

# Bibliometric Analysis of Community Acceptance Towards Reusable Diapers

Totok Wahyu Abadi<sup>1</sup>

<sup>1</sup>Universitas Muhammadiyah Sidoarjo, Indonesia  
Correspondence email: [totokwahyu@umsida.ac.id](mailto:totokwahyu@umsida.ac.id)

---

## Information

Submitted: 25-01-2024

Revised: 23-03-2024

Accepted: 26-04-2024

**How to cite:** Abadi, T. W. (2024). Bibliometric Analysis of Community Acceptance towards Reusable Diapers. *Khizanah Al-Hikmah : Jurnal Ilmu Perpustakaan, Informasi, Dan Kearsipan*, 12(1).

<https://doi.org/10.24252/kah.v12i1a10>

DOI: [10.24252/kah.v12i1a10](https://doi.org/10.24252/kah.v12i1a10)

Copyright 2024 © the Author(s)

This work is licensed under a [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-nc-sa/4.0/).



## ABSTRACT

This research aims to elucidate the development of studies on public acceptance of reusable diapers and their relevance. A quantitative descriptive approach and bibliometric analysis were employed to achieve this objective. Data were collected from Semantic Scholar, Crossref, and Google Scholar. The collected articles were subsequently processed and analyzed using VOSviewer. The research results reveal that four primary topics are pertinent to society's acceptance of reusable diapers: societal behavior and acceptance of disposable diapers and measures to address diaper rash; causes of diaper rash in newborns and the severity index of dermatitis; prevention of diaper rash in infants through personal hygiene practices; and the risks associated with diaper use in toddlers. The transition from disposable to reusable diapers is crucial due to its significant environmental and health benefits, particularly in reducing the incidence of diaper rash. The study implies further research on mothers' acceptance of reusable diapers in Indonesia, encompassing knowledge, attitudes, and behaviors.

**Keywords:** Bibliometric; research trend; reusable diapers

---

## 1. INTRODUCTION

The birth rate in Indonesia reaches 113,057 people per day or around 4 million per year (Prihatin, 2021). Many babies certainly need diapers as part of their clothing. The increase in the number of babies born appears to be directly proportional to the use of disposable diapers. The use of disposable diapers for babies aged 0-2 years has reached 12 million per year. This happens because diapers have an important meaning for babies aged 0-2 years (Nyamukamba et al., 2023).

People often commonly use two types of diapers, especially mothers with toddlers, disposable diapers and reusable diapers (cloth diapers/reusable diapers). Reusable diapers are usually also called cloth diapers or reusable diapers. Reusable diapers are cloth diapers that can be washed and reused for babies. The advantage of this type of diaper is that it is cheaper and more economical than disposable diapers, which cost IDR 2,500/piece, equivalent to 0.16 US dollars. Reusable diapers can be used repeatedly and can even be used by the next child.

Apart from that, reusable diapers are also environmentally friendly diapers because their use does not leave behind waste that can pollute nature. So, these cloth diapers only need to be washed and dried in the sun before reuse. However, the drawback is that it is not practical because it takes a lot of time and energy to wash and dry (Marthaliakirana, 2018; Tamin, 2021).

Disposable diapers are diapers that can only be used once (Kameliawati et al., 2020). If it is dirty, it cannot be used and must be thrown away (Kameliawati et al., 2020; Marthaliakirana, 2018). Disposable diapers are easier and more practical to use. Besides, these diapers also have an impregnating gel that can hold more liquid. It does not need to be replaced frequently and does not leak easily, so using Pospak can keep the baby's skin dry and comfortable. Meanwhile, the disadvantage of disposable diapers is that they are relatively more expensive than cloth diapers, but they cannot be reused. So they must be thrown away after use. Some disposable diapers that use added dyes and fragrances have the risk of causing allergies in babies or diaper rash.

A study by Sigma Research Indonesia (2017) found that the highest initial use of diapers was among babies aged 1-3 months, accounting for 69.6%, and among those less than 1 month old, accounting for 16.1%. Disposable diapers are the most popular, used by 95.2% of mothers for their toddlers' needs. Disposable diapers are the main choice for mothers when choosing baby diapers because the function of disposable baby diapers is that they can make it easier for mothers to maintain the cleanliness and comfort of their babies while sleeping or traveling. Using them is also not difficult and only takes a short time, and disposable baby diapers are easy to carry and can be obtained anytime and anywhere. Moreover, disposable baby diapers offer advantages at an affordable price for all mothers, both those who are financially well off and those who are less likely to choose an alternative to wearing trousers, which is a hassle (Zulfani, 2018).

Nevertheless, the use of disposable diapers, based on research by The World Bank in 2019, turns out to cause a lot of waste problems. Pospak waste is the second largest contributor after organic waste, at 21%. Ecoton, an environmental NGO, found in 2017 that tributaries of the Brantas River in East Java and several other points leading to the ocean contained 300 kg of disposable diaper waste (Dewanti et al., 2020). Disposable diaper waste comprised 40% of all waste in these rivers. In addition, the use of disposable diapers can cause health problems for babies, such as diaper rash and urinary tract infections (Bahruddin, 2019)

On the other hand, reusable diapers (cloth diapers) have not yet gained a "heart" in society, especially mothers. Cloth diapers are currently still looked down upon. Even though cloth diapers have the potential to be very economical and environmentally friendly. Using reusable diapers is much more economical in spending on mothers' household budgets because they can be used repeatedly and can be passed on to the next child. Therefore, it is important to research the theme of public acceptance of reusable diapers.

This research is urgent for several reasons. Firstly, 95.2% of mothers with babies use disposable diapers because they are practical, efficient, and widely available. This research aims to provide information that highlights the lack of awareness in Indonesia about the benefits of reusable diapers and the health risks of using disposable diapers for toddlers (Sebayar & Sembiring, 2020; Ullya et al., 2018; Amalia et al., 2022; Islamiyah & Anhusadar, 2022; Lita et al., 2021) and the environmental impact (Mustofa et al., 2019). Secondly, it seeks to provide insights into research conducted by other researchers regarding public acceptance of reusable diapers.

## **2. METHODS**

This research employs bibliometric analysis to gather information from Google Scholar, Crossref, and Semantic Scholar, with keywords matching the journal-title. Focusing on "Public Acceptance of Reusable Diapers," the selection results yielded 56 article metadata from the

Science Direct database. Metadata is exported to RIS format. The process of using VOSviewer involves downloading metadata and processing it with VOSviewer software version 1.6.12. VOSviewer is a freely available computer program designed for visualizing and exploring bibliometric data analysis mapping (van Eck & Waltman, 2020). This is used to visualize the results of several relevant references by collecting publications by author, occurrence, and others (Al Husaeni & Nandiyanto, 2022). Furthermore, journal references that have been downloaded via the Publish or Perish application have later been entered via the Mendeley application as a tool for compiling a bibliography.

### 3. RESULTS AND DISCUSSION

#### *Results*

Public acceptance is a change that occurs in individuals/societies towards innovation or new ideas (Bahlamar, 2021). These changes include perceptions, knowledge, preferences, attitudes, and behavior (Harmuningsih & Saleky 2019; Rochmaniah et al., 2017). Society accepts new things based on four factors: relative advantage, suitability, technical ease, and practicality (Yahya, 2016). Relative advantage is the extent to which an innovation benefits its recipients. The level of profit or usefulness of an innovation can be measured by its economic value. The usefulness of innovation can also be seen in social status, happiness, and satisfaction because it has very important components. Conformity to needs is the level of adjustment to the recipient's needs, values, and past experiences. Technical ease is the level at which an innovation can be experienced and easily used directly. Thus, it can be put into practice/trial, which means the recipient can try out an innovation by practicing it directly.

Factors that influence people (read: mothers) to use reusable diapers or cloth diapers for their babies are environmentally friendly from an environmental perspective. Reusable diapers are superior to disposable diapers, which use plastic. Plastic that becomes waste is difficult for soil bacteria to decompose. Hence, by using reusable or cloth diapers directly, mothers can contribute to protecting the environment and save costs. If calculated economically, most babies aged 0-12 months need 8-10 diapers daily. The total number of diapers used per month reaches 240-300 pieces. The cost of purchasing diapers in a year reaches IDR 9 million, with details of IDR 2,500/piece or IDR 30,000 per 22 pieces. This makes household expenses quite high. If the baby wears a cloth, assuming diapers are used every four hours, the baby needs only six diapers in one day. Mothers can save money on buying cloth diapers. That's because using cloth diapers is more efficient and economical because these diapers can be washed and used repeatedly over a long period.

On top of that, using cloth diapers can reduce the risk of irritation (diaper rash). Diaper rash in babies is a problem because the baby's skin is sensitive and not fully developed. In this regard, using reusable diapers or cloth diapers can reduce the possibility of diaper rash because the soft surface of reusable diapers does not cause the baby's skin to rub.

Accordingly, using washable diapers can allow mothers to potty train their children. It is easier for parents to teach their children to use toilet training from an early age. Children who are used to using reusable cloth diapers find it easier to feel irritated if their pants are wet and need to go to the bathroom. It is different if the baby uses disposable diapers; they feel more comfortable because disposable diapers are made to stay dry all day.

#### **Bibliometric Research**

Bibliometrics is the study of various types of scientific fields. Bibliometric analysis can be used to quantitatively explain bibliographic information contained in articles/journals or other publications (Naftalin et al., 2020; Prasetyo, 2021). Generally, this analysis uses 2 approaches. The first is the citation approach; it is to look at one journal that has been cited by another journal. The second is the co-citation approach, to look at two or more articles cited by one journal.

**Table 1.** Publications by year, gender, and number of authors

	Characteristics	Amount	%
Year	2021	11	19.64%
	2020	12	21.42%
	2019	14	25%
	2018	12	21.42%
	2017	7	12.5%
Gender	Woman	89	74.2%
	Man	31	25.8%
Number of authors in the article	1 Author	23	41.0%
	2 Authors	14	25%
	More than 3 Authors	19	33.9%

Source: Data Processing Publish or Perish, 2022

Three sources were used to search for data: Google Scholar, Semantic Scholar, and Crossref. Google Scholar allows users to search for academic literature widely across all fields of science, including peer-reviewed papers, theses, books, abstracts, and articles in one place. Similarly, Semantic Scholar is a search engine for retrieving academic information. Crossref is a research article search engine that helps provide information regarding reference lists of previous works and aspects that support research with underlying data that can be reused. Through Reference Linking, researchers can more easily find the needed content.

Based on data collection using three sources from Google Scholar, Crossref, and Semantic Scholar, data was obtained for 56 journals. Among the 56 journals, those with relevant themes from the last five years (2017-2021) focus on public behavior and acceptance, actions to deal with diaper rash, factors related to the causes of diaper rash, diaper dermatitis severity index, prevention of diapers rash in babies in personal hygiene, and the risk of diaper dermatitis in toddlers. The following are previous research results relevant to the problems raised in this research journal.

### **Publications by Year, Gender, and Number of Authors**

Table 1 shows the number of publications in 2017-2021. The highest number of publications regarding the public acceptance of reusable diapers in 2019 was 25%, with 14 articles. In the following years, namely 2018 and 2020, 21.43% of articles were found, each with 12 articles. In 2021, articles relevant to reusable diapers and public acceptance were 19.64% or 11 articles. Meanwhile, the lowest number of publications was in 2017, with 12.5% (7 articles). From 2017 to 2021, the average number of articles related to similar topics was 11 (20%). Of the authors, 31 are male, accounting for 25.8%, while 89 are female, making up 74.2% of the total. Most writers are women.

The distribution of authors in journals focusing on reusable diapers and public acceptance can be categorized from the total 56 journals obtained (Table 1). Among the 56 articles, the number of authors can be divided into several categories. Single authors were found in 23 articles, making up 41%. Multiple authors contributed to 14 articles, 25% of the total. Articles written by three or more authors accounted for 19 or 33.9%. This indicates that research often involves collaboration with other researchers, necessitating the inclusion of all contributors' names in the articles.

### **Publications By Publisher**

Table 2 shows 45 article publishers whose themes were reusable diapers, disposable diapers, and public acceptance of higher education. The publishers with the most publications are the University of Indonesia Depok and the University of North Sumatra, with three journals published by the theme of this study. Publishers have published twice on the theme of reusable diapers and eight publishers are relevant. Only 35 publishers published articles related to the

theme of reusable diapers. This shows that most publishers only published one article related to the theme in this research.

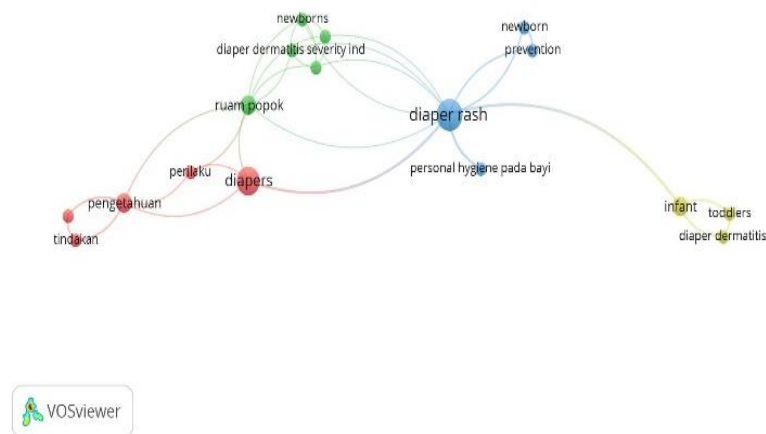
**Table 2.** Names of publishers in 56 journals

Publisher	Amount	Percent	Publisher	Amount	%
STICKERS Brass	1	1.78%	Airlangga University	2	3.57%
University of Indonesia Depok	3	5.35%	Diponegoro University	1	1.78%
Center for Environmental Technology	1	1.78%	STIKES Syedza Saintika	2	3.57%
Jember State University	1	1.78%	Jagaddhita Bulletin	1	1.78%
Mohammad Husni Tamrin University	1	1.78%	Brawijaya University	2	3.57%
Semarang State University	1	1.78%	UPN Jakarta	1	1.78%
Tarumanagara University	1	1.78%	University of Northern Sumatra	3	5.35%
Indonesian Bakti University	1	1.78%	SPECTA Journal of Technology	1	1.78%
STIKES Medestra Indonesia	1	1.78%	STIKES Telogorejo Semarang	2	3.57%
Semarang Ministry of Health Polytechnic	1	1.78%	STIK Siti Khadijah	1	1.78%
Sebeleas University March	1	1.78%	Jambi Ministry of Health Polytechnic	1	1.78%
Yogyakarta Institute of Technology	2	3.57%	Ahmad Dahlan University	1	1.78%
STIKES North Sumatra	1	1.78%	STIKES Bhakti Husada Mulia Madiun	1	1.78%
Tuanku Tambusai Heroes University	2	3.57%	Aisyah Pringsewu University	1	1.78%
Indonesian Islamic University	1	1.78%	Medical Scholar STIKES	1	1.78%
Sukabumi Polytechnic	1	1.78%	Beautiful AKBID	1	1.78%
Hasanuddin University Makasar	1	1.78%	Udayana University	1	1.78%
Indonesian Partner University	1	1.78%	Musi Rawas University	1	1.78%
Malang State University	1	1.78%	Madura Islamic University	1	1.78%
PGRI University Yogyakarta	1	1.78%	Indonesian Muslim University	2	3.57%
Sunan Kalijaga State Islamic University	1	1.78%	Malahayati University	2	3.57%
STIPRAM Yogyakarta	1	1.78%	Hangtuh Pekan Baru STIKES	1	1.78%

Source: Data Processing Publish or Perish, 2022

### Publication Based on Keywords (Co-Occurrence)

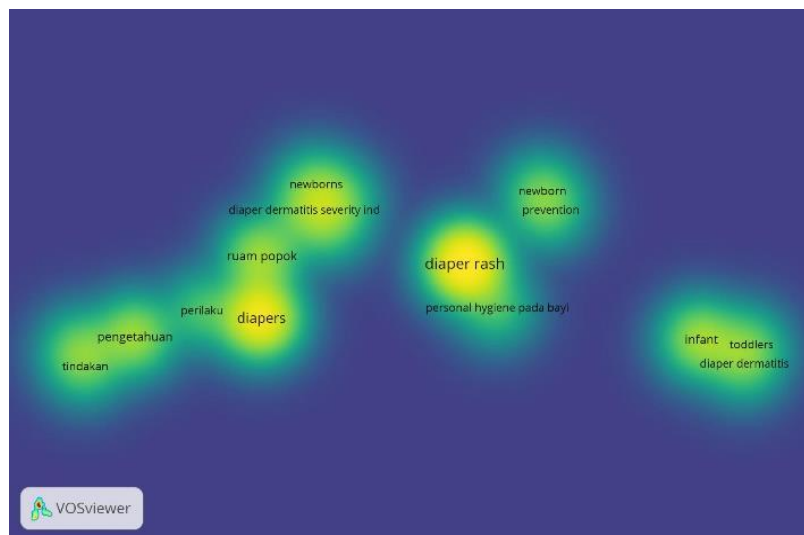
The data collected from 56 journals through Google Scholar, Crossref, and Semantic Scholar contained 64 keywords. These were refined using the VOSviewer application and narrowed down to 17 keywords. The Network Visualization Co-Occurrence results, created with VOSviewer, are shown in Figure 1. This visualization highlights keywords related to the theme of reusable diapers and public acceptance. The most frequently used keyword by other authors in this research area is "Diaper Rash.



**Figure 1.** Network visualization results

Source: The processed data, 2022

Based on the overlay visualization analysis results regarding the year of publication, the oldest year of authors in journals with the same theme related to the keyword diaper rash occurred in 2017 in dark blue. The brighter the color displayed in yellow is the most recent year of writing, such as 2020. In 2020, there are several newly written themes, namely diaper dermatitis on baby's skin when using disposable diapers, prevention of diaper rash in newborn babies, and the impact of using cloth diapers on toddlers.



**Figure 2.** Density visualization results

Source: The processed data, 2022

Density visualization research on public acceptance of reusable diapers results from VOSviewer analysis, as shown in Figure 3. This is a visualization of the level of density/emphasis of the research group (van Eck & Waltman, 2020). Through density, someone can see research topics rarely carried out by other researchers as a basis for writing research with different objects. The more faded/blurred the color represents, the more keyword terms of the topic are still not researched.

On the other hand, if the color becomes brighter yellow, it indicates that the research object on that topic has been carried out frequently/very often. Likewise, Figure 3 shows several keywords that are the dominant topic in research regarding "public acceptance of washable diapers in Indonesia." The dominance of bright yellow shows much research on diaper rash and diapers. The colors are very faded and almost invisible, showing studies that have not been carried out by many researchers, such as the topic of behavior and personal hygiene in babies. Similarly, with studies regarding public acceptance of washable diapers or reusable diapers, no one has conducted a study. The absence of studies on this topic shows there is a possibility of producing high novelty if research is carried out.

**Table 3.** Cluster division

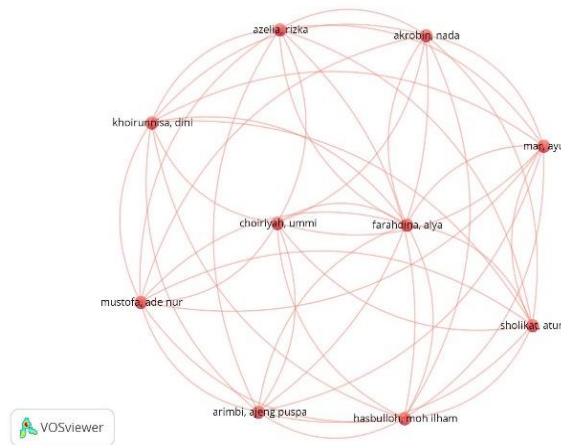
<b>Clusters</b>	<b>Information</b>
Cluster 1	Behavior and Community Acceptance, Actions in dealing with diaper rash
Cluster 2	Factors related to newborns causing diaper rash Diapers dermatitis severity index
Cluster 3	Prevention of diaper rash in babies in personal hygiene
Cluster 4	Risk of diaper dermatitis in toddlers

Source: The primary processed data, 2022

Table 3 shows the cluster division results obtained from VOSviewer. There are four clusters and keywords that are the main topics in discussing the theme of this research, such as behavior and acceptance of society as well as actions in dealing with diaper rash, factors related to newborns causing diaper rash, dermatitis severity index, prevention of diaper rash in babies in personal hygiene, and finally is the risk of diaper dermatitis in toddlers. Of the four clusters, cluster 1, behavior and community acceptance and actions in dealing with diaper rash is a very interesting and important topic to research. This is because there is still minimal research on public acceptance of the use of reusable diapers and low public acceptance of their use. The low acceptance of reusable diapers in public is because disposable diapers are still the exclusive choice and branding of the modern style of young mothers today. Disposable diapers have economic value. It's practical and easy to obtain in every shop. This is different from the existence of reusable diapers, which are difficult to obtain in every shop, and to get them, you have to do online shopping. Therefore, changing people's behavioral patterns from disposable diaper users to reusable diaper users is not easy. Four factors can be used to change and get people used to reusable diaper innovation. These four factors are relative advantage, suitability, technical ease, and practicability (Yahya, 2016).

#### **Publications Based on Author (Co-Author)**

Data obtained from Semantic Scholar, Crossref, and Google Scholar contained 95 authors from 56 journals, which were then filtered to meet the threshold to obtain data as in Figure 3. Figure 3 is a network visualization analysis showing the article's author or writers. The visualization informs that there are 10 authors. Articles written by the ten authors include Azelia, Rizka, Akrobin, Nada, Khoirunnisa, Dini, Ayu, Choirriyah, Umami, Farahdina, Alya, Mustofa, Ade Nur, Sholikat, Atun, Arimbi, Ajeng Puspita, Hasbulloh, Moh Ilham. The article's title is The Influence of Social Intelligence & Facilitator Competence in Cloth Sanitary Napkin Workshops on Women's Learning Motivation. The article was written in 2019 and published in the Proceedings of the Community Service Conference.



**Figure 3.** Networks visualization results  
Source: The processed data, 2022

This review study shows that the research topics that have been written by researchers during the 2017-2022 period are related to public acceptance of disposable diapers and diaper rash caused by pospak. Several previous studies show topics regarding disposable diapers about knowledge and waste management policies generated; the impact of using disposable diapers on urinary tract infections, Sevestre-Jacquet post-erosive syphilis diapers, and dermatitis diapers; and the use of disposable diapers and reusable diapers in their influence on toilet training in toddler-aged children. However, in contrast to related studies regarding public acceptance of reusable diapers from the perspective of information communication and education for sustainable development, no one has yet done so.

#### 4. CONCLUSION

Based on the results of the VOSviewer analysis regarding "Public acceptance of reusable, washable diapers," it can be concluded that there has been no study on this matter. Hence, this research aims to find information about public acceptance of reusable diapers and identify four clusters and main keywords in discussing research themes. It analyzed the behavior and acceptance of society and actions in dealing with diaper rash. Thus, the research discovered that examining newborn-related factors that cause diaper rash, dermatitis severity index, prevention of diaper rash in babies on personal hygiene, and the risk of diaper dermatitis in toddlers (assessing cluster 1 such as community behavior and acceptance and actions in dealing with diaper rash) is a very interesting and important topic to research.

This topic is the first cluster that needs attention because this study has not yet been carried out by many researchers, thus allowing for new, relevant research. Second, Indonesian society, especially mothers, still do not seem to be aware of and accept the existence and presence of reusable diapers (reusable). There is a lack of awareness and knowledge among mothers regarding washable diapers because, according to them, washable diapers are difficult to find in modern shops or grocery stores. So, many young mothers use disposable diapers (postal) for toddlers and toddlers.

Despite their common practice, the transition from using postal to reusable diapers is very important because it has a huge effect on the environment and health, especially reducing the occurrence of diaper rash. Through studies on this topic, the public is expected and encouraged to be careful and critical regarding the use of disposable diapers. The lack of public knowledge regarding diaper rash requires outreach communication activities, information communication, and education, as well as studies that are relevant to the topic of washing and reusable diapers in the realm of education sustainable development.



## REFERENCES

- Al Husaeni, D. F., & Nandiyanto, A. B. D., (2022). Bibliometric Using Vosviewer with publish or perish (using Google Scholar data): From step-by-step processing for users to the practical examples in the analysis of digital learning articles in pre and post-COVID-19 pandemic. *ASEAN Journal of Science and Engineering*, 2(1), 19–46. <https://doi.org/10.17509/ajse.v2i1.37368>
- Amalia, V. R., Sekarwana, N., & Puspa, W, H., (2022). Scoping review: the relationship between frequency and duration of use of disposable diapers on the incidence of urinary tract infections in infants and children. *Bandung Conference Series: Medical Science*, 2(1), 339–346. <https://doi.org/10.29313/bcsms.v2i1.770>
- Bahlamar, B., A. R, Rustianingsih, E., Choiriyah, IU, Sukmana, H., & Abadi, TW (2021). Mud geopark investment development Sidoarjo East Java Indonesia. *Journal of Legal, Ethical and Regulatory Issues*, 24(Special Issue 1), 1–7.
- Bahrudin, A. D., (2019). The relationship between the use of instant diapers and the incidence of diaper rash in babies in posyandu working areas in Panca Tunggal Village, South Lampung Regency 2018. *Malahayati Midwifery Journal*, 5(2), 123–137. <https://doi.org/10.33024/jkm.v5i2.1256>
- Basri, A., Utaminingsih, S. N, & Tisya, V. A (2021). Empowering solo lor posyandu mothers through education on the dangers of sanitary napkins and eco-literacy: preventive efforts for reproductive & environmental health problems. *To Maega: Journal of Community Service*, 4(3), 316–330. <https://doi.org/10.35914/tomaega.v4i3.851>
- Bonifaz, A., Rojas, R., Tirado-Sánchez, A., Chávez-López, D., Mena, C., Calderón, L., & Rosa María, O.P. (2016). Superficial mycoses associated with diaper dermatitis. *Mycopathologia*, 181(9–10), 671. <https://doi.org/10.1007/s11046-016-0020-9>
- Dewanti, DP, Ma'rufatin, A., & Nugroho, R. (2019). Test the water absorption capacity of cellulose from palm fruit bunches as a super absorbent polymer (SAP) material in disposable diapers. In *Journal of Environmental Engineering* (Vol. 12, Issue 2, pp. 99–106). Agency for the Assessment and Application of Technology (BPPT). <https://doi.org/10.29122/jrl.v12i2.4018>
- Dewi, RS, & Ningsih, M. D. D., (2022). Counseling on personal hygiene care for diaper rash in babies. *Bhakti Sabna Nusantara*, 01(02), 56–61. <https://doi.org/https://doi.org/10.58439/bsn.vli2.40>
- Dinah, BN (2020). The relationship between the level of knowledge and policies for managing disposable diaper waste and the amount of waste generated by children under 3 years (toddlers). In *Journal of Public Health Innovation* (Vol. 1, Issue 1, pp. 60–71). Kuningan Garawangi College of Health Sciences. <https://doi.org/10.34305/jphi.v1i1.201>
- Diptyanti, H. (2018). Community acceptance of the Majapahit village program in the Trowulan sub-district. *Airlangga University Surabaya*.
- Harmuningsih, D., & Jacob Saleky, SR (2019). Knowledge, perceptions, and attitudes of the younger generation about climate change and their influence on pro-environmental behavioral intentions. *SPECTA Journal of Technology*, 1(3), 23–32. <https://doi.org/10.35718/specta.v1i3.84>
- Islamiyah, I., & Anhusadar, L. (2022). The relationship between the use of disposable diapers and the success of toilet training in toddlers. *Museum: Journal of Early Childhood Education*, 3(2), 11–18. <https://doi.org/10.37985/murhum.v3i2.122>
- Kameliawati, F., Armay, L., & Marthalena, Y. (2020). The success of toilet training in toddler-aged children is seen in the use of disposable diapers. *Indonesian Health Magazine*, 1(2), 57–60. <https://ukinstitute.org/journals/1/makein/article/download/1211/13>
- Lita, L., Hamid, A., & Utami, A. (2021). The effect of using cloth diapers on the success of toilet training in toddler-aged children. In *Health Vocational Journal* (Vol. 6, Issue 2, p. 56). Pontianak Ministry of Health Polytechnic. <https://doi.org/10.30602/jvk.v6i2.249>
- Marthaliakirana, AD, Irawati, MH, & Rohman, F. (2018). Education for sustainable development (ESD) through community understanding to reduce disposable diaper waste by using

- reuse diapers. *Florea: Journal of Biology & Its Learners*, 5(1), 29–36. <https://doi.org/10.25273/florea.v5i1.2503>
- Mustofa, AN, Farahdina, A., Arimbi, AP, Atun Sholikhat, AM, Khoirunnisa, D., Habiburrahman, Hasbulloh, MI, Akrobin, N., Choiriyah, U., & Azelia, R. (2019). The influence of social intelligence & facilitator competence in cloth sanitary napkin workshops on women's learning motivation. *Community Service Conference Proceedings*, 1, 233–237. <https://doi.org/ISSN 2655-7711 EISSN 2656-0593>
- Naftalin, F., Ayuningtyas, D., & Nadjib, M. (2020). Analysis of the implementation of health operational assistance (bok) with coverage for handling obstetric complications in Bekasi city health centers in 2019. *Jukema (Aceh Public Health Journal)*, 6(2), 154–164. <https://doi.org/https://doi.org/10.37598/jukema.v6i2.906>
- Ngatmi, N., Nurhaeni, N., & Wanda, D. (2019). Fulfilling the comfort needs of children with diaper rash through the application of virgin coconut oil (VCO) using the Kolcaba comfort theory approach. In *JIKO (Scientific Journal of Orthopedic Nursing)* (Vol. 3, Issue 1, pp. 28–36). AKPER Fatmawati. <https://doi.org/10.46749/jiko.v3i1.27>
- Nyamukamba, P., Mququ, Z., Nkosi, S., and Isaacs, S., (2023). "Determination of Selected Harmful Substances in Baby Diapers Available on the South African Market" *International Journal of Environmental Research and Public Health* 20, no. 2: 1023. <https://doi.org/10.3390/ijerph20021023>
- Prasetyo, FD, Dewi Triasti, R., & Ayuningtyas, E. (2021). Utilization of waste baby diapers (diapers) as a planting medium. *Journal of Environmental Engineering*, 21(1), 42–49. <https://doi.org/10.37412/jrl.v21i1.91>
- Prasetyo, H. (2021). Bibliometric analysis on scholarly journals proquest with the keyword "tourism in Indonesia" using vosviewer software. In *Khasanah Ilmu - Journal of Tourism and Culture* (Vol. 12, Issue 1, pp. 16–21). Bina Sarana Informatics University. <https://doi.org/10.31294/khi.v12i1.9792>
- Prihatin, I. U. (2021.). Data 4 Bulan Terakhir: 501.319 Bayi Lahir, 355.332 Orang Meninggal. <https://www.merdeka.com/peristiwa/data-4-bulan-terakhir-501319-bayi-lahir-355332-orang-meninggal.html>
- Rochmaniah, A., & Munawaroh, L. (2017). Consumer reception of the brand image of Sophie Martin Paris fashion products. *Kanal.Umsida. Ac.Id*, 6(1), 21–30. <https://doi.org/https://doi.org/10.21070/kanal>
- Sebayar, SM, & Sembiring, E. (2020). The effectiveness of giving olive oil against diaper rash in toddlers aged 0-36 months. *Indonesian Trust Health Journal*, 3(1), 258–264. <https://doi.org/10.37104/ithj.v3i1.44>
- Sigma Research Indonesia. (2017). Mom with baby diaper trends and behavior. *sigma research Indonesia*. <https://sigmaresearch.co.id>
- Tamin, R. P. (2021). Disposable Baby Diapers vs cloth diapers. adopter Ministry of Health of the Republic of Indonesia. <https://www.alodokter.com/popok-bayi-jual-pakai-vs-popok-kain>
- Ully, W., & Armalina, D. (2018). The relationship between maternal knowledge and behavior in using disposable diapers for toddlers and the incidence of diaper rash. *Diponegoro Medical Journal*, 7(2), 485–498. <https://ejournal3.undip.ac.id/index.php/medico/article/view/20691>
- van Eck, N. J., & Waltman, L. (2020). *Manual de vosviewer*. Univeriteit Leiden, July. [https://www.vosviewer.com/documentation/Manual\\_VOSviewer\\_1.6.17.pdf](https://www.vosviewer.com/documentation/Manual_VOSviewer_1.6.17.pdf)
- Yahya, A. (2016). The influence of agricultural innovation characteristics on the decision to adopt organic vegetable farming. *AGROCIENCE*, 6(2), 1–14. <https://doi.org/https://doi.org/10.35194/agsci.v6i2.101>
- Zakiyyah, FN, Winoto, Y., & Rohanda. (2022). Bibliometric mapping of the development of information architecture research on Google Scholar using VosViewer. *INFORMATION*, 2(1), 43–60. <https://doi.org/https://doi.org/10.24198/inf.v2i1.37766>
- Zerowaste.id. (2021). Disposable diapers vs cloth diapers (clodies). <https://zerowaste.id/zero-waste-mom/alasan-meoleh-popok-kain/>

Zulfani, V. (2018). Management of medical and non-medical waste and knowledge, attitudes, and actions of nurses at Haji Medan General Hospital [University of North Sumatra]. In University of North Sumatra Institutional Repository. <https://repository.usu.ac.id/handle/123456789/13278>