journal*, 10(1), 36-44.
- Widagdo. (2020). *Problems and Management of Infectious Diseases in Children*. Jakarta: CV Sagung Seto.