

## Factors Associated with Symptoms of Dermatitis in Prisoners in Class II A Jambi Penitentiary in 2024

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Informasi Artikel	Abstract
E-ISSN : 3026-6874 Vol: 2 No: 6 Juni 2024 Halaman : 266-271	The national prevalence of dermatitis in Indonesia based on Basic Health Research data by the Ministry of Health 2018 is 6.8% and tends to increase every year. Data from the Jambi Provincial Health Service, in 2021 dermatitis was ranked eighth with the most common disease with a percentage of 5.03%, while in 2022 it experienced an increase and was ranked sixth with a percentage of 5.96%. This study aims to determine the factors associated with symptoms of dermatitis in prisoners at the Class IIA Jambi Penitentiary in 2024. This research is a quantitative study using a cross sectional study design. The sampling technique used Proportionate Random Sampling on 1124 prisoners at the Class IIA Jambi Penitentiary by conducting interviews. Prisoners' knowledge was in the good category as much as 40.4% of respondents. Attitudes in the positive category were 37.2% of respondents. Prisoners with housing that meets the requirements are 21.3% of respondents. Bathing habits were in the good category as many as 53.2% of respondents. Clothing cleanliness was in the good category as many as 37.2% of respondents. Towel cleanliness was in the good category as many as 41.5% of respondents.
<b>Keywords:</b> Dermatitis Prisoners Class IIA Jambi Penitentiary	

### Abstrak

Prevalensi dermatitis nasional di Indonesia berdasarkan data Riset Kesehatan Dasar Kementerian Kesehatan tahun 2018 adalah sebesar 6,8% dan cenderung meningkat setiap tahunnya. Data Dinas Kesehatan Provinsi Jambi, pada tahun 2021 dermatitis menduduki peringkat kedelapan penyakit terbanyak dengan persentase 5,03%, sedangkan pada tahun 2022 mengalami peningkatan dan menduduki peringkat keenam dengan persentase 5,96%. Penelitian ini bertujuan untuk mengetahui faktor-faktor yang berhubungan dengan gejala dermatitis pada narapidana di Lembaga Pemasyarakatan Kelas IIA Jambi Tahun 2024. Penelitian ini merupakan penelitian kuantitatif dengan menggunakan desain cross sectional study. Teknik pengambilan sampel menggunakan Proportionate Random Sampling terhadap 1124 narapidana di Lembaga Pemasyarakatan Kelas IIA Jambi dengan melakukan wawancara. Pengetahuan narapidana berada pada kategori baik sebanyak 40,4% responden. Sikap dalam kategori positif sebanyak 37,2% responden. Narapidana yang memiliki tempat tinggal yang memenuhi syarat sebanyak 21,3% responden. Kebiasaan mandi berada pada kategori baik sebanyak 53,2% responden. Kebersihan pakaian berada pada kategori baik sebanyak 37,2% responden. Kebersihan handuk berada pada kategori baik sebanyak 41,5% responden.

**Kata Kunci :** Dermatitis, Narapidana, Lembaga Pemasyarakatan Kelas IIA Jambi

### INTRODUCTION

Environmental-based diseases still dominate public health problems in developing countries. This disease can occur due to interactive relationships between humans, behavior and environmental components that have the potential for disease. The environment that is expected in the future is an environment that is conducive to the realization of a healthy condition, namely an environment free of pollution, the availability of clean water facilities, adequate environmental sanitation, healthy housing and settlements and the realization of a community life that helps each other. An unhealthy environment will greatly affect the health of both individuals and community groups (Khairina Ashar Y, 2022). According to the 2008 Environmental Health Program Policy Direction Guidelines, it is stated that Indonesia still has environmentally based infectious diseases which are still prominent, one of which is skin disease.

Skin diseases are still a public health problem in the world, including in Indonesia. Common skin problems or disorders include dry, scaly skin on the hands, feet or face, acne, rough texture, skin rashes, skin inflammation and abrasion or loss of the epidermis layer. Skin diseases can be caused by

microorganisms such as viruses, bacteria, fungi, parasites and others. Skin diseases are the most common infectious diseases of all human health problems and affect 900 million people worldwide. The prevalence of several studies related to skin diseases indicates that skin diseases are often found in developing countries with a prevalence ranging between 20-80% (Sitanggang HD, Yutami N, 2021).

Risk factors for skin disease include clean and healthy living behavior, environmental sanitation conditions, availability of clean water, cleanliness of the body, nails, skin, clothing and bedding conditions. Transmission of skin diseases can be through environmental components that contain disease agents and constantly interact with humans, namely water, air, food, and disease-transmitting insects as well as humans themselves. Residential density can also influence the process of disease transfer from one person to another. Skin disease is a disease that is often found in society. Several types of skin diseases include leprosy, scabies, tinea versicolor, and dermatitis (Sitanggang HD, Yutami N, 2021).

Dermatitis is a non-inflammatory inflammation of the skin that is acute, sub-acute or chronic and is influenced by many factors. Dermatitis is a world public health problem with a prevalence in children of 10-20% and in adults around 1-3% (Lestari R, 2022). The International Study Of Asthma And Allergies In Childhood (ISAAC) states that the prevalence of dermatitis varies between 0.3% to 20.5% in 56 countries. The prevalence of dermatitis in Southeast Asia varies between countries, ranging from 1.1% among 13-14 year olds in Indonesia to 17.9% among 12 year olds in Singapore (Akbar H, 2020).

In Indonesia, the prevalence of dermatitis increases every year, based on Basic Health Research data by the Ministry of Health 2018, the national prevalence of dermatitis in Indonesia is 6.8% and tends to increase every year (Manyullei S dkk, 2022). Epidemiological data in Indonesia shows that 97% of 389 cases of skin disease were contact dermatitis, 66.3% of these cases were irritant contact dermatitis and 33.7% were allergic contact dermatitis (Ministry of Health, 2017). Based on data from the Jambi Provincial Health Service, in 2021 dermatitis was ranked eighth in the disease with a percentage of 5.03%, while in 2022 it experienced an increase and was ranked sixth with a percentage of 5.96%.

The spread of disease will occur more easily in densely populated environments. Skin diseases generally attack individuals who live in groups such as in dormitories, Islamic boarding schools, hospitals, crowded villages, nursing homes and correctional institutions. This is due to a lack of oxygen consumption, and if one person has an infectious disease, it will easily spread to other people. Detention centers, or more commonly known as prisons, are always synonymous with overcrowded rooms, poorly maintained and lacking ventilation, which makes it very possible for various diseases to arise. Prison conditions with inadequate facilities are certainly a risk factor for the emergence of various communicable and non-communicable diseases. The prison environment is usually not controlled and not well maintained or the use of unclean water often causes skin problems, itching, allergies or dry skin (Warlenda S vermita, 2021).

Almost all correctional institutions in Indonesia have the same problem, namely excess capacity. The problem of excess capacity which is not immediately addressed, results in the process of training prisoners not being able to run as it should, besides that it will give rise to new problems including health problems. In the Regulation of the Minister of Law and Human Rights of the Republic of Indonesia Number 11 of 2017 concerning the Grand Design for Handling Overcrowding in Detention Centers and Correctional Institutions, it is explained that the current condition of most correctional institutions in Indonesia is overcapacity. Excess capacity in prisons has an impact on poor health conditions, the greater the number of people incarcerated in correctional institutions, the worse their health level is. With the large number of correctional residents, the carrying capacity of sanitation and the environment will decrease and get worse, thereby reducing the quality of life of correctional residents, including increasing the potential for contracting various diseases.

According to Gafur (2018), his research explains that personal hygiene, environmental sanitation (clean water facilities), and allergies can influence the incidence of dermatitis. Personal hygiene, namely clean towels, body cleanliness (bathing), cleanliness of hands and nails, is directly related to the incidence of dermatitis, this is because people have low education, have a low level of knowledge and awareness to always maintain personal hygiene. Moreover, they live in densely populated areas and poor environmental conditions, so contact with the environment and other people is higher.

Based on data obtained from the Jambi Class IIA Penitentiary, information was obtained that the number of prison inmates was 1124 people. The prison consists of 7 blocks for prisoners, namely blocks A1, A2, B1, B2, C, E1, and E2 where each block is occupied by  $\pm$  100 people. As a result of interviews with officers at the clinic, data was obtained that skin disease was the first most common disease in Class IIA Jambi prisons. The number of visits by prisoners complaining of itching at the Jambi Class II A prison clinic from July to October 2023 was 576 visits. Meanwhile, the prevalence of prisoners with complaints of itching is 46.26%.

The results of initial observations carried out by the author through short interviews with officers at the prison clinic found that there are habits of prisoners that can trigger symptoms of dermatitis, such as the habit of wearing alternate clothes, using soap alternately and prison conditions that are overcapacity so that it can facilitate transmission. disease. Based on this description, the author is interested in conducting research on "Factors associated with symptoms of dermatitis in prisoners at the Class IIA Jambi Penitentiary in 2024"

## METHOD

The type of research that will be used is quantitative research using a cross-sectional study design to see the relationship between independent variables (knowledge, attitudes, residential density, bathing habits) and the dependent variable (dermatitis symptoms) at the same time. This research was conducted in November 2023-March 2024. The population used in this research was all inmates at the Class IIA Jambi Penitentiary, totaling 1124 people. The sampling technique in this research was Proportionate Random Sampling. The instruments used in this research were questionnaires and observation sheets.

Data analysis in this research uses univariate analysis to see the frequency distribution of each variable and bivariate analysis to see the relationship between the independent variable and the dependent variable. To determine whether there is a relationship between the independent variable and the dependent variable, use the chi square test

## RESULTS AND DISSCUSION

**Table 1 Frequency Distribution of Respondents for Class IIA Jambi Penitentiary Prisoners in 2024**

Variable	Category	Frequency (f)	Percent (%)
Dermatitis Symptoms	Symptomatic	62	66
	Asymptomatic	32	34
Knowledge	Poor	56	59,6
	Good	38	40,4
Attitude	Negatif	59	62,8
	Positif	35	37,2
Residential Destiny	Unqualified	74	78,7
	Qualify	20	21,3
Kebiasaan Mandi	Poor	44	46,8
	Good	50	53,2

Based on table 1, the distribution results for each variable studied among inmate respondents at the Class IIA Jambi Penitentiary in 2024 are obtained. Table 4.1 shows that the majority of

respondents experienced symptoms of dermatitis, namely 62 (66%) respondents. Respondents in the lack of knowledge category were 56 (59.6%) respondents. Respondents with a negative attitude category were 59 (62.8%) respondents. Respondents with residential density that did not meet the requirements were 74 (78.7%) respondents. Respondents with poor bathing habits were 44 (46.8%).

**Table 2 Bivariate Analysis of Knowledge and Symptoms of Dermatitis in Prisoner Respondents in Class II A Jambi Penitentiary in 2024**

		Dermatitis Symptoms				Total		p-value	PR	CI-95%
Variable	Category	Symptomatic		Asymptomatic		n	%			
		n	%	n	%					
Knowledge	Poor	43	76,8	13	23,2	56	100	0,014	3,308	1,361-8,042
	Good	19	50	19	50	38	100			
Attitude	Negative	44	74,6	15	25,4	59	100	0,039	2,770	1,144-6,711
	Positive	18	51,4	17	48,6	35	100			
Residential Destiny	Unqualifi ed	53	71,6	21	28,4	74	100	0,050	3,085	1,117-8,517
	Qualify	9	45	11	55	20	100			
Habit of bathing	Poor	36	81,8	8	18,2	44	100	0,106	4,154	1,613-10,697
	Good	26	52	24	48	50	100			

Based on table 2, it shows that of the 56 respondents in the lack of knowledge category, 43 (76.8%) respondents had symptoms of dermatitis, while 13 (23.2%) respondents had no symptoms. Meanwhile, of the 38 respondents in the good knowledge category but with symptoms of dermatitis, there were 19 (50%) respondents and there were 19 (50%) respondents who had no symptoms of dermatitis. Of the 59 respondents in the negative attitude category, 44 (74.6%) respondents had symptoms of dermatitis, while 15 (25.4%) respondents had no symptoms. Meanwhile, of the 35 respondents in the positive attitude category, 18 (51.4%) respondents had symptoms of dermatitis and 17 (48.6%) respondents had no symptoms of dermatitis. Of the 74 respondents who lived in places with residential density that did not meet the requirements and had symptoms of dermatitis, 53 (71.6%) were respondents, while there were 21 (28.4%) respondents who had no symptoms.

Meanwhile, of the 20 respondents who lived in places with residential density that met the requirements but had symptoms of dermatitis, 9 (45%) respondents and 11 (55%) respondents who did not have symptoms of dermatitis. Of the 44 respondents in the category of poor bathing habits, 36 (81.8%) respondents had symptoms of dermatitis, while 8 (18.2%) respondents had no symptoms. Meanwhile, of the 55 respondents in the category of good bathing habits, 26 (52%) respondents had symptoms of dermatitis and 24 (48%) respondents had no symptoms of dermatitis.

## INTERPRETATION

### Relationship between knowledge and dermatitis symptoms

The results of the research show that the p-value is 0.014, so the p-value  $<0.05$  is obtained, so there is a relationship between knowledge and symptoms of dermatitis in prisoners at the Class IIA Jambi Penitentiary. The results of risk calculations obtained a value of  $PR=3.308$ , which means that respondents with poor knowledge have a risk of 3.30 times compared to respondents with good knowledge.

The results of this research are in line with research conducted by Hidayat (2022) which shows that there is a relationship between knowledge and the incidence of dermatitis in Class IIB prisons in Majalengka. Other research conducted by Marniati (2022) also shows that there is a relationship between knowledge and the incidence of dermatitis.

Knowledge has an important role in shaping a person's actions. Someone who has good knowledge will be able to take action to prevent disease. A person's health behavior is influenced by knowledge as a predisposition to determine a person's real actions or behavior. Insufficient knowledge causes the inmates to not maintain personal hygiene so they are more susceptible to disease. (Notoadmojo S, 2014)

### **Relationship between attitude and dermatitis symptoms**

The results of the research show that the p-value is 0.039, so the p-value  $<0.05$  is obtained, so there is a relationship between attitude and symptoms of dermatitis in prisoners at the Class IIA Jambi Penitentiary. The results of risk calculations obtained a value of  $PR=2.770$ , which means that respondents with a negative attitude had a risk of 2.77 times compared to respondents with a positive attitude.

The results of this research are in line with research conducted by Zahara (2019) showing that there is a relationship between attitude and the incidence of dermatitis. Other research conducted by Nengsi (2023) shows that there is a relationship between attitude and the incidence of dermatitis. Respondents' lack of knowledge influences their attitudes.

The results of this research are supported by theory according to Notoadmojo (2018), one of the factors that influences the symptoms of dermatitis is the knowledge and attitudes of prisoners about dermatitis. If knowledge about dermatitis is good, it will influence attitudes and preventive actions towards dermatitis so as to avoid dermatitis and conversely, if knowledge about dermatitis is lacking, it will influence behavior so there will be a risk of developing symptoms of dermatitis. (Notoadmojo S, 2018)

### **Relationship between residential density and dermatitis symptoms**

The results of the research show that the p-value is 0.050, so the p-value is  $<0.05$ , so there is a relationship between residential density and symptoms of dermatitis in prisoners at the Jambi Class IIA Penitentiary. The results of risk calculations obtained a value of  $PR=3.085$ , which means that respondents with residences that do not meet the requirements have a risk of 3.08 times compared to respondents with residences that meet the requirements.

The results of this study are in line with research conducted by Edison (2022) showing that there is a relationship between residential density and the incidence of skin diseases. Other research conducted by Aswad (2019) shows that there is a relationship between residential density and the incidence of skin diseases. Overcrowded housing can cause limited use of clean water, bedding, clothing and other necessities which can cause skin problems due to the easy growth of fungi and parasites (Aswad H dkk, 2019).

### **Relationship between bathing habits and dermatitis symptoms**

The results of the research show that the p-value is 0.005, so the p-value is  $<0.05$ , so there is a relationship between bathing habits and symptoms of dermatitis in prisoners at the Jambi Class IIA Penitentiary. The results of risk calculations obtained a value of  $PR=4.154$ , which means that respondents with bathing habits were 4.15 times less at risk than respondents with good bathing habits.

This research is in line with research conducted by Ulva (2020) showing that there is a relationship between bathing habits and the incidence of dermatitis. Other research conducted by Warlenda (2021) also shows that there is a relationship between bathing habits and dermatitis in the Class IIA Pekanbaru prison.



Bathing is an important part of maintaining personal hygiene. Bathing can eliminate odors, remove dirt, stimulate blood circulation, and provide freshness to the body. It's best to shower twice a day, the main reason is to keep your body healthy and fresh. Bathing makes our body fresh by cleansing the whole body ( Yanto N, Verawati B, 2022). Prisoners whose habit of bathing is only once a day, do not rub their bodies with soap, do not use soap when bathing and some also use soap in turns with friends. This has a big impact on personal hygiene (personal cleanliness) so it can lead to the emergence of skin diseases. like dermatitis(Warlenda S vermita, 2021)

## CONCLUSION

Respondents who had symptoms of dermatitis were 62 (66%) respondents. Respondents who had poor knowledge were 56 (59.6%) respondents. Respondents who had a negative attitude were 59 (62.8%) respondents. Respondents with residential density that did not meet the requirements were 74 (21.3%) respondents. Respondents with poor bathing habits were 44 (46.8%) respondents. The research results obtained pvalues for the variables knowledge ( $p=0.014$ ), attitude ( $p=0.039$ ), residential density ( $p=0.050$ ), bathing habits ( $p=0.005$ ).

Prisoners are expected to maintain personal hygiene to avoid dermatitis. Apart from that, prisoners are also advised to always use personal items and not share them with other people to avoid the possibility of contracting skin diseases.

## REFERENCES

- Khairina Ashar Y. Manajemen Penyakit Berbasis Lingkungan. Iqbal M, editor. Surabaya: Cipta Media Nusantara; 2022. 1 p.
- Sitanggang HD, Yutami N, Nadeak ES. Kebersihan Tempat Tidur dan Sprei Sebagai Faktor Risiko Keluhan Penyakit Kulit di Wilayah Pesisir, Kampung Bugis, Kota Tanjungpinang Tahun 2018. J Heal Technol [Internet]. 2021;16(2):56–62. Available from: <http://e-journal.poltekkesjogja.ac.id/index.php/JTK/article/view/888>
- Lestari R. Hubungan Sanitasi Lingkungan Dengan Gejala Penyakit Kulit Di Wilayah Kerja Puskesmas Sukamenanti Kabupaten Pasaman Barat. J NTHN Nan Tongga Heal Nurs. 2022;16(1):14–23.
- Akbar H. Hubungan Personal Hygiene dan Pekerjaan dengan Kejadian Dermatitis di Wilayah Kerja Puskesmas Juntinyuat. Promot J Kesehat Masy. 2020;10(1):1–5.
- Manyullei S, Adziim AMF, Arman L, Handoko SA. Penyuluhan Dermatitis pada Masyarakat Maccini Baji Kelurahan Pundata Baji Kecamatan Labakkang Kabupaten Pangkajene dan Kepulauan. J Altifani Penelit dan Pengabd Kpd Masy. 2022;2(4):23–30.
- Warlenda S vermita. Hubungan Personal Hygiene Narapidana Laki-Laki Dengan Kejadian Penyakit Dermatitis Di Lembaga Pemasyarakatan (Lapas) Kelas II A Pekanbaru. Avicenna J Ilm. 2021;16(3):141–8.
- Notoadmojo S. Promosi Kesehatan dan Perilaku Kesehatan. Jakarta: Rineka Cipta; 2014.
- Notoadmojo S. Metodologi Penelitian Kesehatan. Jakarta: PT. Rineka Cipta; 2018.
- Aswad H, Siri Dangnga M, Kumaladewi Hengky H. Faktor Risiko Kejadian Penyakit Kulit Pada Nelaya Di Desa Teteaji Kecamatan Tellu Limpoe Kabupaten Sidenreng Rappang. J Ilm Mns Dan Kesehat. 2019;2(3):459–72.
- Yanto N, Verawati B. Kebiasaan Mandi Disungai Dengan Kejadian Dermatitis Di Desa Limau Manis. Community Dev J J Pengabd Masy. 2022;3(2):1159–61.