



Influence Health Promotion of Personal Protective Equipment to Increase Knowledge About Contact Dermatitis in Citrus Farmers in Cingkes Village Kabupaten Simalungun

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Track Record Article	Abstract
<p>Accepted: 19 October 2023 Revised: 5 March 2024 Published: 10 March 2024</p> <p>How to cite : Marganda, S., Syaputri, D., Tanjung, N., S, R. S., & S, N. H. (2024). Influence Health Promotion of Personal Protective Equipment to Increase Knowledge About Contact Dermatitis in Citrus Farmers in Cingkes Village Kabupaten Simalungun. <i>Contagion :Scientific Periodical of Public Health and Coastal Health</i>, 6(1), 59–66.</p>	<p><i>Occupational Contact Dermatitis is a skin disorder that is often found in farmers who spray pesticides. Knowledge of the use of personal protective equipment on citrus farmers in Cingkes Village is still low, therefore it is very important to provide health counseling on the use of personal protective equipment on farmers. The purpose of the study was to determine the effect of health promotion about pesticides and the use of personal protective equipment on increasing knowledge about dermatitis in citrus farmers in Cingkes Village, Simalungun Regency. This type of research is quasi-experimental with a one group pre test-post test research design. This research was conducted in Cingkes Village, Simalungun Regency, which was carried out from July to September 2023. The research sampling was carried out by purposive sampling method. The instruments used were questionnaires and standing banners, leaflets and demonstrations on the use of personal protective equipment to improve farmers' knowledge of contact dermatitis. Data were analyzed using Wilcoxon signed rank test with SPSS version 20 software. The results showed that there is a significant influence of health promotion regarding Personal Protective Equipment on knowledge of contact dermatitis among orange farmers in Cingkes Village, Simalungun Regency (p-value=0.000). To the government and health workers to increase the knowledge of farmers by providing health counseling in order to prevent the occurrence of dermatitis in farmers. to citrus farmer farmers should use gloves, protective clothing, glasses, and masks when working with citrus or chemicals to prevent contact dermatitis.</i></p> <p>Keywords : Health Promotion, Dermatitis, Farmers, Knowledge, Personal Protective Equipment</p>

INTRODUCTION

Agriculture is one of the largest sectors in Indonesia. Pesticides are used by farmers to kill plant disturbing organisms (Pangihutan et al., 2020). Occupational Contact Dermatitis is a skin disorder often found in pesticide spraying farmers (Meliyanti et al., 2020). Chemicals in the form of pesticides are one of the causes of occupational skin diseases. Lack of knowledge of farmers about the dangers of pesticides and dermatitis prevention (Entianopa et al., 2021).

Agriculture is one of the largest sectors in Indonesia. Pesticides are used by farmers to kill plant disturbing organisms. Occupational Contact Dermatitis is a skin disorder often found in pesticide spraying farmers. Chemicals in the form of pesticides are one of the causes of occupational skin diseases. Lack of knowledge of farmers about the dangers of pesticides and dermatitis prevention (Aprilliani et al., 2022).

The prevalence of occupational contact dermatitis is estimated at 80%, allergic contact dermatitis at 20% and new data in the United States and the United Kingdom at 50% and 60%

of dermatitis is caused by occupational disease (Marks et al., 2016). Based on Basic Health Research data in 2018, the prevalence of dermatitis in Indonesia is 6.8% and tends to increase every year (Kemenkes RI, 2018). Epidemiologic data in Indonesia shows that 97% of 389 cases of skin disease are contact dermatitis, 66.3% of which are irritant contact dermatitis and 33.7% are allergic contact dermatitis (Kemenkes RI, 2019).

North Sumatra Province, the prevalence of dermatitis reached 27.5%. Occupational skin diseases can be in the form of dermatitis. Occupational contact dermatitis accounts for 90% of occupational dermatoses. Allergic contact dermatitis due to occupational contact with materials in the workplace accounts for 25% of all occupational contact dermatitis (Manik, 2017). Based on data from the Central Statistical Agency of Simalungun Regency, that the incidence of dermatitis increased in Simalungun Regency in 2020 as many as 3.071 incidents of skin diseases and infections, 2.987 incidents of skin diseases and allergies. In 2021, there were 3.801 incidents of skin diseases and infections and 4.971 cases of skin diseases and allergies (BPS Kabupaten Simalungun, 2023).

Personal protective equipment is a set of safety equipment used for workers to protect all or part of their bodies from the possibility of exposure to potential hazards in the work environment to accidents and occupational diseases (Tarwaka, 2015). Based on research Aina et al., (2021) states that there is a relationship between the level of knowledge about the use of personal protective equipment and the incidence of contact dermatitis, this is because knowledge can affect the occurrence of contact dermatitis, because the lower the knowledge of farmers about occupational diseases and the importance of using personal protective equipment at work will create the potential for hazards in the workplace.

Research Zuidah et al., (2020), stated that there was an effect of health counseling on the use of personal protective equipment on the level of knowledge of farmers. Health education has the effect of increasing the level of knowledge, and health education is a program that can be implemented for all ages, men and women, as well as all levels of final education (Ni'mah et al., 2015; Minaka et al., 2016).

Cingkes Village is a village with the livelihood of most citrus farmers. Based on an initial survey, it was found that many citrus farmers experienced symptoms of dermatitis. Factors causing citrus farmers to experience dermatitis are due to lack of knowledge of the use of personal protective equipment when picking oranges. The level of knowledge is important in changing one's behavior. Increasing knowledge is done with health promotion to prevent the incidence of dermatitis in citrus farmers in Cingkes Village, Simalungun Regency. The purpose

of this study was to determine the effect of health promotion on personal protective equipment on changes in knowledge about dermatitis in citrus farmers.

METHODS

This type of research is a quasi-experiment with a one group pre-test-post test research design, namely research to explain the effect of providing health promotion on dermatitis symptoms in citrus farmers in Cingkes Village, Simalungun Regency.

This research was conducted in Cingkes Village, Simalungun Regency, which was carried out from July to September 2023. The population in this study were citrus farmers spraying pesticides in Cingkes Village, as many as 1000 people. Sampling using purposive sampling technique. The minimum sample size in this study was calculated based on the formula, the number of samples obtained was 100 people.

The instruments used were questionnaires and standing banners, leaflets and demonstrations on the use of personal protective equipment to improve farmers' knowledge of contact dermatitis. Data analysis was performed with univariate and bivariate using the Wilcoxon signed rank test. Data processing was done using SPSS version 20 software.

RESULT

The characteristics of Cingkes Village farmers can be seen as follows:

Table 1. Characteristics of farmers in Cingkes Village, Simalungun District

Characteristics	N	%
Age		
25-35 years	11	11.0
36-46 years	23	23.0
47-57 years	36	36.0
58-68 years	30	30.0
Gender		
Male	60	60.0
Female	40	40.0
Education		
Not in school	9	9.0
Elementary School	23	23.0
Junior High School	24	24.0
Senior High School	38	38.0
College	6	6.0

Based on Table 1. The results showed that the majority of farmers aged 47 - 57 years as many as 36 people (36.0%), and farmers aged 25 - 35 years as many as 11 people (11.0%). The majority of the gender of farmers are men as many as 60 people (60.0%), and women as many as 40 people (40.0%). The majority of farmers' education level is high school level as many as 38 people (38.0%).

Table 2. Distribution of Respondents Based on Pre Test Actions On Orange Farmers in Cingkes Village

Action	N	%
Good	59	59
Not Good	41	41
Total	100	100

Based on table 2. The results of actions on orange farmers before getting counseling were categorized as good as many as 59 respondents (59%) and those categorized as poor as many as 41 respondents (41%).

Table 3. Distribution of Respondents Based on Post Test Actions on Orange Farmers in Cingkes Village

Action	N	%
Good	94	94
Not Good	6	6
Total	100	100

Based on table 3. The results of orange farmers after receiving counseling increased which were categorized as good as many as 94 respondents (94%) and those categorized as less good as many as 6 respondents (6%).

Table 4. Results of Paired Sample T-Test Analysis of the Effect of Health Promotion Regarding Personal Protective Equipment on Increasing Knowledge Regarding Contact Dermatitis among Orange Farmers in Cingkes Village, Simalungun Regency in 2023

Variable	Mean	t-hitung	Df	P- Value
Pre Test Knowledge	7,74	-29,039	100	0,000
Post Test Knowledge	14,46			
Pre Test Action	7,94	-28,347	99	0,000
Post Test Actions	14,63			

The results of the analysis using the paired sample t test obtained a t-value calculating pre-test – post test knowledge, which is 29.039 with a *p value* of 0.000. Because the value of knowledge obtained *p value* $0.000 < 0.05$, H_0 is rejected and accepts H_a means that the attitude before and after counseling is not the same or there are differences or an increase of 70%.

Based on the analysis using the pair sample t test, the t-value of the pre-test – post test action is 28.347 with a p-value of 0.000. Because the value of action obtained is $0.000 < 0.05$, H_0 is rejected and accepts H_a means that the action before and after counseling is not the same or there is a difference or an increase of 94%.

DISCUSSION

The effect of health promotion regarding personal protective equipment on increasing knowledge about contact dermatitis in citrus farmers in Cingkes Village, Simalungun Regency

Personal protective equipment is a set of safety equipment used by workers to protect all or part of their bodies from the potential hazards of the work environment against accidents and occupational diseases to reduce the severity of a possible accident or occupational disease (Khoainur, 2019).

In general, health counseling is an activity or effort to convey health messages to the community, group or individual. In other words, the existence of health counseling is expected to have an impact on changes in knowledge. The knowledge of the community after being given health education has increased with a good category. It can be said that health counseling makes a good contribution to increasing knowledge in the community (Jadjitala et al., 2022). Health counseling is able to improve a person's knowledge and attitude if it uses good and correct methods and media (Iyong et al., 2020).

Factors that influence knowledge are individual experience of an object and information received by individuals, especially about preventing work accidents. Therefore, providing information through counseling methods with leaflets has a significant effect on changing respondents' knowledge about the importance of using personal protective equipment for safety (Notoatmodjo, 2012).

Farmers tend to take the danger of pesticides lightly so they do not comply with safety requirements in the use of pesticides including using personal protective equipment (Yuliansari et al., 2021). Poisoning that occurs is influenced by farmers' habits in using personal protective equipment (Djojoseumarto, 2020). Lack of personal protective equipment is a cause of poisoning that often occurs in farmers. The use of personal protective equipment by farmers in this study is the real action of farmers in an effort to prevent poisoning (Aeni et al., 2021).

The results of the study with analysis using the Paired t-Test test showed that there was a significant effect of providing counseling on health promotion regarding Personal Protective Equipment on Knowledge of Contact Dermatitis in Citrus Farmers in Cingkes Village, Simalungun Regency (p-value = 0.000). The delivery of information is influenced by the methods and media used which can have a significant effect on knowledge and actions before and after on citrus farmers about the importance of personal protective equipment in the prevention of contact dermatitis in farmers.

This is in line with research Simanjuntak et al., (2016); Surbakti et al., (2023) states that there is a significant influence of the provision of counseling on the importance of the use of personal protective equipment on changes in farmer actions, this is because the extension method with effective leaflets has a great influence on changes in farmer actions towards the use of personal protective equipment when spraying pesticides.

Research Syafriani et al., (2019), stated that there was a significant effect of providing counseling on the importance of using personal protective equipment on changes in farmers' knowledge. Due to the extension method with leaflets effectively provide a great influence on changes in farmers' knowledge of the use of personal protective equipment when spraying pesticides. The leaflet method has an effect on changing the knowledge of citrus farmers, farmers began to know ways to avoid the dangers of pesticides when spraying (Sinaga et al., 2022).

Factors affecting citrus farmers are susceptible to contact dermatitis is the lack of knowledge of farmers in knowledge and action in the use of personal protective equipment. From the questionnaire given to respondents before being given counseling, the attitudes and actions of respondents were low in the use of personal protective equipment, such as when using pesticides on plants or chemicals, farmers often did not use gloves, and masks when applying pesticides to plants so that farmers were contaminated with pesticides and chemicals on the skin of farmers so that they could cause dermatitis in farmers.

After the respondents were given counseling and the respondents were again given questions in the form of a questionnaire, and based on the results of the study there was a change in the knowledge of respondents on the attitudes and actions of farmers about personal protective equipment to increase knowledge about contact dermatitis seen from the results of the post test on the respondents. This counseling is a preventive effort to prevent dermatitis in citrus farmers and other disease symptoms caused by lack of knowledge of the use of personal protective equipment in jeru farmers.

CONCLUSIONS

This health counseling has a significant effect on health promotion regarding Personal Protective Equipment on knowledge about contact dermatitis in citrus farmers in Cingkes Village, Simalungun Regency. It is recommended to the local government to be able to provide information or counseling on the use of good personal protective equipment to citrus farmers in order to reduce contact dermatitis to citrus farmers.

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