

TEPID SPONGING AND COMPRESS PLESTER ON TODDLERS WHO HAVE A FEVER

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ABSTRAK TEPID SPONGING DAN PLESTER KOMPRES TERHADAP BALITA YANG MENGALAMI DEMAM

Latar Belakang Indonesia penderita demam sebanyak 465 (91.0%), demam merupakan peningkatan yang terjadi pada suhu tubuh dengan set point dihipotalamus meningkat. Adapun penanganan utama yaitu dengan non farmakologi berupa tindakan tepid sponging dan plester kompres.

Tujuan penelitian untuk mengetahui perbedaan antara tepid sponging dan plester kompres pada balita yang mengalami demam di Puskesmas Antang Perumnas.

Metode menggunakan desain Quasi Eksperimental Design atau (eksperimental semu) dengan pendekatan Two Group Pretest-Posttest design. Teknik pengambilan sampel menggunakan Purposive Sampling berdasarkan kriteria yang ditetapkan oleh peneliti sehingga didapatkan sampel sebanyak 30 orang balita dibedakan menjadi 2 kelompok intervensi. Analisis data menggunakan Uji Mann Whitney.

Hasil pada kelompok intervensi berupa tepid sponging dengan menggunakan kain/washlap yang sudah direndam air hangat suhu 34°C di kompres pada daerah dahi ketiak dan selangkangan (tempat berlalunya pembuluh darah besar) kurang lebih 5-6 kali. Sedangkan kelompok perlakuan plester kompres pada daerah bagian dahi, ketiak dan selangkangan. Pengukuran suhu pada kedua kelompok intervensi dilakukan sebelum dan 30 menit setelah perlakuan. Rata-rata suhu tubuh sebelum diberikan tepid sponging 38.29°C mengalami penurunan sebesar 0,82°C begitupun dengan plester kompres mengalami penurunan sebesar 0,46°C. Uji statistik menggunakan Mann Whitney nilai $P=0,000 < 0,005$ (α) yang berarti ada perbedaan yang signifikan antara lama pemakaian tepid sponging dan plester kompres pada balita yang mengalami demam.

Kesimpulan perlakuan tepid sponging lebih baik jika di bandingkan dengan plester kompres untuk penurunan suhu tubuh terhadap balita yang mengalami demam

Saran bagi tenaga kesehatan untuk dijadikan sebagai penatalaksanaan dalam penanganan balita demam.

Kata Kunci: Balita Demam Tepid Sponging, Plester Kompres

ABSTRACT

Background: Indonesian fever sufferers as much as 465 (91.0%), fever is an increase that occurs in body temperature with the set point in the hypothalamus increases. The main handling is with non-pharmacology in the form of the action of tepid sponging and plaster compresses.

Purpose to know out the difference between tepid sponging and plaster compresses on toddlers who have a fever at Antang Perumnas Health Center.

Methods using Quasi Experimental Design with the two group pretest-posttest design approach. Sampling techniques using Purposive Sampling based on criteria set by researchers so that a sample of 30 toddlers was divided into 2 intervention groups. Data analysis using the Mann Whitney Test.

Results in the intervention group in the form of tepid sponging by using a cloth / washlap that has been soaked in warm water temperature 34 ° C in compresses on the forehead area of the armpit and groin (where the passage of large blood vessels) approximately 5 -6 times. While the plaster treatment group compresses on the forehead, armpit and groin areas. Temperature measurements in both intervention groups were performed before and 30 minutes after treatment. The average body temperature before being given tepid sponging 38.29 ° C decreased by 0.82 ° C as well as the compresser decreased by 0.46 ° C. Statistical tests using Mann Whitney values $P = 0.000 < 0.005$ (α) which means there is a significant difference between the length of use of sponging edges and compressed plaster in toddlers who have fever.

Conclusion of tepid sponging treatment is better when compared with plaster compresses for a decrease in body temperature for toddlers who have fever

Suggestion for health workers to be used as management in handling toddler fever.

Keywords: Tepid Sponging, Plaster Compress, Toddler Fever

INTRODUCTION

Fever is an increase that occurs in body temperature with an increased *set point* in the hypothalamus (Suri et al., 2019). Most fevers that occur in children are the result of changes in the thermoregulatory heat center in the hypothalamus where the brain sets a temperature above the normal setting, so the body will produce heat (Imron, 2011). Fever in the individual's condition has an increase in body temperature above normal, namely > 37.5 o C, the fever is not dangerous if it is below 39 o C and a single measurement does not describe the fever is increasing.

Fever can be caused by viruses and microbes and their production comes from outside the body which is an exogenous pyrogen that can stimulate components of the immune system causing an increase in body temperature (Faradilla & Abdullah, 2020; Key et al., 2019). Body temperature is the difference between the amount of heat produced by the body and the amount of heat lost to the external environment (Potter & Perry, 2005). It is said that body temperature is normal if body heat with axillary measurements ranges from 36.0 o C – 37.5 o C (Faradilla & Abdullah, 2020).

World Health Organization (WHO) estimates that the number of cases of fever worldwide reaches 16-33 million with 500-600 thousand deaths each year. Children's age is the most vulnerable condition for fever. According to the 2012 WHO report, the infant and child mortality rate (IMR) in the world is 289,000 people (Putra et al., 2018).

In Indonesia, 465 (91.0%) fever sufferers out of 511 mothers use palpation to distinguish whether the child's temperature is hot than usual and is used as a sign of fever in the MTBS (Integrated Management of Sick Toddler) program, while the remaining 23.1% use a thermometer to confirm fever. Rasinta, 2017).

From the results of collecting data on the health profile of South Sulawesi in 2016, the Toddler Mortality Rate (AKBA) was 173 people. In 2017 the number (AKBA) was 1,334 people and in 2018 (AKBA) was 1,243 people (*Profile of the South Sulawesi Health Office, Toddler Mortality Rate*)

Toddlers less than five years old are in an intensive environmental exploration period because at this time children begin to find out how everything happens and how to control things to maintain temperature, toddlers are the most vulnerable to the growth stage because children begin to interact at that age and explore the environment. the surrounding area so that the risk of being exposed to several diseases is increased, whether from viruses, bacteria or fungi that can cause symptoms of fever.

Handling fever in children requires separate behavior that is different from adults.

This is because if the handling measures taken are not appropriate in dealing with fever and are slow, it can result in the development and growth of children being disturbed. Fever can endanger the safety of a child's life if not handled properly and quickly it can cause other complications such as seizures, hyperthermia, and decreased awareness of children (Astuti, 2018).

Handling fever can be done non-pharmacologically or pharmacologically or both, non-pharmacological measures are actions that reduce heat such as warm compresses (*edge sponging*) and other modern alternatives using compress plasters can improve blood circulation and open skin pores.

The action of reducing fever in toddlers by means of *sponging* and comparing with antipyretics has been widely studied by experts (Akyirem & Bossman, 2021; Alves et al., 2008; Chetak et al., 2017; Iqomh et al., 2019; Thomas et al., 2019). ., 2009) and the use of compress plasters have also been widely studied (Hastuti et al., 2021; Mariana S.Wowor, 2017) but research comparing the two methods is still lacking.

The Tepid Sponge Compress is a warm compress technique that combines the technique of compressing the block on the superficial blood vessels with the wiping technique. Tepid sponging is a procedure to improve the control of body heat loss through evaporation and conduction, which is usually done in patients who have a high fever.

To reduce fever, the best water temperature for compresses is 34 O C warm water which is measured with a laboratory thermometer using mercury as a temperature indicator or lukewarm (Astuti, 2018). Another action to reduce fever in toddlers with compresses that are considered practical and modern for use when toddlers have a fever and has been widely circulated in the community can be found in pharmacies, namely compress plaster.

This plaster compress is made from hydrogel material containing hydrogel on polyacrylate-base with paraben and menthol content and polymer with a crosslinked structure containing large amounts of water more than 70% which can reduce body temperature through evaporation. While the pharmacological action is the act of giving antipyretic drugs, namely fever-reducing drugs such as parastamol. WHO has recommended parastamol (*acetaminophen*) as a fever treatment in children if non-pharmacological treatment only lowers body temperature but not to normal limits or 37.5 O C can

be given fever-reducing drugs and drug administration can be started when the temperature reaches 38 0C. C.

This has been proven by research conducted by (Chetak et al., 2017) which showed that the administration of antipyretics and the tepid sponging method could lower body temperature faster than using antipyretics alone.

Based on data obtained from Antang Perumnas Makassar Public Health Center in 2017, there were 129 toddlers, who suffered from fever 201 (68.8%). In 2018 there were 117 toddlers who had fever from 153 (76.4 %) and in 2019 there were 119 toddlers who had fever from 149 (79.8%) handlers who were given at the Antang Perumnas Health Center, namely only giving antiperetic drugs to toddlers with fever. From the data obtained, it can be concluded that there is an increase in toddlers who experience fever every year.

RESEARCH METHODOLOGY

This type of research uses a quasi-experimental design or (quasi-experimental) which is an experimental activity that aims to find out a symptom or effect caused by a result of a particular intervention or treatment. using a two group *pretest-posttest design* plan . This research was conducted on 12 August-11 November 2020 at the Antang Public Health Center, Makassar.

The population in this study were all toddlers who had a fever at the Antang Perumnas Public Health Center for the January-July 2020 period, totaling 65 toddlers. The sample in this study were some toddlers who had a fever at the Antang Perumnas Public Health Center, while the number of samples in this study were 30 respondents, namely 15 toddlers in the *tepid sponging treatment* and 15 toddlers in the compress plaster treatment with sampling technique using purposive sampling based on inclusion criteria, namely

- a. All toddlers aged 0-5 years who experience body temperature > 37.5 o C.
- b. Parents of toddlers are willing if their children become respondents.

And the exclusion criteria are:

- a. The patient's parents are not willing to have their child become a respondent.
- b. Patients who are in a condition that requires emergency action / treatment

Temperature measurements in the *tepid sponge group* were carried out before and 30 minutes after the treatment, namely compressing toddlers approximately 5-6 times. While the compress plaster group was done by gluing it on the forehead and armpit where the blood vessels were given for 30 minutes. Temperature measurements were carried out before and 30 minutes after the intervention.

The instrument used in this study was observation using a checklist *and* a digital thermometer to measure the temperature of toddlers. The statistical test used is the Menn Whitney test because the data are not normally distributed.

RESEARCH RESULT

Univariate Analysis

Table 1
Frequency Distribution of Respondents
Characteristics of the Tepid Sponging Treatment
Group and Compress Plaster

Characteristics	Tepid Sponging		Compress Plaster	
	F	%	F	%
Age	1	13	1	13
	2	20	2	20
	3	33	3	33
	4	33	4	33
Sex	L	53.3	L	60
	P	46.7	P	40

Table 1 shows the age of the respondents in the *tepid sponging treatment group*. There were 2 respondents aged 1 year (13%), 2 years old as many as 3 respondents (20%), 3 years old as many as 5 respondents (33%), and 4 years old as many as 5 respondents (33%). Meanwhile, in the compress plaster treatment group, 2 respondents (13%), 2 years old, 3 respondents (20%), 3 years old, 5 respondents (33%), and 4 years old, 5 respondents (33). %).

Characteristics of respondents based on gender in the tepid sponging treatment group obtained that 8 respondents were male (53.3%), and female respondents were 7 respondents (46.7%). Meanwhile, in the compress plaster treatment group, there were 9 respondents (60%), male and 6 female (40%).

Table 2

Pre and Post-test Temperature in the Tepid Sponging and Compressing Plaster Groups

Characteristics	Tepid Sponging						Compress Plaster					
	Pretest			Posttest			Pretest			Posttest		
	F	%		F	%		F	%		F	%	
Temperature	37.6-38	3	20	36.00-37	1	6.7	37.6-38	9	60	37.10-37.50	8	53.3
	38.10-39	10	66.7	37.10-37.50	11	73.3	38.10-39	6	40	>37.50	7	46.7
	>39	2	13.3	>37.50	3	20						

Table 2 shows the body temperature of the respondents before being given treatment in the tepid sponging treatment group, the body temperature was 37.60-38 0 C for 3 respondents (20%), then 38.10-39 0 C for 10 respondents (66.7%), and > 39 0 C for as many as 2 respondents (13.3%). Meanwhile, after being given the treatment, the *Perid Sponging* treatment group was obtained with a body temperature of 36 -37 0 C as many as 1 respondent (6.7%), then 37.10-37.5 0 C as many as 11 respondents (73.3%), and > 37.5 0 C as many as 3 respondents. (20%).

In the compress plaster treatment group, the body temperature before treatment was 37.6-38 0 C for 9 respondents (60%), and 38.10-39 0 C for 6 respondents (40%). After being given the treatment, the body temperature degrees were 37.10-37.5 0 C as many as 8 respondents (53.3%), and > 37.5 0 C as many as 7 respondents (46.7%).

Bivariate Analysis

Table 3
The Effect of the Treatment of Tepid Sponging on Fever Toddlers

Variables	N	Mean	SD	SE	p-value
Pre_test tepid sponging	15	38.29	0.33	.08589	0.001
Post_test tepid sponging	15	37.40	0.27	.07202	

Table 3 shows that the body temperature of toddlers with fever before being given tepid sponging averaged 38.29°C with a standard error of .08589, while the body temperature of toddlers with fever after being given *tepid sponging* averaged 37.4°C with a standard error of .07202 and based on The results of the test using the Wilcoxon Signed Ranks Test on the treatment of *tepid sponging* on toddlers with fever showed that the p value (Asymp. Sig. (2-tailed)) was 0.001 (0.001 < 0.005) so Ho was rejected and Ha was accepted, which means that the tepid sponging treatment can be reduce body temperature for toddlers who have fever.

Table 4

Effect of Compress Plaster Treatment on Toddler Fever

Variables	N	Mean	SD	SE	p-value
Pre_test plaster compress	15	38.00	0.12	.03352	0.001
Post_test plaster compress	15	37.50	0.11	.02960	

Table 4 shows that the body temperature of toddlers with fever before being given the compress plaster was an average of 38°C (standard error .03352), while the body temperature of toddlers with fever after being given the compress plaster was an average of 37.5°C with a standard error of .02960. Based on the *Wilcoxon Signed Ranks Test* on compress plaster treatment for toddlers who have fever, the p value (Asymp. Sig. (2-tailed)) is 0.001, where the value is 0.001 < 0.005 (α) so Ho is rejected and Ha is accepted, which means *Perid sponging* treatment can reduce the body temperature of toddlers who have a fever at the Antang Perumnas Public Health Center.

Table 5
Comparison of the Treatment of Tepid Sponging and Compress Plaster on Fever Toddler

Variables	N	Mean	SD	Sum Rank	SE	p-value
Post_test tepid sponging	15	0.82	1.8	21.9	.048008	0.000
Post_test plaster compress	15	0.46	1.5	9.1	.38791	

Table 5 is the result of the treatment of tepid sponging and plaster compresses on toddlers showing, the average value of the treatment of *tepid sponging* was higher (0.82 0 C) with an SE value of 48008 and the plaster compress treatment (0.46 0 C) with a further SE value of 38791. the number of

edges higher ranking sponging 21.9 compared with plaster compresses 9.1.

The results of the Mann Whitney Test showed that the p value (Asymp. Sig. (2-tailed)) was $0.000 < 0.005$ (α) so that H_0 was rejected and H_a was accepted, which means that the *tepid sponging treatment* is better when compared to compress plaster for lowering body temperature. To toddlers who have a fever.

DISCUSSION

Fever is a state of body temperature above normal as a result of an increase in the temperature regulating center in the hypothalamus. Fever is not a disease but a sign of disease, most fevers that occur in children are the result of changes in the heat center (thermoregulation) in the hypothalamus.

Fever is a condition where individuals experience an increase in body temperature above normal, namely > 37.5 o C, fever is not dangerous if below 39 o C, and a single measurement does not describe an increasing fever (Arifuddin, 2017; Lubis & Lubis, 2016; Sudibyo et al., 2020). Fever action can be done non-pharmacologically, namely actions that reduce heat, giving warm compresses (*edge sponging*) and plaster compresses.

Handling fever in children requires separate behavior that is different from adults, because if the handling measures taken are not appropriate in dealing with fever and slow it can result in impaired child development and growth. Fever can endanger the safety of children's lives if not handled quickly and appropriately, it can cause other complications such as hyperthermia, seizures, and decreased awareness of children (Arifuddin, 2017).

Body temperature in the intervention group before the treatment of tepid sponging table 2 shows that 10 respondents (66.7%) had moderate fever of 38.10-39 oC and 2 respondents had a high fever of >39 oC (13.3%). Furthermore, for the intervention group , compress plaster was given to 9 respondents (60.0%) with low fever 37.60-38.00 oC and 6 respondents (40.0%).

This shows that fever is a symptom of a disease, this condition is a reaction or body mechanism to survive in the face of the entry of foreign objects or germs such as viruses, bacteria or parasites into the body, to destroy them requires a certain temperature which is usually higher than the normal temperature. or called fever (Kania, Nia and Handiarsa, 2016).

After being given a *tepid sponge* to 15 respondents, namely a warm compress technique that combines the technique of compressing the block on superficial blood vessels with the wiping

technique, there is a decrease in body temperature in toddlers who have fever. The treatment is given by using a cloth/washcloth soaked in lukewarm water. 34 o C in the armpit, groin, and forehead (where large blood vessels pass) compresses of approximately 5-6 times, temperature measurements are carried out 2 times, before treatment and 30 minutes after treatment. Perid sponging compress works by vasodilating (widening) vessels peripheral blood throughout the body so that heat is evaporated from the skin to the surrounding environment.

The provision of *tepid sponging* using warm compresses in areas with large blood vessels is an attempt to stimulate the preoptic area of the hypothalamus to reduce body temperature (Carlson et al., 2019). After being given a compress plaster to 15 respondents with fever by attaching a compress plaster to the forehead, groin armpit which is part of the presence of large blood vessels, there is a decrease in body temperature due to natural cooling, the *hydrogel on polyaclyte-base content* contained in the compress plaster accelerates the transfer process. heat from the body to the plaster compress besides that the plaster also contains parabens and menthol which can help reduce heat (Bintang et al., 2020; Mahdiyah et al., 2015).

Based on the properties of the hydrogel, especially the very high water content, the hydrogel can be developed into a product called fever-reducing plaster. The working principle of the hydrogel plaster is to absorb energy from the fever area and then transfer that energy to the water molecules in the hydrogel so that there is a decrease in fever temperature through evaporation (Fatkularini et al., 2016).

From the results of table 3 shows that after being given tepid sponging there are 11 respondents in the normal temperature range (37.10°C-37.50°C) with a value of 73.3 % and body temperature which only decreased but did not reach normal $>37.500c$ as many as 3 respondents (20.0%). Furthermore, in the intervention group after being given a plaster compress, there were 8 respondents in the normal temperature range (37.10°C-37.50°C) with a value of 53.3% and body temperature which only decreased but did not reach normal $>37.500c$ as many as 7 respondents (46.7%) .

In general, fever occurs for a short time, but fever is a condition that causes discomfort, this condition can be overcome by non-pharmacological treatment, such as by physical methods, the principle of the physical method, which is to facilitate greater heat release, for example by treatment of tepid sponging and compress plaster.

Because the treatment of *tepid sponging* and plaster compresses is a non-pharmacological method which is only the main treatment to help lower body temperature and not to cure diseases that cause fever, there will be a decrease in body temperature that is less effective for some toddlers who are affected by the fever factor accompanied by other diseases. caused by a high period of infection requires treatment of infectious diseases, therefore these patients are also difficult to show an effective decrease in body temperature requiring assistance with fever medicine and the administration of drugs to treat infectious diseases.

This study is in line with (Mohamad, 2011) with the title *The Effectiveness of Warm Compresses in reducing fever in Typhoid Abdominal patients*, it was found that there was an ineffective decrease in body temperature as many as 5 respondents were patients with a diagnosis of fever whose infection period was still high, the fever experienced by these patients also it is difficult to demonstrate effective reduction in body temperature. Therefore, patients with fever whose infection period or fever is still high need to be given intensive antibiotic therapy and antipyretic therapy.

Based on the analysis of the results of the treatment of *tepid sponging* on toddlers with fever, the p-value (Asymp. Sig. (2-tailed)) is 0.001, which means the value is $0.001 < 0.005$ (α) so that the hypothesis is accepted, which means that the *Tepid Sponging* treatment can reduce the temperature. body against toddlers who have a fever at the Antang Perumnas Public Health Center.

Table 3 shows that the body temperature of toddlers with fever before being given *tepid sponging* averaged 38.29°C with a standard error of .08589. Meanwhile, the body temperature of toddlers with fever after being given *tepid sponging* averaged 37.40°C with a standard error of .07202 and based on test results using the Wilcoxon Signed Ranks Test on the Treatment of *Tepid Sponging* Toddlers with fever, the p value (Asymp. Sig. (2-tailed)) which is 0.001, where the value is $0.001 < 0.005$ (α) so it shows the results H_0 is rejected and H_a is accepted.

From these results, toddlers experienced a decrease in body temperature by about 0.82 C after being *tepid sponging* for 30 minutes. The results of the study are in line with research conducted by (Iqomh et al., 2019) it was found that the *tepid sponging* compress is a warm compress that combines the block compress technique on superficial blood vessels with the wiping technique works by vasodilating (widening) peripheral blood vessels throughout the body so that evaporation heat

from the skin to the surrounding environment will be faster.

Based on the analysis of the results of the plaster treatment of toddlers with fever, the p-value (Asymp. Sig. (2-tailed)) is 0.001, which means the value is $0.001 < 0.005$ (α) so that the working hypothesis is accepted, which means that the compress plaster treatment can reduce the body temperature of toddlers who have fever at the Antang Perumnas Public Health Center.

Table 4 shows that the body temperature of toddlers with fever before being given a compress plaster averaged 38.00°C with a standard error of .03352, while the body temperature of a toddler with fever after being given a plaster compress was an average of 37.50°C with a standard error of .02960 and the results Wilcoxon *Signed Ranks Test* on compress plaster treatment for toddlers with fever showed the p value (Asymp. Sig. (2-tailed)) was $0.001 < 0.005$, so H_0 was rejected and H_a was accepted. From these results, toddlers experienced a decrease in body temperature of about 0.46 C after a compress plaster was applied for 30 minutes.

The results of this study are in line with research conducted by (Mahdiyah et al., 2015) which reported that plaster compresses decreased body temperature by an average difference of 0.42 C in children with typhoid fever. Plaster compresses are made from hydrogel material containing hydrogel on polyacrylate-base containing parabens and menthol and polymers with crosslinked structures containing large amounts of water more than 70% which can reduce body temperature through evaporation.

Based on the comparative analysis of the treatment of *tepid sponging* and plaster compresses on toddlers with fever, it shows that the average number of treatment for *tepid sponging* is 0.820C higher than the treatment with compressed plaster of 0.460C after being given treatment for 30 minutes and the p value is obtained (Asymp. Sig. (2-tailed).) which is 0.000, where the value is $0.000 < 0.005$ (α) thus means that there is a comparison between the treatment of *Tepid Sponging* and plaster compresses or in other words the treatment of *tepid sponging* is better when compared to Plaster compresses for lowering body temperature against Toddlers who have fever at the Puskesmas Antang Perumnas Year.

The use of *Tepid sponging* as an initial treatment for feverish toddlers is easy and effective because it does not cost money to use only warm water in a compress by combining the block compress technique in the area of supervised blood vessels with the wiping technique. The *Perid sponging* compress works by vasodilating (widening)

peripheral blood vessels in all parts of the body so that heat evaporation from the skin to the surrounding environment will occur faster and body temperature adapts to warm water more quickly.

Based on table 5, the results of the Tepid Sponging Treatment and compress plaster against Toddlers show, the average value of the Tepid Sponging Treatment is higher (0.82 o C) with an error value of .48008 and the compress plaster treatment (0.46 o C) with an error value .38791 Furthermore, the number of edges higher sponging 21.9 compared to plaster compresses 9.1 and based on the results of the Mann Whitney Test, the p value (Asymp. Sig. (2-tailed)) is $0.000 < 0.005$ (α) so that H_0 rejected and H_a accepted.

The results of this study are strengthened by research conducted by Mariana S.Wowor Mario, E.Katuuk and Vandri D.Kallo based on the results of the Post test statistic with a significance level of 95% ($\alpha = .005$), the p-value is 0.001. The p value - value $0.001 < 0.005$ which means H_0 is accepted by warm water compresses is 0.8 and the average decrease after plaster compresses is 0.4 with these results means that giving warm water compresses is more effective in reducing children's body temperature in the Paulus room of Bethesda Hospital GMIM Tomohon (Mariana S.Wowor, 2017).

Likewise, research conducted by (Ramdani, 2015) showed that there was a significant difference in the baby's body temperature before and after being given a warm compress at the Bergas Public Health Center, Kab. Semarang with a p-value of $0.000 < (0.05)$, there is a significant difference in the baby's body temperature before and after being given compress plaster with a p-value of $0.000 < (0.05)$, there is a significant difference in the effectiveness of warm compresses and plaster compresses in lowering the body temperature of infants who have fever. Warm compresses are more effective in lowering the body temperature of infants aged 0-1 years who have a fever compared to plaster compresses. The researcher assumes that fever is a symptom of disease for non-pharmacological main treatments such as physical methods.

The principle of the physical method is that it facilitates greater heat release and there will be a reduction in fever with the treatment of tepid sponging and compress plaster. However, because the tepid sponging method and compress plaster are only the main snacks to reduce fever and not to cure fever-causing diseases, there is a fever reduction that is less effective for some toddlers influenced by the fever factor accompanied by diseases caused by a high infection period requiring Therefore, it is difficult for these patients to show an effective

decrease in body temperature and require assistance with antiperetic drugs and administration of drugs to treat infectious diseases.

In this study, the average decrease in body temperature after being given an intervention with the previous study was the same due to the way of treatment and duration of administration. The difference is only in the number of samples and predetermined criteria which are adjusted to the characteristics of the research area.

CONCLUSION

Based on a comparative analysis of the treatment of tepid sponging and plaster compresses on toddlers with fever, it shows that the average number of treatment of tepid sponging is higher (0.820c) than the treatment of plaster compresses (0.460c) after being given treatment for 30 minutes, thus means that the treatment of tepid sponging is better. when compared with plaster compresses to reduce body temperature for toddlers who have fever at the Antang Perumnas Health Center

SUGGESTION

It is hoped that this research can be input for health workers to serve as initial management in handling fever in toddlers.

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