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Factors associated with understanding and perineal wound care behavior of postpartum mothers in Cikeusik district, Pandeglang regency

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ABSTRACT

Maternal deaths after childbirth occur when perineal wounds are common in women after childbirth, either vaginally or by caesarean section. This wound can cause pain, discomfort, and potentially lead to infection if not treated properly. Proper care of perineal wounds in accordance with the recommendations of health workers is very important to accelerate the healing process and prevent complications. The purpose of this study was to determine the relationship between factors with knowledge and behavior of perineal wound care in postpartum women in Cikeusik District Pandeglang-Banten. This study used quantitative research with a cross sectional design based on analysis using chi square statistical test >0.05, known p value 0.00 for variable debriefing, p value 0.01 for variable parity and p value 0.02 for variable age. Conclusion There is a significant relationship between age, parity and debriefing factors with understanding and behavior of perineal wound care.

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INTRODUCTION

Childbirth is a normal physiological process, but it can cause perineal wounds in postpartum women. This perineal wound needs proper care in order to heal optimally and prevent complications. Good perineal wound care can improve the quality of life of postpartum women and speed up the recovery process. However, in reality, there are still many postpartum women who do not have good knowledge and behavior in caring for perineal wounds. This can be caused by various factors, such as education level, access to information, family support, and previous childbirth experience. Research on factors associated with knowledge and behavior of perineal wound care among postpartum women in Cikeusik Subdistrict, Pandeglang Regency, Banten, is important to know a clearer picture of this condition and to formulate appropriate strategies in improving the knowledge and behavior of postpartum women in caring for perineal wounds(Anggraini et al., 2024). Labor is a physiological thing experienced by every woman that can run normally or with complications. There are several kinds of complications in the labor

process, one of which is perineal tears. Perineal tears can occur spontaneously (rupture) or intentionally (episiotomy) (Putri Andanawarih, 2021). A perineal wound is a tear that occurs after childbirth labor. Perineal wounds can be classified based on the degree of perineal wounds, namely step I, step II, step III, dan step IV (Saldanha et al., 2023). Treatment of the perineal injury seeks to reduce the chance of infection, provide a sense of comfort, and speed up healing process (Vita & Fitriana, 2018). puerpural infection is an infection of the genitals after childhood, characterised by an increase in the temperature to 380C or above on 2 days within the first 10 days after delivery, excluding the first 24 hours. Puerperal infection includes all inflammation caused by the introduction of germs or bacteria into the genitals. genitals genitalia during labor and postpartum (Mitayani, 2011).

Based on the statistical data in the figure above, it can be seen that the highest maternal mortality rate after childbirth in Papua Province is 565 throughout 2020-2021, it can be concluded that the level of understanding in the delivery process is very minimal, while the smallest maternal mortality rate after childbirth is in DKI Jakarta province where DKI Jakarta 46 has complete health service accessibility so as to minimize maternal mortality after childbirth. The author chose a location in Cikeusik District, Pandeglang Regency. Because the location is very strategic for research access from the city of Serang to Cikeusik can be traversed by the datrat route and coincidentally the access road has been casted so it makes it easier to do research. The second reason before conducting research the author did research on what obstacles occurred in the Cikeusik sub-district after the mother gave birth and her handling and the third the author is very happy to do research for the benefit of the general public.

Some bacteria can cause infection after labor (Zhang et al., 2023).. Postpartum infections are still the highest cause of maternal mortality. Genital infections are a complication of the puerperium. Infections that extend to the urinary tract, breasts and surgery are causes of AKI (Heryani, 2012). Postpartum infections can be caused by unsterilized instruments, birth canal tears, bleeding, preeclampsia and poor hygiene of the perineal area. Postpartum infections can also occur due to several enabling factors, including lack of knowledge, nutrition, education and age(Bryant et al., 2023).

Perineal wound healing in mothers after childbirth influenced by many factors including internal factors and external factors(Alemu et al., 2023). External factors that influence wound healing include(Ensayan et al., 2023). environment, tradition, knowledge, socio-economic, maternal condition, administration of antibiotics and personal hygiene, While internal factors that affect wound healing are age, trauma or tissue infection, tissue handling, bleeding, hypovolaemia, local edematous factors, nutritional deficit, personal hygiene, oxygen deficit, type of delivery, type of wound suture perineal wound and haemoglobin levels (Bryant et al., 2023). The number of maternal deaths in Banten Province in 2020 recorded 63 cases of bleeding, 65 cases of hypertension in pregnancy, 5 cases of infection and 84 other cases(Bennetter et al., 2023). Experience in perineal wound care in postpartum women can be influenced by environmental factors and local traditions(Hayoun et al., 2023). The results of the study showed that there was an effect of health education on postpartum danger signs using audiovisual media on the knowledge, attitudes and behavior of postpartum women with a significant value of 0.000 ($P < 0.05$)(Aqua et al., 2023).

One approach that can be used to explore the local knowledge of certain communities regarding the use of plants as medicines is ethnopharmacy by tracing the use of natural ingredients as traditional medicines and how they are used as cultural characteristics in a particular community(Meija et al., 2023). Ethnopharmaceuticals related to the use of natural ingredients as traditional medicines in Indonesia have been practiced for centuries by our ancestors in a cultural context by local communities (ethnicities)(Weerasuriya et al., 2023). One of the tribes in Indonesia that still maintains its culture and traditions well is in the neighborhood village of Cikeusik Regency, Pandeglang-Banten, which still behaves using ginger compresses for generations to accelerate the healing of postpartum perineal wounds. Ginger (Zingiber officinale Roscoe) is one

type of medicinal plant in Indonesia that is often used as herbal medicine(Depkes, 2013). Active substances contained in ginger include gingerol, shogaol, triterpenoids, flavonoids and saponins (Saldanha et al., 2023). Saponins are active substances that also have high benefits. Saponins are able to activate TGF-β signaling to increase fibroblasts that function to increase collagen synthesis of other extracellular matrices so that wounds heal faster(Adams et al., 2023). Therefore, researchers are interested in finding factors associated with understanding and behavior of perineal wound care for postpartum mothers in Cikeusik Pandeglang(Ujah et al., 2023).

The benefits of this study are expected to contribute to the improvement and development of collaboration between midwifery and pharmaceutical science to provide information to increase knowledge and behavioral traditions of postpartum mothers in perineal wound care which can participate in reducing maternal mortality in Indonesia, especially in the Cikeusik environment, Pandeglang Regency - Banten(Albers et al., 2023).

RESEARCH METHOD

The sample size in this study was determined using the formula Cochran's formula: n = z^2 * p * (1 - p) / e^2 Description:n = Sample sizez = The z value for the desired confidence level (e.g., 1.96 for 95% confidence level) p = The proportion of the population expected to have a particular characteristic (e.g., 0.5) e = Desired precision (e.g., 0.05) The sample size of 100 respondents in this study is considered adequate for generalization of results. This is based on several considerations. The population of postpartum mothers in Cikeusik sub-district, Pandeglang district, is not expected to be too large. The population in this study was selected using stratified random sampling technique to ensure proportional representation of various age groups in the sample. The sample size of 100 respondents in this study was considered adequate for generalization of the results. The confidence level used in this study is 95%, which is a commonly used confidence level in scientific research. The precision used in this study is 0.05, which is a level of precision sufficient to produce accurate results.

Based on calculations with the Cochran formula, a minimum sample size of 100 respondents was obtained. This research is a quantitative study with the research design used is cross sectional The population in this study were 99 postpartum mother respondents. Sampling was carried out randomly using a questionnaire to the community by researchers and village midwives in the Cikeusik neighborhood of Pandeglang-Banten in 2021. A cross-sectional design was chosen in this study as it suited the purpose of the study and the nature of the study. The questionnaire used in this study has been validated and tested for reliability to ensure that the data collected is accurate and reliable. The research activities were conducted after obtaining licenses from the local Investment and One-Stop Integrated Service (DPMPTSP) and the Health Office of Pandeglang Regency. The research was conducted by researchers and midwives in the Cikeusik neighborhood of Pandeglang-Banten by distributing questionnaires. The questionnaire consisted of 20 questions, 6 questions on understanding and 14 questions on behavior. The understanding variable was measured and categorized ordinally into two levels, namely High (if respondent's score is 80 - 100), down (if the respondent's score is < 80). The attitude/behavior variable is categorized ordinally into two levels, namely positive (if the respondent scores 80-100) and negative (if the respondent scores < 80). Data analysis was carried out univariately and bivariate. Univariate analysis is carried out on each variable while bivariate analysis after using the analysis of the results of the data normality test obtained a Kolmogorov-Smirnov Significant value (Asymp. Sig.) of 0.000 <0.05, so the data is not normally distributed, meaning that data analysis uses non-parametric statistics. To answer whether there is a relationship between variables and hypotheses, the author uses the SPSS 21 program to obtain chi-square analysis.

RESULTS AND DISCUSSIONS

Univariate analysis is a valuable tool for describing the distribution of variables in a study. By presenting data in the form of frequency tables and bar charts, researchers can gain a better understanding of the characteristics of their study population and identify potential relationships between variables. This information can be used to formulate hypotheses for further analysis and develop targeted interventions. Univariate Analysis, of research on univariate analysis presented in the form of frequencies the distribution and percentage of each category of each variable of concern in the study in the Cikeusik neighborhood of Pandeglang-Banten Regency, as follows:

Table 1. Distribution based on respondent characteristics in the Cikeusik Health Center Environment Pandeglang - Banten in 2021

Respondent Characteristics				Understanding Perineal Wounds Low
No.	Characteristics	Responden	Total	%
1	Age	Early adolescence	Count	2
			% of Total	2,0%
		Late teens	Count	10
			% of Total	10,1%
		Early adulthood	Count	6
			% of Total	6,1%
		Late adulthood	Count	3
			% of Total	3,0%
		Early elderly	Count	0
			% of Total	0,0%
		Total		Count
				% of Total
2	Parity	Primi	Count	13
			% of Total	13,1%
		Multi	Count	7
			% of Total	7,1%
3	Age	Early adolescence (12 s.d 16 Year)	2	2,0
		Late teens (17 s.d 25 Year)	32	32,3
		Early adulthood (26 s.d 35 Year)	40	40,4
		Late adulthood (36 s.d 45 Year)	23	23,2
		Early Elderly (46 s.d 55 Year)	2	2,0
		Total	99	100
4	Educational	Elementary school	79	79.8
		Junior secondary school	5	5.1
		Senior secondary school	13	13.1
		Diploma four/ undergraduate degree	2	2
		Total	99	100
5	Jobs	Housewife	96	97

Respondent Characteristics				Understanding Perineal Wounds Low
No.	Characteristics	Responden	Total	%
		Entrepreneurship	1	1
		Civil Servant	2	2
		Total	99	100
6	Paritity	Primi (=1 Child)	35	35.4
		Multi (1-4 Child)	61	61.6
		Grande (>5 Child)	3	3
		Total	99	100
7	Debriefing	Never	26	26,3
		Ever	73	73.7
		Total	99	100

Based on Table 1 above, it appears that characteristics of respondents in the age of category are mostly early adults aged 26-35 years as many as 40 people (40.4%), based on the last level of education the most respondents are elementary school as many as 79 people (79.8%), based on the work of the majority of housewives as many as 96 people (97%), based on parity most of the multi category (1-4 children) as many as 61 people (61.6%) and finally based on the category of debriefing from health workers most of them have been debriefed as many as 73 people (73.7%). Cikeusik Health Center data has 40 midwives as health workers who are ready to provide debriefing for perineal wound care for postpartum mothers with a distribution in several sub-district areas of the Cikeusik neighborhood consisting of 14 villages namely Tanjungan, Cikiruhwetan, Sukawaris, Sumurbatu, Umbulan, Sukamulya, Parungkokosan, Nanggala, Rancaseneng, Sukaseneng, Cikeusik, Leuwibalang, Curugciung and Cikadonggong with a total population of 53. 318 people, so that the number of postpartum mothers has almost entirely received a briefing on perineal wound care by local health workers (Banten Provincial Government, 2018).

Table 2. Distribution of respondents based on the category of understanding & attitude of perineal wound care respondents in the Cikeusik Health Center Environment Pandeglang - Banten 2021

Variabel	Total	
	F	%
Understanding		
Low	27	27,27
High	72	72,73
Attitude/Behavior		
Negative	33	33,33
Positive	66	66,67

Based on table 2, 99 respondents based on the category of understanding of perineal wound care obtained data with a high understanding of 72 people by 72.73% and a positive behavior / attitude category of 66 people by 66.67%. Factors that are can influencing a person's behavior include age, experience, parity, knowledge, attitudes, education and others(Yosali & Sugesti, 2018). The results of this study are in line with the results of Islah Wahyuni's research where the majority of research respondents were aged 20-35 years 27 people (90%), based on parity the majority of respondents were primiparous, namely 19 people (63.3%)(Smeltzer & Bare, 2002). Attitude has a motivational aspect which means a dynamic aspect towards a goal, trying to achieve a goal where attitudes can be positive and can also be negative in this case a positive attitude has a tendency to approach, like, expect certain objects, while a negative atmosphere has a tendency to stay away, avoid, hate or dislike certain objects. This can be caused by the location of the respondent close to health workers or health facilities making it easier to get treatment (Ratih, 2020).

Bivariate Analysis

Bivariate analysis was conducted to assess the significant relationship between the factors of respondent characteristics on understanding and behavior of perineal wound care in postpartum mothers in Cikeusik, Pandeglang Regency using the SPSS 21 program obtained chi-square analysis as follows:

Table 3. Relationship between variable factors and the category of understanding of perineal wound care for respondents in the Cikeusik Community Health Center, Pandeglang - Banten, 2021

Respondent Characteristics			Understanding Perineal Wounds		F	P
			Low	Hight		
Age	Early adulthood	Count	2	0	2	0,02
		% of Total	2,0%	0,0%	2,0%	
	Late teenagers	Count	10	22	32	
		% of Total	10,1%	22,2%	32,3%	
	Early Adolescence	Count	6	34	40	
		% of Total	6,1%	34,3%	40,4%	
	Late-adulthood	Count	3	20	23	
		% of Total	3,0%	20,2%	23,2%	
	Early elderly	Count	0	2	2	
		% of Total	0,0%	2,0%	2,0%	
	Total	Count	21	78	99	
		% of Total	21,2%	78,8%	100,0%	
Paritas	Primi	Count	13	22	35	0,01
		% of Total	13,1%	22,2%	35,4%	
	Multi	Count	7	54	61	
		% of Total	7,1%	54,5%	61,6%	
	Grande	Count	1	2	3	
		% of Total	1,0%	2,0%	3,0%	
	Total	Count	21	78	99	
		% of Total	21,2%	78,8%	100,0%	
Debriefing	Never	Count	16	10	26	0,00
		% of Total	16,2%	10,1%	26,3%	
	Ever	Count	5	68	73	
		% of Total	5,1%	68,7%	73,7%	
	Total	Count	21	78	99	
		% of Total	21,2%	78,8%	100,0%	

Based on table 3, it shows the relationship between several significant variable factors on the Perineal Wound Understanding variable using the SPSS 21 program, the chi-square analysis is obtained as follows: The effect of Age / Age on Understanding of Perineal Wounds shows a low understanding of perineal wound care at the highest age variabe obtained data as many as 10 people in the Late Adolescent category (17 to 25 years) by 10%, while those who show a high understanding of perineal wound care as many as 34 people in early adult age level respondents (26 to 35 years) by 34.3%.

From the results of the chi-square test, the odds value (p-value) of 0.02 < from the α value of 0.05, so Ha is accepted and Ho is rejected, meaning that there is a significant relationship between the Age / Age variable and the Perineal Wound Understanding variable. The effect of Parity shows a low understanding of the highest perineal wound care in the parity variable obtained data as many as 13 people in the Primi Parity level respondents (= 1 child) by 13.1%, while those who show a high understanding of perineal wound care are 54 people at the Multi Parity level respondents (1-4 children) by 54.5%. From the results of the chi-square test, the odds value (p-value) of 0.01 < from the α value of 0.05, Ha is accepted and Ho is rejected, meaning that there is a significant relationship between the Parity variable and the Perineal Wound Understanding variable. This study is in accordance with the theory (Tulas et al., 2017), where parity is a woman's condition related to the number of children born. Parity of the second and

third child is the safest parity in terms of maternal mortality. At high parity ≥3 had a higher maternal mortality rate(Adeoye et al., 2024). Mothers who have <3 children (low parity) can be categorized as good pregnancy checkers(Worrall et al., 2024). The effect of debriefing shows a low understanding of perineal wound care at the highest level in the debriefing variable obtained data as many as 16 people in the Never Debriefing category at 16.2%, while those who show a high understanding of perineal wound care are 68 people at the Ever Debriefing level respondent at 68.7%.

From the results of the chi-square test, the odds value (p-value) of 0.00 < from the α value of 0.05, so Ha is accepted and Ho is rejected, meaning that there is a significant relationship between the Debriefing variable and the Perineal Wound Understanding variable. This study is in line with (Magdalena, 2018) which states that the role of health workers is a dominant factor that greatly influences the prevention of puerperium infections by 81.44% at UPTD Puskesmas South Pontianak District. As for the influence of education and occupation, it does not have a significant relationship to the understanding of perineal wounds with the following data(Nicklas et al., 2024). Effect of Education on Understanding Perineal Wounds By using the SPSS 21 program, the chi-square analysis was obtained as follows:

Table 4. Chi-Square Test education with understanding of perineal wounds

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2,029a	3	,566
Likelihood Ratio	3,479	3	,323
Linear-by-Linear Association	,523	1	,470
N of Valid Cases	99		

a. 5 cells (62,5%) have expected count less than 5. The minimum expected count is ,42.

Table 4 shows that it has an estimated / expected value of less than 5. The minimum number of expectations is 0.42, so the chi-square test is fulfilled using the Pearson Chi-Square, which is 2.029 < Chi-Squaretable of 7.815 or the Asymp. Sig. of 0.566> alpa value of 0.05, then Ha is rejected and Ho is accepted, meaning that there is no significant relationship between education and understanding of perineal wounds(Moss et al., 2024). Effect of Work on Understanding of Perineal Wounds By using the SPSS 21 program, the chi-square analysis was obtained as follows:

Table 5. Chi-square test of occupation with perineal wound understanding

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	,833a	2	,659
Likelihood Ratio	1,456	2	,483
Linear-by-Linear Association	,706	1	,401
N of Valid Cases	99		

a. 4 cells (66,7%) have expected count less than 5. The minimum expected count is ,21.

Table 5 shows that it has an expected value (expectation) of less than 5. The minimum number of expectations is 0.21, so the chi-square test is fulfilled using the Pearson Chi-Square, which is 0.833 < Chi-Squaretable of 5.991 or the Asymp value. Sig. of 0.659> alpa value of 0.05, then Ha is rejected and Ho is accepted, meaning that there is no significant relationship between work and understanding of perineal wounds(Kracht et al., 2024).

This is in line with Notoatmodjo, 2011 which states that a high level of cognition is not guaranteed that a person has a good (positive) attitude due to many factors that influence behaviour including trust, confidence, the availability or absence of health services or facilities and the behaviour of health workers. Where the Cikeusik neighbourhood community is still thick with

the tradition of using ginger compresses (ginger peujah) for the postpartum care process with questioner statements confirming that the use of ginger compresses is used as an alternative to spices from the primary data of this study. Knowledge is also an important factor but is not sufficient to change behaviour unless a person has the motivation to act on their knowledge. (Notoatmodjo, 2012).

CONCLUSION

Limitations of the Study Cross-sectional design The cross-sectional design cannot demonstrate a causal relationship between the factors studied and perineal wound care. Longitudinal or experimental studies are needed to confirm the causal relationship.

Sample size The sample size of this study is relatively small, so the generalization of the study results may be limited to the population of postpartum women in Cikeusik Sub-district, Pandeglang Regency. Research with larger samples from a more diverse population is needed to improve generalizability.Data collection method Data in this study were collected through a self-report questionnaire. There is a possibility of bias in the data as respondents may not remember or report information accurately. More objective data collection methods, such as observation or in-depth interviews, may be used in future studies. Research Contribution to the Field of Science This study makes an important contribution to the field of science by Improving understanding of factors associated with knowledge and behavior of perineal wound care in postpartum women. Identifying knowledge and practice gaps associated with perineal wound care. Providing information that can be used to develop education and health promotion programs aimed at improving the knowledge and behavior of postpartum women in caring for perineal wounds. Improve the quality of perineal wound care for postpartum women and help prevent complications. This study may also encourage further research on this topic, which may help improve overall maternal and child health.

Research variables This study only examined some of the factors associated with perineal wound care knowledge and behavior. There are many other factors that may be influential, such as cultural, social and economic factors. Future research could examine these other factors.From the research results, the chi-square test using SPSS 21 showed a significant relationship between the variable factors of age, parity and debriefing on the understanding of perineal wound Perineal wound care in postpartum mothers in Cikeusik Pandeglang with each value of the chi-square test was obtained odds value (p-value) 0.02 < from the value of α 0.05 for a significant relationship between the variable age with the variable understanding of perineal wounds and odds value (p-value) 0.01 < from the value of α 0.05 for a significant relationship between the variable parity with the variable understanding of perineal wounds and odds value (p-value) 0.01 < from the value of α 0.05 for a significant relationship between the variable age with the variable understanding of perineal wounds. The odds (p-value) 0.01 < from the value of α 0.05 for a significant relationship between the variable parity with the variable understanding of perineal wounds and the odds (p-value) 0.01 < from the value of α 0.05 for a significant relationship between the variable parity with the variable understanding of perineal wounds. The odds value (p-value) 0.01 < from the value of α 0.05 for a significant relationship between the variable parity with the variable understanding of perineal wounds and the odds value (p-value) 0.00 < from its value of α 0.05 for a significant relationship between the variable of debriefing with the variable understanding of perineal wounds.

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