D'Nursing and Health Journal **(DNHJ)**
E-ISSN: 2774-3810, P-ISSN: 2774-3802
Vol: 5 No: 1, March 2024
Page: 1-9

Personal Hygiene and The Occurrence of Contact Dermatitis in Rice Farmers

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ABSTRACT
Background: Prevention of dermatitis is significant for the community, especially for farmers who have a high risk of developing this disease. The symptoms of dermatitis of farmers who work in the fields are affected by a decrease in his personal hygiene level. Personal hygiene is included in the occurrence of dermatitis in farmers who work in the areas.
Method: This research is non-experimental quantitative research with an analytic survey design through a cross-sectional approach. The sampling technique used in this research is cluster sampling. Respondents are rice farmers who work directly in the fields, obtained as many as 110 respondents in five regions in East Java.
Results: The respondents' criteria are that they have worked for at least one year, are farm laborers (working farmers), and are willing to be respondents. The results of the Chi-Square statistical test show that the value of $p = 0.044$ indicates a value of $p < 0.05$. These results mean that there is a relationship between personal hygiene and the occurrence of contact dermatitis in farmers.
Conclusion: The incidence of this dermatitis can cause a decrease in activity in farmers, so it can affect the mechanism of work patterns in farmers.

Keywords: *Contact Dermatitis; Personal Hygiene; Rice Farmers*

Introduction

Indonesia is a country in the agrarian category. This can be seen in the majority of Indonesian people's livelihoods in the agricultural sector. Indonesia, a country with a tropical climate, also often encounters several diseases, one of which is a skin disease. Certain factors, such as harmful environmental factors, weather, and other factors, such as viruses, bacteria, allergies, and a poor immune system, can cause various skin diseases. Farmers, a job that has intense contact with Irritants results in a high risk of skin disorders, one of which is dermatitis. Dermatitis is a painful skin disease that starts as a small spot or red lump and then becomes a dark red or purple spot and can spread. According to Udiyono & Adi (2017), the factors that cause dermatitis are influenced by two factors: direct factors such as chemicals and indirect factors such as previous disease history, age, environment, and personal hygiene. Therefore farming is a job with a high risk of developing skin disorders (Sari et al, 2021; Putri et al, 2021).

Skin disease is one of the health problems related to work, with a percentage of around 25% in America. The problem of skin disorders caused by work reaches 90% with occupational dermatitis. In addition, farmers in America are the highest contributor to leather (Jumiati et al., 2020). In 2017 in Indonesia, 97 skin diseases were found to be dermatitis, of which 66.3 were irritant contact dermatitis, and 33.7% were allergic dermatitis. Most skin diseases that occur among workers in Indonesia are caused by contact dermatitis 92.5%, infections cause 5.4%, and 2.1% are caused by other skin diseases (Tombeng et al, 2017). According to research conducted by Ike on tobacco farmers in Ambulu, it was found that 27 farmers with a presentation of 44.3% experienced skin disorders, namely contact dermatitis, while as many as 34 farmers with a presentation of 55.7% had dermatitis (Putri, 2019; Hariyanto et al, 2021).

Skin disorders, namely contact dermatitis in farmers, are often complained of in the form of itching and redness of the skin of the feet and hands (Putri, 2019). Contact dermatitis in farmers is caused by direct contact with some materials that can cause dermatitis, such as chemicals in the form of fertilizers. The use of fertilizers and pesticides in agriculture and the dirty environment of the rice fields causes farmers to experience contact dermatitis. In addition, *personal hygiene* is also a factor in the occurrence of contact dermatitis in farmers. The habit of cleaning dirt on the body before taking a break by farmers is carried out in water flowing from the river, and

doing personal hygiene practices among farmers could be better. Farmers' habits while on agricultural land when working, such as not changing work clothes the next day, using little water to clean themselves when working, not using protective equipment when in contact with chemicals, and poor *personal hygiene*, are factors that must be attended to reduce the incidence of contact dermatitis in farmers (Riyansari & Irdawati, 2018; Afandi et al, 2022).

Based on the background above, researchers are interested in examining the incidence of contact dermatitis in farmers, its relationship with personal *hygiene*, and the incidence of contact dermatitis in farmers.

Method

The study design chosen was non-experimental quantitative research with an analytic survey design using a cross-sectional approach. The population and Sample Respondents in this study were rice farmers who worked directly in the fields. The sampling technique used in this study was cluster sampling and proportional sampling by taking samples from several areas, including Jember, Ponorogo, Situbondo, Lumajang, and Kediri. The total sample is 110 respondents. The criteria for respondents as samples in this study were rice farmers who had work experience of more than one year, rice farmers who worked directly on agricultural land and were willing to be investigated. The criteria for respondents who were not included in the sample of this study were farmers who had temporary domiciles and experienced psychiatric disorders. Demographic data collected includes age, gender, occupation, and last education. To assess the level of personal hygiene of respondents using the Personal Hygiene questionnaire by Rany Prastian (2018), which has been tested for validity, the r count value is more significant than r table, and the reliability test obtained α of 0.872 > 0.6, which indicates that the question items are reliable for use. Researchers examined the symptoms of contact dermatitis experienced by respondents using the Symptoms of Contact Dermatitis questionnaire by Erick, AM (2016), which was studied subjectively. Univariate data analysis was performed to analyze each variable and the characteristics of the respondents. Bivariate data analysis used the Chi-Square test to assess the relationship between the level *of personal hygiene* and the incidence of contact dermatitis.

Results

Table 1. Frequency Distribution of Respondent Characteristics by Education Level and Age.

Variable		Frequency (f)	Percentage (%)
Gender	Male	76	69.09
	Female	34	30.91
Education Level	Non-Schooling	4	3.64
	Elementary School/Equivalent	63	57.27
	School/Equivalent	27	24.55
	High School/Equivalent	15	13 .64
	Undergraduate Level 1	1	0.91
Age	Adolescents (12-25 Years)	2	1.82
	Adults (26-45 Years)	36	32.73
	Elderly (46-65 Years)	69	62.73
	Elderly (> 65 Years)	3	2.73

Based on the data in table 1, it is known that the number of respondents to rice farmers was 110 respondents, with 76 male rice farmers (69.09%) and 34 female rice farmers (30.91%). Based on the data in the table, it is known that the education level of the most respondents is Elementary School (SD/equivalent) with a total of 63 (57.27%). Then following the educational level of junior high school (Junior High School/equivalent) with a total of 27 (24.55%), high school (Senior High School/equivalent) as many as 15 (13.64%), rice farmers who did not attend school as many as 4 (3, 64%), and 1 undergraduate level (0.91%). Based on the data in the table it is also known that the age of the majority of rice farmer respondents is the elderly (46-65 years) which amounts to 69 (62.73%). Then there were 36 (32.73%) adults (26-45 years), 3 (2.73%) seniors (> 65 years), and 2 (12-25 years) teenagers (1.82%).

Table 2. Relationship between Personal Hygiene and Symptoms of Contact Dermatitis in Rice Farmers in 2022

No	Variable	Symptoms of dermatitis				Total		p=value
		Present		None		n	%	
		n	%	n	%			

Personal Hygiene								
1	Not good (< 75%)	29	82.86	6	17.14	35	31.82	0.044
2	Good (> 75%)	48	64	27	36	75	68.18	
	Total	77	70	33	30	110	100.0	

Based on table 2 above, the results obtained from the Chi Square statistical test can be seen that the value of p = 0.044 which indicates the value of p < 0.05, with farmers having symptoms of dermatitis due to personal hygiene patterns with the variable "Personal Hygiene is not good (<75%)" found a total of 31.82%, and for the variable "Personal Hygiene is good (> 75%)"total of 100% so that it could be concluded that Ha was$_a$ acceptable and related, which meant that there was a significant relationship between personal hygiene and symptoms of contact dermatitis in farmers working in the fields.

Discussion

Personal hygiene is one of the factors that can be an easy effort to do to prevent skin diseases such as contact dermatitis (Akbar, 2020). There are many things that can be used as an assessment related to personal hygiene in a person in this study including the frequency of bathing every day, the use of soap when bathing, the use of towels, the habit of washing hands, the habit of changing clothes every day, and how to dry clothes. The research that has been carried out obtains the results from statistical tests that there is a significant relationship between personal hygiene and symptoms of contact dermatitis in farmers who work in the fields. A discussion of these characteristics can be seen in table 1. Based on table 1, it is known that the number of respondents to rice farmers was 110 respondents with 76 male rice farmers (69.09%) and 34 female rice farmers (30.91%) . Based on table 1, it is known that the education level of the most respondents was Elementary School (SD/equivalent) with a total of 63 (57.27%) while the lowest was an undergraduate level of education level 1 with 1 (0.91%). Based on the data in the table, it is also known that the majority of rice farmer respondents are elderly (46-65 years) with a total of 69 (62.73%) and the lowest is teenagers (12-25 years) with 2 (1.82%) .

This research is in line with research conducted by Hairil Akbar in 2020 which stated that personal hygiene in the form of clean towels, body hygiene (bathing), hand washing habits is related to the incidence of dermatitis in the work area of the Juntinyuat Health Center (Akbar, 2020).Personal hygiene is very important for farmers who work in the fields to stay healthy and safe while at work. In addition, personal hygiene can prevent the spread of germs and disease and prevent skin allergies (Hastuti, 2018).

In this discussion, researchers conducted research in the form of a significant relationship between personal hygiene and symptoms of contact dermatitis in farmers working in the fields. Where the symptoms of dermatitis of farmers who work in the fields are affected by a decrease in the level of personal hygiene in him. Personal hygiene is included in the factor of the occurrence of dermatitis in farmers who work in the fields. Personal hygiene is very important for farmers because it prevents germs from sticking to clothes and bodies of farmers who are exposed to sweat or even other chemicals such as pesticides, fertilizers, etc. Personal hygiene experienced by farmers has decreased due to wrong bathing habits, washing clothes, clothes used, inappropriate rules for washing hands and feet or not even using soap and using running water (Rahmatika et al, 2020). Wrongly caused by several factors experienced by farmers. The habit of bathing is a part of personal hygiene so that farmers can avoid skin diseases such as dermatitis. The skin is very sensitive to the types of diseases that stick to the skin. Take a proper shower according to the rules, namely 2 times a day using clean, running water and soap (Pratiwi et al., 2022). Washing clothes after doing outdoor activities is highly recommended, because clothes that have been worn outside are already exposed to sweat and sun exposure. For farmers, clothes will be exposed to soil, fertilizers, pesticides and so on. Then change into new clothes (Pratiwi et al., 2022).

Washing hands and feet using soap and running water can reduce the development of bacteria and remove dirt on the skin, especially the hands. Hand washing can be done in 6 steps according to the applicable Ministry of Health regulations (Pratiwi et al, 2022). Farmers who work in the fields are often exposed to objects or gases that irritate their skin. Not only that, the duration of work also affects

the incidence of dermatitis due to frequent close contact with chemicals (pesticides, fertilizers) and sweat.

Based on table 2 above, the results obtained from the Chi Square statistical test can be seen that the value of p = 0.044 which indicates a p value <0.05, with farmers who have symptoms of dermatitis due to personal hygiene patterns with the variable "Personal Hygiene is not good (<75%)" found a total of 31.82%, and for the variable "Good Personal Hygiene (> 75%)" found a result of 68.18% with a total of 100% so that it can be concluded that H_a is acceptable and related, which means there is significant relationship between personal hygiene and symptoms of contact dermatitis in farmers working in the fields.

This research is in accordance with research that has been conducted by farmers with Dermatitis who have poor personal hygiene as many as 20 people (32.5%), who have good personal hygiene as many as 17 people (24.6%) and who have very good personal hygiene as many as 14 people (5%). Based on these data it can be concluded that farmers who experience dermatitis are more in the group of farmers who have poor personal hygiene (Rahmatika et al, 2020).

Conclusion

Dermatitis is a skin disease that feels painful starting from small spots or lumps that are red in color and then become blotches. dark red or purple and can spread. In this case, personal hygiene is an important factor in preventing contact dermatitis, there are several important factors related to personal hygiene in a person including the frequency of bathing every day, use of soap when bathing, use of towels, habit of washing hands, habit of changing clothes every day , as well as how to dry clothes. In the agricultural sector, personal hygiene is very important for farmers who work in the fields to stay healthy and safe while at work. Personal hygiene experienced by farmers has decreased due to wrong bathing habits, washing clothes, clothes used, rules for washing hands and feet that are not appropriate or not even using soap and using running water. Therefore there is a great need for awareness of the importance of personal hygiene such as bathing 2 times a day, washing feet and hands with soap and washing clothes after work.

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