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The Effect of the Use of Blanket Warmer on the Increase in Body Temperature in Post Op Section Caesarea Patients in the Recovery Room of the Central Surgical Installation of Dr. M.M Dunda Limboto Hospital

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ABSTRACT

Hypothermia often occurs during Caesarean section surgery due to the effects of anesthesia and room temperature. Therefore, a Blanket Warmer is necessary to increase the patient's body temperature. Objective: To determine the effect of Blanket Warmer use on body temperature increase in post-Caesarean section patients in the Recovery Room of the Central Surgical Installation of Dr. M.M. Dunda Limboto Regional Hospital. This study used a pre-experimental design with a one-group pretest-posttest. Purposive sampling was used to select 23 respondents. This design involved two observations: before and after the experiment. Results: This study showed a p-value of 0.000 ($p<0.05$), indicating a significant effect, with an average value of 54.62 before and 67.69 after. It can be concluded that the use of a Blanket Warmer has an effect on increasing body temperature in post-Caesarean Section patients. Conclusion: Therefore, the use of a blanket warmer is essential to increase the body temperature of post-Caesarean Section patients who experience hypothermia while in the Recovery Room.

INTRODUCTION

Surgery or surgery is one of the follow-up actions of handling emergency cases in the hospital. Surgery is a treatment that uses invasive methods by making an incision to open and display the part of the body that will be performed (treatment) and ends with closure through the process of stitching the wound scar scar. This procedure has many risks to the human body. (Putri Dafriani, 2021)

Caesarean section (SC) surgery is one of the most frequently performed surgeries in human medicine. This surgery has become a routine procedure with a very low morbidity and mortality, the goal of the car-area section is to remove the baby through the gaps created by the incisions made in the mother's abdomen and uterus. This incision is often made transversally, just below the waist. Caesarean sections are often performed with the mother conscious during the procedure thanks to epidural or spinal anesthesia (Ulya, Ningsih, Yunadi, & Retnowati, 2021).

Caesarean section (SC) is a surgical procedure to deliver a fetus by opening the abdominal wall and uterine wall, *Caesarean section* (SC) is a way of producing the results of conception through making an incision in the uterine wall through the abdomen due to several medical indications, namely placenta previa, preeclampsia, fetal emergency, fetal abnormality and large fetus in order to reduce the risk of maternal death if giving birth normally in addition to medical indications.(Susanto, 2022)

According to the Word Health Organization (2022), the number of births by *the Caesarean section* method is quite large, which is around 24% to 30% of all delivery processes and the use of caesarean section continues to increase globally, now reaching more than 1 in 5 (21%) of all births. This figure is expected to continue to rise over the next decade, with nearly a third (29%) of all births likely to be performed by caesarean section by 2030.

The latest study conducted by researchers through The Lancet, the study used data from the WHO and UNICEF in 169 countries between 2000 and 2020. Researchers found the country with the lowest caesarean section rate in 2010 was 0.9%, in 2014 South Sudan and the country with the highest caesarean section rate was the Dominican Republic at 58.1%. In 2015, 15 countries including Brazil, Egypt, Turkey and Mexico used more than 40% of caesarean sections, Many important things in developing countries show that social status and health facilities support mothers to opt for caesarean sections over normal delivery.WHO-specific data on post-cesarean section (SC) hypothermia is not explicitly available, but the World Health Organization (WHO) generally states that perioperative hypothermia (occurring before, during, or after surgery) is a common adverse event, with an estimated 70-90% of patients experiencing a body temperature below 35°C within the first hour of surgery. This is caused by a combination of factors such as environmental heat loss, thermoregulatory disturbances due to anesthesia, and heat transfer from the core to the periphery of the body.

Data from the results of Riskedas (Basic Health Survey, 2022) shows that the incidence of childbirth by *Caesarean section* in Indonesia reaches 17.6% of the number of births. Currently, childbirth by *Caesarean section* is not new for mothers. This is evidenced by the increasing number of births by *Caesarean section* in Indonesia. The increase in cesarean *section* deliveries is due to the development of medical indications and the reduced risk of mortality in *cesarean sections* , which is supported by advances in surgical techniques and anesthesia. Local research shows a high prevalence, with one other study stating that nearly 80% of patients after general anesthesia experience hypothermia.

Based on data obtained from the Gorontalo Provincial Health Office, in 2022 it reached 19,250. Operation *Caesarean section* This is an increase in the trend of childbirth handled by health workers because it is considered easier and faster to give birth. In this case, there is an increase in the number of surgical patients in one year. Surgical operations *Caesarean section* has the risk of disturbing the integrity or integrity of the body and can even be a threat to the patient's life and has various complications. Postoperative complications are bleeding both internal and external, which is characterized by restlessness, restlessness, constant movement, feeling thirsty, cold, wet, pale, increased pulse and decreased blood pressure. In addition, post-operative patients *Caesarean section* can experience hypothermia caused by low temperatures in the operating room, open wounds and decreased muscle activity due to the effects of spinal anesthesia, thus prolonging the healing process of surgical wounds (Putri Dafriani, 2021) Hypothermia affects several organ systems. Hypothermia initially causes an increase in metabolic rate in the cardiovascular system to occur tachicardi, peripheral vascular resistance, causing shivering. (Gorontalo Health Office, 2022)

Based on the data obtained in the Central Surgery Installation room of Dr. M.M Dunda Limboto Hospital over the last 3 months, it reached 230 Sc patients, and the most in August was 92 Sc patients. Hypothermia is a condition in which the body's mechanism for temperature regulation has difficulty coping with cold temperature pressure. Hypothermia can also be defined as the temperature inside the body below 36°C. The human body is able to regulate the temperature in the thermodynamic zone, which is between 36.5 oC and 37.5 °C. Beyond that temperature, the body's response to regulate temperature will actively balance heat production and heat loss in the body(Rositasari & Dyah, 2022)Hypothermia is a medical emergency that can arise when the body loses heat faster than heat production so that when the body temperature drops, the nervous system and other organs cannot function normally. If not followed up, hypothermia can eventually lead to heart failure and respiratory system disorders that can lead to death (Fitriani et al., 2021).

According to (Listiyanawati, 2022) Hypothermia is defined as a condition in which the body temperature is less than 36°C and can occur before, during or after surgery. Postoperative hypothermia can lead to a variety of adverse physiological effects. Hypothermia initially causes an increase in metabolic rate, in the cardiovascular system tachicardi occurs, peripheral blood vessel resistance, thus causing shivering. Shivering is a mechanism for the body's compensation against hypothermia.

Prevention of extreme hypothermia in postoperative patients, the main objective is that in the event of hypothermia then the objective of the intervention is to minimize or reverse the physiological process. There are several ways to overcome postoperative hypothermia, including pharmacological and non-pharmacological measures (Suindrayasa, 2020). Nonpharmacological treatment to prevent the body from experiencing hypothermia is carried out by the heating method, including the use of *Blanket Warmer*, oxygen humidification and warm infused liquids. The rewarming technique is a non-pharmacological action to prevent hypothermia and chills (Jarod, Wibowo, 2024)

An indication for providing an active external mounting method is to provide *Blanket Warmer*. Officers in the recovery room routinely do this. Hypothermic bodies can be protected from exposure to air that has lower temperatures by giving *Blanket Warmer*. *Blanket Warmer* is considered more optimal in handling hypothermia because *Blanket Warmer* produces heat that can be regulated with a certain temperature so that the heat produced will be transmitted to the body of the patient experiencing hypothermia, so that there will be heat transfer from the *Blanket Warmer* into the patient's body(Winarni Endang, 2022).

Blanket Warmer It is a tool to maintain the stability of the patient's body temperature when the patient experiences hypothermia. This tool basically utilizes the heat that is flowed by using a blower as a heat conduction medium so that the patient's condition is maintained in a warm state.*A Blanket Warmer is a device*

used to warm patients who are experiencing hypothermia. Which hypothermia itself occurs, if the patient loses or emit too much heat in other words the body experiences a drop in temperature, if left continuous it can lead to death. (Syahrizal, 2021)

Increased body temperature using *Blanket Warmer* is a warming method to treat or prevent hypothermia (low body temperature), such as surgery or under the influence of anesthesia. *Blanket Warmer* Generates heat that is channeled into the blanket, providing warmth directly to the patient's body to counteract the cold effects of anesthesia or other conditions. Effectiveness *Blanket Warmer*It has been proven to be more effective than regular blankets in increasing body temperature and stabilizing the patient's condition after surgery.(Winarni Endang, 2022)

This is in line with research (Susanto, 2022) About Electric Blanket can Reduce the Incidence of Chills and Hypothermia in Postoperative Patients *Caesarean section* obtained the results that there was a significant influence of the intervention in the form of an eclectic blanket on the incidence of chills and an increase in body temperature of postoperative cesarean section patients. The research by Sutanto. S (2022) on Effectiveness *Blanket Blower Warmer* Regarding the Recovery Time of Shivering Patients After Surgery, the results were obtained that the administration of *blanket blower* Warmer has been shown to be effective against shivering recovery time up to level 0.

Research results (Muchtar & Masda, 2021) The average body temperature of a post-Caesarean Section patient before the use of an electric blanket in the Operating Room of RSAB Pekanbaru is 33.70C. 2. The average body temperature of post-section caesaria patients after the use of an electric blanket in the Operating Room of RSAB Pekanbaru is 34.70C. 3. There was an effect of giving an electric blanket on the increase in body temperature of post-section caesarean section patients in the Operating Room of Awal Bros Hospital (RSAB) Pekanbaru with a p value = 0.000, a significant value of < ά (0.05).

The results of interviews with the Head of the Central Surgical Installation Room (IBS) of Dr. M.M dunda Limboto Hospital in the last three months have increased and the average hypothermia is around 85%. The number of Blanket Warmers in the Recovery Room room is only two devices, so patients must alternate using Blanket Warmers to warm the body if many post op patients experience hypothermia at the same time. The Head of the Room also explained that in the Hospital's provisions there is no standard number of specific Blanket Warmer, but the Blanket Warmer must be enough to warm patients who experience hypothermia at the same time.

The application of Blanket Warmer, which is used in the Recovery Room of Dr. M.M Dunda Limboto Hospital, is to prepare tools and materials, Blanket Warmer is prepared and set at the specified temperature, then application to sc patients with the risk of hypothermia and finally monitoring and evaluating the patient's body temperature.

RESEARCH METHODOLOGY

This research is quantitative, with the research design using the research method, pre-experimental designs, one group, pretest, posttest. Pre-experimental designs one group pretest-posttest, i.e. the previous researcher gave a pre-test to the group to be given treatment. Then the researcher carried out a treatment or treatment. After completing the treatment, the researcher gave a post-test. The magnitude of the effect of treatment can be known more accurately by comparing the results of the pre-test with the post-test. This study was conducted to see if there is an effect of the use of Blanket Warmer on the Increase in Body Temperature in Post op Section Caesarea patients in the Recovery Room of the Central Surgery Intalasi (IBS) Hospital, Dr. M.M DundaLimboto Hospital.

This research will be carried out at Dr. M.M Dunda Limboto Hospital in the Recovery Room of the Central Surgical Installation. This research was conducted on November 15-22, 2025. This research began from the process of preparing a proposal by taking initial data at the research site. The determination of the sample in this study is based on the theory of Atikunto (2014) that sampling if the subject is less than 100 people, all of them are taken, but if the subject is more than 100 people, it can be taken 10-15% or 20-25%. The formula used is: The sample in this study is 23 Post Op *Section Caesarea* patients in the Recovery Room of the Central Surgery Rehabilitation Room of Dr. M.M DundaLimboto Hospital.

Data Collection Techniques

Primary Data

Primary data is called first-hand data, and is obtained directly from the research subject by using a data retriever or measurement tool, or directly on the subject as a source of information sought by the researcher. The advantage of primary data is that it is high accuracy, while the disadvantage is that it requires large resources to obtain it (Saryono & Anggraeni., 2013).

Secondary Data

Secondary data or second-hand data obtained from other parties is not directly obtained by the researcher from the research subject. The advantages of secondary data are that they are highly efficient, while

the disadvantage is that they are less accurate (Saryono & Anggraeni., 2013). The data obtained is for example the number of post-operSectioncaesarea patients in the recovery room of the central surgical installation of Dr. M.M DundaLimboto Hospital.

Data Analysis Techniques

Univariate Analysis

Univariate analysis aims to explain or describe the characteristics of each research variable. The form of univariate analysis depends on the type of data. In this study, the univariate analysis is the frequency distribution and percentage of the characteristics of the respondents of the research variables.

Bivariate Analysis

Bivariate analysis is an inferential data analysis used to find out how well an independent variable affects a dependent variable. The bivariate analysis in this study was to determine the effect of the use of *Blanket Warmer* on the Increase in Body Temperature in post op *Section Caesarea* patients by looking at the differences before and after the use *of Blanket Warmer*. For the normality test, the research data was used *the Shapiro Wilk Test* because the number of samples used in the study was <50. After the data normality test is carried out, if the data is normally distributed, the statistical test can be used *the Paired t-test* and if the obtained is abnormally distributed, the statistical test can be used the *Wilcoxon t-test.*

Statistical Hypothesis

H0 : It is said to be meaningless if it has a p value of ≥ 0.05. then Ha is rejected and Ho is accepted which means there is no Usage Effect *Blanket Warmer* Against Increased Body Temperature in Post Op Patients *Caesarean section* In the Recovery Room of the Central Surgical Installation of Dr. M.M Dunda Limboto Hospital.

Ha : It is said to mean if it has a p value of ≤ 0.05. then Ha is accepted and Ho is rejected which means there is an Influence of Use *Blanket Warmer* Against Increased Body Temperature in Post Op Patients *Caesarean section* In the Recovery Room of the Central Surgical Installation of Dr. M.M Dunda Limboto Hospital.

RESULTS

Distribution of Respondent Characteristics

Table 1 Distribution of respondents by characteristics of age, gender, occupation and last education

No.	Age	Frequency	Introduce yourself
1.	17-25 Years	5	**21,7%**
2.	26-35 Years	12	**52,2%**
3.	36-45 Years	6	**26,1%**
	Jobs		
1.	IRT	15	**65,2%**
2.	TEACHER	3	**13,0%**
3.	NURSE	3	**13,0%**
4.	LECTURER	2	**8,7%**
	Final Education		
1.	SD	2	**8,7%**
2.	Junior High School	4	**17,4%**
3.	High School	10	**43,5%**
4.	D3/S1	5	**21,7%**
5.	S2	2	**8,7%**
	Diagnosis		
1.	G1A0P0	12	**52,2%**
2.	G2A0P1	5	**21,7%**
3.	G2A1P0	3	**13%**
4.	G3A0P2	1	**4,3%**
5.	G3A1P1	2	**8,7%**
	Total	**23**	**100%**

Source: Primary Data (2025)

Based on table 1 Frequency distribution by age, the most respondents in this study were 26-35 as many as 12 respondents (52.2%). Based on work, the most respondents in this study were IRT as many as 15 respondents (65.2%). Based on the latest education, the most respondents in this study were high school with 10 respondents (43.5%). Based on the pregnancy diagnosis, the most respondents in this study were G1P0A0 (52.2%).

Univariate Analysis

Univariate analysis was carried out to find out the picture of free and bound variables. Univariate analysis was carried out using the help of the SPSS (*Statistical Product and Service Solution*) program and presented in the form of a table.

Distribution of Respondent Frequency Based on Increased Body Temperature Before Intervention

Table 1. Distribution of Respondent Frequency Based on Increased Body Temperature Before Intervention

Yes	Body Temperature	Frequency	Present (%)
1.	Hypothermia (≤ 36 C)	23	100%
Total		**23**	**100%**

Source: Primary Data (2025)

Based on the table above, it was found that before the intervention was given, all respondents experienced hypothermia, namely 23 respondents (100%).

Distribution of Respondent Frequency Based on Increased Body Temperature After Intervention

Table 3 Distribution of Respondent Frequency Based on Increased Body Temperature After Intervention

Yes	Body Temperature	Frequency	Present (%)
1.	Hypothermia (≤ 36 C)	3	13%
2.	Normal (36 C – 37.5 C)	20	87.0
Total		**23**	**100%**

Source: Primary Data (2025)

Based on the table above, it was found that body temperature after being given *Blanket Warmer*mostly experienced an increase in normal body temperature, namely as many as 20 respondents (87.0%).

Bivariate Analysis

Table 4. The Effect of the Use of Blanket Warmer on the Increase in Body Temperature in Post Op Section Caesarea Patients in the Recovery Room of the Central Installation of Dr. M.M Dunda Limboto Hospital

Variable	Before	Red	Std. Deviation	t	P-Value	N
Increased Body Temperature	Before	54,62	10.300	12,111	0,000	23
	After	67,69	10.727			

Source: Primary Data (2025)

Based on table 4, it shows that the results of the paired T test with iliai p value 0.000 < 0.05 which means that H0 is accepted and H1 is rejected or there is a significant influence between the use *of blanket warmer* on the increase in body temperature in Post Op *Section Caesarea patients* in the Recovery Room of the Central Installation of Dr. M.M Dunda Limboto Hospital.

DISCUSSION

Univariate Analysis

Increased body temperature before the intervention (use of *blanket warmers*)

Based on the results of the study, it was found that before being given intervention, all respondents experienced hypothermia, namely 23 (100%). This is because anesthesia drugs inhibit the body's metabolism

which can cause hypothermia and also cause imperfect metabolism, in addition to post op sc patients have a higher risk of experiencing hypothermia than other surgeries due to a combination of physiological changes in pregnancy and intraoperative environmental conditions.

Hypothermia initially causes an increase in metabolic rate, in the cardiovascular system tachicardi occurs, peripheral vascular resistance, thus causing shivering. Shivering is a mechanism for compensating the body against hypothermia (Hidayatulloh, 2023). How long a person can survive a hypothermic attack depends on various factors that support continued survival, or various factors that make the situation worse.

According to Islami (2022), a person's metabolism varies, one of which is influenced by body size, namely height and weight, which are assessed based on body mass index, which is a factor that can affect metabolism and have an impact on the thermogulation system. People who are obese have more fat reserves will tend to use fat reserves as a source of energy from within, meaning they rarely burn calories and increase heart rate. The larger body stores a lot of fat tissue, so it is better at maintaining body temperature.

The researchers' assumption that post-op *Caesarea section* patients experience hypothermia on average due to a combination of anesthesia effects, cold operating room temperature, loss of body heat due to open wounds and surgical procedures, and decreased muscle activity that affects heat production. It is estimated that 70-90% of patients who undergo surgery experience portermia, even though the surgery lasts only 1 hour. Recovery of normothermic can take up to 4 hours if hypothermia precautions are not taken. So it is necessary to use a warming device such as *a Blanket Warmer* to increase the patient's body temperature within normal limits quickly.

Increased body temperature after intervention (use of *blanket warmer*)

Based on the results of the study, it was found that the body temperature after being given *Blanket Warmer* mostly experienced an increase in normal body temperature, namely as many as 20 respondents (87.0%), This is because after the *Blanket Warmer* was applied for 15 minutes, most of the results were obtained that the patient's body temperature increased and the acre felt warm with an average temperature of 36.5 C. can increase body temperature in patients who experience hypothermia.

Blanket Warmer can help postoperative patients not to shiver more than normal. A person who has hypothermia can use *a Blanket Warmer* to keep his body temperature stable. This tool has the ability to make patients suffering from hypothermia get hot and stay warm. The use of *Blanket Warmer* is more effective in overcoming hypothermia because it produces heat that can be controlled up to a certain temperature. This allows the hypothermic patient to receive heat from the heater to his body. *Blanket Warmer* can increase body temperature by providing direct heat, increasing peripheral blood circulation and stabilizing thermoregulation, making it very effective in preventing and overcoming hypothermia, especially in *post-Caesarean Section patients.* Pratiwi (2022)

The results of the study conducted by Shinta (2022) also found that the average body temperature in the group *of Section Caesarea* patients who were not given *a Blanket Warmer* before being given a regular blanket was 34.26 o C and after being given a regular blanket rose to 35.14 o C, with the highest pre-test body temperature (35.20 o C) lower than the post test (36.09 o C) and the lowest pre test body temperature (33.70 o C) lower compared to post test (34.00 o C).

In this study, there were 3 respondents (13%) who were still experiencing hypothermia. This shows that there is an increase in body temperature but not within normal limits. . There are several reasons why post-op cesarean patients can still experience hypothermia even though they have been given *a Blanket Warmer* , namely there are still anesthetic effects both spinal and general that inhibit thermoregulation in the hypothalamus and there are also patients who have other risk factors such as anemia, and low BMI.

In *Caesarean section*, spinal anesthesia causes a blockade of the sympathetic nerve that triggers peripheral vasodilation. As a result, heat from the core of the body moves quickly to the peripheral tissues, so that the temperature of the core of the body remains low even when the outer body is felt warm by *the Blanket Warmer*. The core temperature is usually 36-37.5C, while the peripheral temperature is usually lower by approximately 1-4C. When vasodilation occurs suddenly, the body tries to achieve equilibrium, so that the heat moves from a warmer region to a cooler one (peripheral), this process causes a decrease in core temperature of 0.5-1.5 C in just the first 30-60 minutes after the sympathetic block is formed. Spinal anesthesia also inhibits thermoregulation in the hypothalamus. Winarni (2020)

This is in line with research (Jarod et al., 2024) why post-op section patients can still experience hypothermia even though they have been given *a Blanket Warmer* , namely the difference in body size and the degree of hypothermia that occurs causing a difference in body temperature decrease. Smaller or thin body size increases in temperature more slowly because the body produces less heat than obese people.

The researcher's assumption is that to increase body temperature within normal limits in post-op *Caesarea Section patients* who experience hypothermia it is more efficient to use a warming blanket such as *Blanket Warmer* because it can increase body temperature in less than 30 minutes. Most of the human body is unable to withstand hypothermia for long periods of time because the core body temperature must be maintained within a very narrow range for normal functioning. Although natural mechanisms such as shivering

help generate heat, and blood vessels narrow to reduce blood flow to the skin, the body's ability to compensate for exposure to cold is severely limited without adequate protection. The use of *Blanket Warmer* is very effective in warming the body of post op *Caesarea Section* patients quickly, so it does not take hours to restore normal body temperature in post op *Caesarea Section patients*.

Bivariate Analysis

The Effect *of Blanket Warmer* on the Increase in Body Temperature in Post Op *Section Caesarea Patients* in the Recovery Room of the Central Installation of Dr. M.M Dunda Limboto Hospital

In this study, the researcher first conducted a data normality test, before a paired t test, which aims to find out whether the data used is normally distributed or not. The normality test used was the Shapiro-Wilk test, and it can be seen that the data in this study is normally distributed because the significant value at the pre-test is 0.016 which means a p value > of 0.005, and the significant value in the post test is 0.053 which means > 0.005.

This study shows that after a *paired t test is carried out*, in general, the use of *Blanket Warmer* can affect the increase in body temperature in post op *Caesarea Section patients*. This can be seen from the results of the study regarding the variable of body temperature increase in post-op *Caesarea Section patients* In the Recovery Room of the Central Installation of Dr. M.M Dunda Limboto Hospital before and after treatment, a statistical test value was obtained, namely (p = 0.000), with p < 0.005 meaning that in this study H0 was accepted H1 was rejected. Thus, it can be concluded that there is a significant influence between increased body temperature in post-op *Caesarea Section* patients before and after the use *of Blanket Warmer*.

The results of this study are in accordance with the research conducted (Jarod et al., 2024) about "Influence *Blanket Warmer* Against Hypothermia in Post-General Anesthesia Patients at Jatiwinangun Purwokerto Hospital". The results showed that there was a change in the level of hypothermia after administration *Blanket Warmer*, there were a large number of respondents who were not hypothermia, namely as many as 30 respondents (78.9%) after being given *Blanket Warmer*, this is due to *Blanket Warmer* The use of electric power in this study uses electricity so that the body temperature of patients who experience hypothermia after surgery increases in temperature. Usage *Blanket Warmer* It uses hot air and flows through the blanket, known as convection. This process increases body temperature due to exposure to hot air and prevents heat loss from the body. Thanks to the ability *Blanket Warmer* to generate and maintain a predetermined temperature, thus allowing the transmission of heat to the body of the hypothermic patient.

In line with the research conductedRanti Nur Azizah et al., (2025) Effectiveness *Blanket Warmer* It depends a lot on the extent of the heated body surface. Underbody blankets have proven to be more effective than upper or lower body blankets because they cover a larger area, resulting in an increase in core temperature of up to 1.2°C within 120 minutes. In addition, *Blanket Warmer* It also plays a role in preventing heat redistribution due to peripheral vasodilation triggered by spinal anesthesia. It was also found that active heating using *Blanket Warmer* significantly better than other methods in preventing intraoperative hypothermia. Overall, *Blanket Warmer* It works effectively through heat convection and proper blanket placement strategies, and can be used as a primary intervention to prevent postoperative hypothermia complications. Utilize *Blanket Warmer* is a superior approach in treating hypothermia compared to conventional blankets due to its ability to facilitate the transfer of heat from the warmer to the patient's body.

The researcher's assumption is that the use of *Blanket Warmer* is the right tool to increase body temperature in post-op *Caesarean Section patients*. In the increase in body temperature of post op patients, a warming device is needed that is able to increase body temperature in less than 30 minutes. *The Blanket Warmer* has the ability to make patients who are experiencing hypothermia get hot and stay warm and can increase the body temperature of the patient post op after use for 10 to 15 minutes, because *the Blanket Warmer* is designed to be flexible to maintain temperature in various places, so it is designed to cover the entire area. It works by channeling heat to the blanket which then transfers heat to the patient's body efficiently to stabilize and increase body temperature faster than a regular blanket. *The Blanket Warmer* used must be ensured to function properly, have a sufficient amount of supplies and comply with hospital SOP standards so that it can quickly increase the body temperature of post-op *Caesarea Section* patients .

CONCLUSION

The body temperature level of post-op *Caesarea Section patients* before being given *a Blanket Warmer* was < 36 C for 23 respondents (100%). The body temperature level of post-op *Caesarea Section* patients after being given a warmer questionnaire increased by 20 respondents (87.0%). The use of *Blanket Warmer* has an effect on increasing body temperature through an external heat delivery mechanism that helps maintain the patient's thermoregulatory balance and the use of *Blanket Warmer* has a positive effect on increasing and maintaining body temperature.

ADVICE

The researcher hopes that after knowing the results of the research on the use *of Blanket Warmer* in post-op *Caesarean Section patients*, it is hoped that the hospital can facilitate Blanket Warmer in the operating room with a sufficient amount adjusted to the number of post op patients, so that there is no delay in increasing body temperature when there are post op patients who experience hypothermia at the same time.

From the results of this study, it is hoped that it can be one of the references to be carried out further about variables that have not been researched and can provide additional science and information for research related to the use of *Blanket Warmer.*

From the results of this research, it is hoped that it can develop knowledge and apply the knowledge that has been obtained and share the experience gained by researchers with other researchers. From the results of this study, it is also hoped that the next researcher will be able to develop this research by researching other post op patients, the effects of anesthesia, using a larger number of samples and using a more accurate blanket tool in accordance with the purpose of the research to be carried out.

REFERENCES

Jarod, M., Heri Wibowo, T., & Nova Handayani, R. (2024). Effect of Blanket Warmer on Hypothermia in Patients After General Anesthesia at Jatiwinangun Purwokerto Hospital. Scientific Journal of Educational Vehicles, 10(8), 711–719. https://doi.org/10.5281/zenodo.11112343

Listiyanawati, M. D. (2022). The Effectiveness of Electric Blankets in Increasing Body Temperature of Post-Section Cesarean Patients Experiencing Hypothermia. 3(2), 69–73.

Mahdi Ahmed, Azni Idris, S. R. S. O., P A Wheeler, Rome, L. de, Abu-zahra, T. R., Ta, R. A., Arabiyyat, A. R., Mikkelsen, R. L., United States Environmental Protection Agency, Risse, M., Afriyansyah, B., Zghair, H., Ali, A., Adhikari, B. K., Barrington, S., Martinez, J., King, S., Agamuthu, P., Fauziah, S. H., Hue, N. V, … Khalil, M. S. (2023). Bibliography Review Section Caesarea. Australian Journal of Basic and Applied Sciences, 2(1), 20–29. http://dx.doi.org/10.1080/10962247.2015.1083913%0Ahttps://doi.org/10.1080/10962247.2015.10839 13%0Ahttp://inpressco.com/category/ijcet%0Awww.eijst.org.uk%0Ahttps://mafiadoc.com/sustainabl e-management-of-wet-market-waste-citeseerx_5b6de990097c470f468b45ef.h

Muchtar, R. S. U., & Masda, F. R. (2021). The Effect of Electric Blankets on the Increase in Body Temperature of Post Section Caesaria Patients in the Operating Room of Awal Bros Pekanbaru Hospital. Initium Medica Journal, 1(1), 1–8.

Pratama, Y. (2022). The blanket warmer is equipped with body temperature monitoring. In UWHS Journal (Issue Blanket Warmer, Hypothermia, Temperature, Heater, pp. 4–8).

Pusparini, N. M. O. (2021). Differences in Pain Intensity Post Caesarea Section Before and After Finger Palm Relaxation at RSIA Pucuk Permata Hati in 2023. Laboratory of Tropical Pharmacy Research and Development, Faculty of Pharmacy, Mualawarman University, Samarinda, East Kalimantan, 1(1), 105–112.

Putri Dafriani, H. afri. (2021). THE EFFECTIVENESS OF USING A WARM BLANKET COMPARED TO THE INCREASED TEMPERATURE IN POST OPERATING PATIENTS IN RSUD. SAWAHLUNTO. See also Psalm 12, 9–15.

Ranti Nur Azizah, A., Haris, F., & Rahmawanto. (2025). Effectiveness of the Use of Blanket Warmer for the Prevention of Hypothermia in Post-Operative Patients with the Effect of Spinal Anesthesia. TRIAGE Journal of Nursing Science, 12(1), 14–19. https://doi.org/10.61902/triage.v12i1.1601

Rositasari, S., & Dyah, V. (2022). THE EFFECTIVENESS OF PROVIDING BLANKET WARMER TO POST-CAESAREAN SECTION PATIENTS WHO EXPERIENCE HYPOTHERMIA AT PKU MUHAMMADIYAH HOSPITAL IN SURAKART. 10(1).

Salsabila, A., Yanrin, N. P., Sukmaningtyas, W., Burhan, A., Adriani, P., Study, P., Anesthesiology, K., University, K., Nation, H., & Abstract, I. (2024). Overview of the Incidence of Hypothermia in Caesarean Section Patients at the Brebes Regional General Hospital. Scientific Journal of Educational Vehicles, 10(10), 29–37. https://doi.org/10.5281/zenodo.11313844.

Saryono & Anggraeni. (2013). Qualitative and Quantitative Research Methodology in Health Sciences. Medical Nun.

Setiati, H. (2020). Definition of Hypothermia. http://repository.unimus.ac.id

Sugiyono. (2017). Qualitative, Quantitative, and R&D Research Methodologies. Alphabet.

Susanto, I. M. (2022). Electric Blanket can Reduce the Incidence of Chills and Hypothermia in Postoperative Caesarean Section Patients. 136–142.

Sigh. (2021). Blanket Warmer Intervention for Postoperative Patients. Scientific Journal of Health Education, 15(6), 54–56.

Syahrizal, H. (2021). The Effectiveness of Warmet Blangket on the Treatment of Shivering in Post Section Caesarea (SC) Patients with Spinal Anesthesia in the Recovery Room. 2(4), 1147–1152.

Winarni, E. (2020). The effectiveness of the use of Blanket Warmer on temperature in patients shivering post spinal anesthesia replacement. Nursing, 1–13.
Winarni Endang. (2022). EFFECTIVENESS OF THE USE OF BLANKER WARMER ON TEMPERATURE IN PATIENTS SHIVERING POST SPINAL ANESTHESIA REPLACEMENT LOWER EXTREMITY.
Winarni, S. (2021). CHAPTER II hypothermia. 4–5, 5.
Abdul, H, S, Thalib & Leni, W (2021). The Effectiveness of Decuputus Wound Treatment with Modern Dressing Methods on the Wound Healing Process : Literature Review.
Afrila Gani, A., Oktarina Nursing Study Program, Y., Medicine and Health Sciences, F., & Jambi, U. (2022). Pinang Masak Nursing Journal Overview of Nurses' Knowledge of the Application of Bundle Care in the Prevention of Pressure Wounds at Dr. Bratanata Jambi Hospital. Pinang Masak Nursing Journal, 1(1).
Anugrahwati, M. (2022). Application of the Use of Anti-Decubitus Mats. Application of the Use of Anti Decubitus Mats
Aripratiwi, C., Sutawardana, J. H., & Hakam, M. (2020). The Effect of Familiar Auditory Sensory Training on the Level of Awareness of Stroke Patients at dr. Soebandi Jember Hospital. Indonesian Journal of Nursing Education, 6(2), 137–146. https://doi.org/10.17509/jpki.v6i2.26917
Health Research and Development Agency of the Ministry of the Republic of Indonesia in 2022. Retrieved August 18, 2022 from http://www.depkes.go.id/resources/downloa d/infoteractual/materi_rakorpop_2022/Result% 20Risk esdas%202018.pdf.
Black, Joyce M., & Jane Hokanson Hawks, 2014, Surgical Medical Nursing (8th ed.). Salemba Medika, Jakarta.
Djojodibroto, R. (2024). Respiratory Medicine. Edition2. Jakarta: EGC.
Mahmuda, I. N. N. (2019). Prevention and Management of Decubitus in Geriatrics. Biomedicine,11(1), 11. Https://Doi.Org/10.23917/Biomedika.V11i1.5966
Maryam. (2022). Decubitus Ulcers in Nursing Care. Literature Review. Universitas Jendral Sudirman Purwokerto
Mutia, L., Pamungkas, K. A., & Anggraini, D. (2020). Profile of Ulcer Sufferers of Decubitus Ulcer Who Underwent Lying Down in the Inpatient Room of Arifin Achmad Hospital, Riau Province for the period of January 2011-December 2013. Jom Fk Journal, 2(2), 1–11.
Primantika, D. A., & Erika Dewi Noorratri. (2023). IJOH: Indonesian Journal of Public Health. IJOH: Indonesian Journal of Public Health, 01(02), 1–6.
SDKI, DPP, & PPNI. (2022). Indonesian Nursing Diagnosis Standards: definitions and diagnostic indicators. (Edition 1). Jakarta: DPPPPNI.