

FACTORS ASSOCIATED WITH DIAPER RASH IN INFANTS AGED 0-12 MONTHS

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ABSTRAK : AKTOR-FAKTOR YANG BERHUBUNGAN DENGAN RUAM POMPA PADA BAYI USIA 0-12 BULAN

Latar Belakang : Kulit bayi relatif tipis sehingga lebih rentan terhadap infeksi, peradangan, dan alergi. Ruam popok merupakan masalah kulit yang umum terjadi pada bayi. Data epidemiologi menunjukkan bahwa ruam popok atau diaper rash terjadi di 65% populasi anak-anak. Kejadian ruam popok dapat dimulai sejak periode neonatus, sejak bayi mulai menggunakan popok (Putri & Ludiana, 2021). Namun, insidensi lebih sering ditemukan pada bayi yang lebih tua, sebab frekuensi penggantian popok lebih jarang dibandingkan neonatus.

Tujuan: Untuk mengetahui faktor-faktor yang berhubungan dengan ruam popok pada bayi.

Metode : Penelitian Strategi dalam mencari jurnal yang digunakan dalam literature review, pertanyaan yang digunakan untuk melakukan review jurnal yang disesuaikan dengan PICOT dan istilah pencarian jurnal melalui MESH, batasan mengambil jurnal dan hal lainnya. Jurnal yang digunakan dalam literature review didapatkan melalui database google scholar. Populasi : Bayi yang mengalami ruam popok. Sampling : Sebagian dari bayi yang mengalami ruam popok.

Hasil : Berdasarkan 10 penelitian terdapat 4 jurnal penelitian tentang ruam popok terjadi karena kurangnya pengetahuan ibu, terdapat 4 jurnal penelitian tentang ruam popok dikarenakan personal hygiene, terdapat 1 jurnal penelitian tentang ruam popok karena lama pemakaian popok sekali pakai dan terdapat 1 jurnal penelitian tentang ruam popok karena penggunaan bedak tabur pada area genital.

Kesimpulan : dengan penatalaksanaan memberikan edukasi kepada ibu untuk menggunakan popok kain yang memiliki daya serap tinggi dan mengganti sesering mungkin. Masalah teratasi setelah diberikan perawatan selama 5 hari dengan intervensi yang diberikan, kemudian dilakukan pendokumentasian dengan menggunakan manajemen SOAP.

Saran : Dalam kasus ruam popok akan sembuh dengan penanganan penggunaan popok tidak lebih dari 4 jam, setelah BAK/BAB segera dibersihkan dengan air atau kapas DTT, menjaga kelembaban area genital.

Kata kunci : bayi, personal hygiene, ruam popok.

ABSTRACT

Background. Babies' skin is relatively thin, making it more susceptible to infection, inflammation and allergies. Diaper rash is a common skin problem in infants. Epidemiological data shows that diaper rash occurs in 65% of the paediatric population. The incidence of diaper rash can start as early as the neonatal period, from the time an infant starts wearing nappies. However, the incidence is more common in older infants, as the frequency of nappy changes is less frequent compared to neonates.

Objective: To determine the factors associated with diaper rash in infants.

Methods: Research strategy in finding journals used in the literature review, questions used to review journals tailored to PICOT and journal search terms through MESH, journal retrieval limitations and other matters. Journals used in the literature review were obtained through the google scholar database. Population: Infants with diaper rash. Sampling: Some of the babies who have diaper rash.

Results: Based on 10 studies, there are 4 research journals on diaper rash due to lack of maternal knowledge, there are 4 research journals on diaper rash due to personal hygiene, there is 1 research journal on diaper rash due to long use of disposable diapers and there is 1 research journal on diaper rash due to the use of powder on the genital area.

Conclusion: with the management of providing education to the mother to use cloth diapers that have high absorption and change as often as possible. The problem was resolved after being given treatment for 5 days with the interventions provided, then documentation was carried out using SOAP management

Suggestion: In the case of diaper rash, it will heal by handling the use of diapers for no more than 4 hours, after BAK / BAB immediately cleaned with water or DTT cotton, keeping the genital area moist.

Keywords: baby, diaper rash, personal hygiene.

INTRODUCTION

In recent years, the use of disposable diapers has been very common in Indonesia. Most mothers prefer disposable diapers compared to using cloth diapers, because of the practicality that makes mothers feel they don't need to change wet diapers frequently due to defecation, besides making the house cleaner not exposed to baby urine and babies who cannot use the toilet yet. (Ullyya et al., 2018)

If the baby uses diapers, the baby will have the potential for diaper rash in the buttocks and thigh folds. Diaper rash is a common problem in infants, especially newborns (Anbartsani et al., 2021). Diaper-rash usually occurs in infants with reddened skin on the buttocks and pubic area, due to irritated skin, especially in newborns who are sensitive to irritants. Diaper rash is an irritation of the baby's skin on the bum area (Asyaul Wasiah et al., 2021). This can happen if the nappy is not changed immediately, the nappy is too rough and does not absorb sweat and is constantly in direct contact with the baby's skin, because in a humid and warm area it certainly triggers the growth of bacteria, plus abrasions due to friction which reduces the effectiveness of the skin barrier, causing diaper rash (Nurhayati et al., 2023). The incidence of diaper rash varies from country to country, depending on parents' knowledge of how to use nappies (Feviya Nurjannah et al., 2023).

According to data released by the World Health Organisation, the prevalence of diaper rash in infants is very high, with 25% of babies born in the world suffering from diaper rash (Juairiah. & Widiari, 2023). The highest number is at the age of 6-12 months (WHO, 2018). According to IDAI data in Indonesia in 2022 around 7-35% of infants aged 6-12 months experience nappy rash as many as 1.9-10 million babies. Based on the results of research conducted by Dini Royda in Ngelele Village, Jombang Regency in 2017, the incidence of nappy rash from 32 respondents who experienced nappy rash was 11 babies (34.4%), most of the respondents who did not experience nappy rash were 21 babies (65.6%). From the results of research conducted at PMB Zulfiah Surabaya in June to July 2018, 40 babies were examined, 25 babies (62.5%) had nappy rash and 15 babies (37.5%) did not have nappy rash.

efforts to prevent nappy rash are actually very simple including changing the child's nappy frequently after defecation, keeping the skin of the baby's nappy area moist, and remembering that parents need to be wise in choosing good staples for their children (Arum Meiranny et al., 2021).

choose staples made from soft, high-fibre materials, or use other chemical-free nappies that are considered safer for your baby's skin. cloth nappies are a solution to prevent nappy rash (Anggraini, 2019). The use of baby powder can cover the urinary tract and will accumulate in the pubic area so that it becomes a place for germs to grow. when changing disposable nappies use a protective cream or ointment containing zinc oxide or petrolatum to form a protective layer on the baby's skin (Susanti, E. 2020).

Based on the above background, the authors are interested in further examining the literature review wearing factors associated with fertiliser space in infants aged 0-12 months.

RESEARCH METHODS

the journal search strategy used in the literature review, journal review questions are adjusted to journal search terms through PICOT and MESH, journal publication restrictions. the journals used for the literature search were obtained from the Google scholar data base. the author opened the website [www. Google scholar.com](http://www.google.com). the researcher wrote the keywords according to MESH (Medical Subject Heading), namely "Long use of diapers", "personal hygiene" and selected full text. 723 findings appeared, then narrowed down with academic journals and found 10 findings and then sorted from the latest.

RESEARCH RESULTS

Personal hygiene is a person's effort to maintain cleanliness to prevent disease. personal hygiene is also the first step towards a healthier life.

According to research conducted by Rohemah and Nova P. (2018), the results of cross tabulation of genital hygiene with diaper rash in toddlers aged 12-36 months can be seen that almost half of the 22 toddlers who experienced diaper rash with insufficient genital hygiene were 9 toddlers (40.9%) based on Chi Square analysis, the P value was 0.000 with a calculated significant value of 0.000 < 0.05, so it was concluded that there was a relationship between genital hygiene. Diaper rash is not a fatal symptom, but it is important to change diapers after wetting the bed, keep the skin dry using special soap, loosen diapers, and ensure that mothers regularly remove baby diapers. by changing and washing your baby's diapers. dry the diaper at the bottom point before putting on new clothes and diapers.

According to research by Miftahul Khairah and Arkha Roosyariah (2022), it shows that of the

23 babies who experienced nappy rash and were given talcum powder on the genital area, 18 (85%) babies, most of whom experienced severe nappy rash. $P = 0.000 < 0.05$, which means that there is a relationship between the use of talcum powder in the genital area of infants aged 0-9 months on the incidence of diaper rash. This is in accordance with the theory put forward by Cahyu (2015). That the use of talcum powder can result in diaper space. The powder mixes with sweat in the folds of the thighs to cause the growth of bacteria so as to worsen the condition of the diaper. Giving talcum powder is one of the habits that parents often do which is considered a hereditary tradition after bathing their babies and putting talcum powder on the baby's body (Astuti et al., 2023).

According to Siti Aisyah's research in 2015 (2015) suggests that the length of use of babies who often use diapers is mostly 17 (56.67%). P value $\alpha = 0.05$ which concluded that there is a

relationship between the use of diapers and the incidence of diaper rash in infants aged 6-12 months. This is in accordance with the theory put forward by Apriza (2017) that the use of diapers is not more than 2-3 hours. So that if disposable diapers are used for more than 4 hours it can make the baby fussy and uncomfortable doing activities (Sandra & Morika, 2019).

RESEARCH STEPS OR RESEARCH METHODS USED

Hadminah and Neneng Julianti (2022), Uliya et al (2021), Lindha Sri K, et al (2021), Siti Aisyah (2015), Siti Nurbaeti (2017), Miftakhul K and Arkha R (2022), Eka Feviya Nurjannah et al (2023), Devi Sri Intan and Qurratul A'yyun (2020), used the same method with the cross sectional method. Rohemah and Nova purmahardini (2018) used the retrospective method and Luzain Indra et al, (2021) used the descriptive correlational method.

RESEARCH RESULT

Author	Title	Journal name	Method (design, population, sample, variables, instruments, analyses)	Result
Hadminah, Neneng Julianti	Nappy rash in infants in hamlet 2 of Tridaya sakti village, tambun Selatan subdistrict, Bekasi district in 2022	suherman medika university journal, 12-04-2023	DESIGN: cross-sectional POPULATION: mothers who have babies aged 0-12 months hamlet 2 Tridayasakti village SAMPLE: 70 mothers who have babies VARIABLES: maternal knowledge, environment, parental role, and education INSTRUMENT: questionnaire ANALYSIS: Chi square	The results showed that the variables associated with nappy rash in infants in hamlet 2 of Tridaya sakti village, South tambun sub-district were maternal knowledge, environment (P value 0.029) and parental role (P value 0.004), while the unrelated factor was education (P value 0.719) which showed that most respondents (70%) experienced nappy rash, and there was an association between maternal knowledge, maternal environment and parental role with nappy rash, while maternal education had no association with the occurrence of nappy rash (Susanti, 2020).
Rohemah, Noval Purmalhalrdini	the relationship between genital hygiene and diaper rash in	Journal of nursing and midwifery ISSN: 2621-	DESIGN: retrospection POPULATION: 33 toddlers SAMPLE: 33 toddlers	The results of the study of the relationship between genital hygiene with diaper Rash in toddlers aged 12-36

	toddlers aged 12-36 months BPS suswati, Sst M.Mkes Pameksaan 2018	0231 (Online) ISSN: 2580-1929 (Print)	VARIABLE: infants aged 12-36 months INSTRUMENT: questionnaire ANALYSIS: Chi square	months, the number of toddlers in 2017 the number of toddlers in January to June as many as 20 toddlers who were exposed to him continued as many as 4 (20%) toddlers, and the number of toddlers in July-December as many as 26 toddlers who were exposed to him aged as many as 7 (35%) toddlers based on analysis Square P value 0.000 with a significant value calculated 0.000 <0.05, it is concluded that there is a relationship between genital hygiene with diaper Rash in toddlers aged 12-36 months. The results of the study with data analysis showed the P value of maternal knowledge regarding the use of diapers with diaper rash of 0.031 and prevalence ratio (PR) 0.220. Meanwhile, the P value of maternal behaviour regarding the use of diapers with diaper rash was 0.048 and prevalence ratio (PR) 0.266. the P value for the relationship between maternal knowledge and maternal behaviour related to the use of disposable diapers on the baby was 0.007.
Ullyal, Widyawalti, Desy Alrmallinal	The relationship between maternal knowledge and behaviour in the use of disposable diapers in toddlers with the incidence of diaper rash.	Journal of Diponegoro medicine Volume 7, Number 2, May 2018 ISSN Online: 2540-8844	DESIGN: cross sectional POPULATION: mothers of children aged 3 months-36 months who use disposable nappies in meteseh village. SAMPLE: consecutive sampling number 35 VARIABLE: maternal knowledge in disposable diapers prevalence of nappy rash. INSTRUMENT: questionnaire ANALYSIS: Chi square	The results of the study with data analysis showed the P value of maternal knowledge regarding the use of diapers with diaper rash of 0.031 and prevalence ratio (PR) 0.220. Meanwhile, the P value of maternal behaviour regarding the use of diapers with diaper rash was 0.048 and prevalence ratio (PR) 0.266. the P value for the relationship between maternal knowledge and maternal behaviour related to the use of disposable diapers on the baby was 0.007.
Lindhal Sri K, Alrsy Widyawalti	The relationship between perianal care and the incidence of diaper dermatitis in infants in the working area of the mrican health centre, Kediri city in 2021.	Surgery. 8 edition vol 2. Jalkalrtal : EGC	DESIGN: cross sectional POPULATION: 33 mothers with babies who use diapers SAMPLE: 33 respondents VARIABLES: 1. perianal care done by mothers to their babies who use disposable nappies. 2. prevalence of nappy dermatitis in infants. INSTRUMENT: questionnaire	based on the results of the study showed that 79% or 26 babies experienced nappy dermatitis. P value > 0.05 (0.05) which means there is a relationship between perianal care and the incidence of nappy dermatitis in infants in the work area.

<p>Luzalin Indral Rochmalwalti, Ns. Yunital Wulalndalri, M. Kep, Ns. Dialn Nur Wulalnningrum, M.Kep</p>	<p>The relationship between maternal efficacy and the implementation of personal hygiene to reduce nappy rash in infants aged 0-12 months.</p>	<p>nursing study programme undergraduate programme faculty of health sciences Kusuma Husada university Surakarta 2021</p>	<p>ANALYSIS: contingency coefficient test. DESIGN: descriptive correlational POPULATION: mothers who have babies aged 0-12 months SAMPLE: 95 respondents VARIABLE: maternal efficacy with the implementation of personal hygiene by reducing nappy rash in infants aged 0-12 months INSTRUMENT: quota sampling ANALYSIS: spearman rank</p>	<p>The results showed that respondents who had high efficacy were 52 respondents (54.7%) and mothers with low efficacy were 43 respondents (43%). respondents had a good level of personal hygiene as many as 54 respondents (56.8%) and respondents who had an unfavourable level of personal hygiene were 41 respondents (43.2%). the results of the rank correlation test, namely the P-value of $0.000 < \alpha$ (0.05) means that there is a relationship between maternal efficacy and the implementation of personal hygiene to reduce nappy rash in babies aged 0-12 months.</p>
<p>Siti Alisyah</p>	<p>The relationship between diaper use and the incidence of nappy rash in infants aged 6-12 months in 2015.</p>	<p>Journal Midpro Frequency Two issues per year (June and December) DOI prefix 10.30736 Print ISSN: 2086-2792 Online ISSN: 2684-6764</p>	<p>DESIGN: cross sectional POPULATION: infants aged 6 to 12 months in Putat kumpul polindes, Turi, Lamongan SAMPLE: 30 respondents VARIABLE: relationship between diaper use and nappy rash INSTRUMENT: questionnaire and observation sheet ANALYSIS: contingency coefficient test.</p>	<p>The results of the study of the relationship between diaper use with the incidence of diaper rash in infants aged 6-12 months in 2015 the frequency of use of infants who often use diapers is mostly 17 (56.67%). P value $\alpha = 0.05$ which concluded that there is a relationship between the use of diapers with the incidence of nappy rash in infants aged 6-12 months.</p>
<p>Siti Nurbaleti</p>	<p>The relationship between maternal knowledge and actions in perianal care with the incidence of diaper rash in infants aged 0-12 months at RSUD Dr. H.</p>	<p>journal of medical and health sciences, volume 4, number 1, January 2017 26.</p>	<p>DESIGN: cross sectional POPULATION: mothers of infants aged 0-12 months at RSUD Dr H. Moeloek Bandar Lampung SAMPLE: 78 respondents VARIABLES: 1. mothers' knowledge in perianal care with the</p>	<p>the results of the study obtained that of the 27 people who had poor knowledge there were 22 people (28.2%) who had diaper rash. while of the 51 mothers who had good knowledge there were 11 people (14.1%) who had diaper rash. based on the results of statistical tests obtained a value of $P =$</p>

Abdul Moeloek Bandar Lampung.			incidence of nappy rash in infants aged 0-12 months. 2. mothers' actions in perianal care with the incidence of nappy rash in infants aged 0-12 months. INSTRUMENT: questionnaire ANALYSIS: Chi Square. DESIGN: cross sectional POPULATION: infants aged 0-9 months at PMB Fadilah bulukagung village Madura SAMPLE: 23 respondents VARIABLE: the use of loose powder on the genital area of infants aged 0-9 months against the incidence of diaper rash INSTRUMENT: purposive sampling ANALYSIS: Chi square	0.000 ($\alpha < 0.05$) which means there is a significant relationship between knowledge and maternal actions in perianal care with the incidence of diaper rash in infants aged 0-12 months at Dr. H Abdul Moeloek Hospital Bandar Lampung.
Miftalrul Khalirah, Alrkhal Roosyalrial	The relationship between the use of powder on the genital area of infants aged 0-9 months and the incidence of diaper rash at PMB Fadilah, Bulukagung village, Madura.	Midwifery journal. Vol. 12 No. 2 ISSN 2580-4774 (Online) September 2022 Hall 121-129 ISSN 2088-2505 (Print)	DESIGN: cross sectional POPULATION: infants aged 0-9 months at PMB Fadilah bulukagung village Madura SAMPLE: 23 respondents VARIABLE: the use of loose powder on the genital area of infants aged 0-9 months against the incidence of diaper rash INSTRUMENT: purposive sampling ANALYSIS: Chi square	The results showed that of the 23 babies who experienced diaper rash and were given loose powder in the genital area, 18 (85%) babies, most of whom experienced severe diaper rash. $P = 0.000 < 0.05$ which means there is a relationship between the use of powder in the genital area of infants aged 0-9 months on the incidence of diaper rash at PMB Fadilah, Bulukagung village, Madura.
Ekal Feviyal Nurjalnalh, Desi Salriyani, Dwi Alnital Alpriastuti, Zulhijriyani	the relationship between infant personal hygiene and the incidence of diaper rash in infants 0-12 months in lubuk Banjar village	midwifery educational research journal volume 01 No 01, pp.31-35, April 2023 (midwifery educational research journal) high school of health science Bakti Utama Pati	DESIGN: cross sectional POPULATION: infants aged 0-12 months in lubuk Banjar village SAMPLE: 65 respondents VARIABLES: 1. frequency of diaper rash 2. frequency of personal hygiene in infants aged 0-12 months 3. relationship between personal hygiene of infants with the incidence of diaper rash in infants aged 0-12 months INSTRUMENT: accidental sampling ANALYSIS: Chi square	The results of the relationship test between the two variables using the Chi square statistical test obtained results based on the fisher Exact test obtained $X^2 \text{ count} > X^2 \text{ table}$ ($32.96 > 3.841$) which means H_0 is rejected and H_a is accepted. $P \text{ value} = 0.001$ which means there is a significant relationship between personal hygiene and the incidence of diaperas in infants aged 0-12 months in Lubuk Banjar village.
Devi Sri Intaln, Qurraltul Al'yun	The relationship between mothers' knowledge of	Journal: Salkti Bidaldalri/2020/ Vol.3 No.2 Issn:2580-1821	DESIGN: cross SECTIONAL : infants aged 0-6 months in grujungan village,	The results of the study showed that mothers with sufficient knowledge were 22 respondents (50%), and

infant personal hygiene and the incidence of diaper rash in infants aged 0-6 months in grujugan village, larangan sub-district, Pamekasan district.

larangan sub-district Pamekasan district
SAMPLE: 44 respondents
VARIABLE: relationship between knowledge and incidence of diaper rash in infants aged 0-6 months
INSTRUMENT: questionnaire
ANALYSIS: contingency coefficient

mothers with good knowledge were half (4.54%) as many as 8 respondents. The data were then analysed using the coefisien contingensy statistical test using the SPSS 18 for Windows program to obtain a value of $\alpha = 0.05$, $df = 2$, X^2 count = 14.459a X^2 table = 0.5991. because, X^2 count > X^2 table, it can be concluded that H_0 is rejected with H_1 accepted, which means that there is a relationship between maternal knowledge about personal hygiene of infants with the incidence of diaper Rash.

CONCLUSION

Based on midwifery care for baby A aged 12 days with nappy rash, the subjective data obtained is that the mother says that it has been 5 days since baby A appeared reddish spots on the buttocks, anus and thighs. The objective data obtained is from vital signs within normal limits, namely pulse, respiration, body temperature, physical examination, namely the appearance of reddish pustules on the buttocks, anus, and upper thighs, then diagnose babies with diaper rash degree 2 (moderate), with management providing education to mothers to use cloth diapers that have high absorption and change as often as possible. The problem was resolved after being given treatment for 5 days with the interventions provided, then documentation was carried out using SOAP management.

SUGGESTION

For the author: It is hoped that the author can increase knowledge, insight and real experience in providing midwifery care to babies with nappy rash.

For the field: It is expected to always provide information about the impact of using nappies and preventive management of nappy rash to mothers so as to prevent the occurrence of nappy rash in infants.

For educational institutions: It is expected to be an additional discourse or reference so that it can increase knowledge about midwifery care in infants with nappy rash.

For the baby's mother and family: Increase information either through posyandu activities, counselling during neonatal examinations, or reading the KIA book so as to increase the respondent's knowledge about diaper rash.

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