

Does Health Education Prevent Dermatitis Wounds in Teenagers?

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Abstract

Background: Dermatitis accounts for 97% of the 389 skin disease cases in Indonesia, which often occur in teenagers. They suffer from dermatitis, which can include intense itching and scratching accompanied by skin hypersensitivity. Scratching can cause several skin conditions, including blemishes and erythematous, excoriated, and crusting lesions that compromise the skin and increase the chance of secondary infection and spreading to the deeper layers of the skin (cellulitis) or forming pockets of pus. **Objective:** This study aims to determine the effect of health education on knowledge, attitudes, and behavior for preventing dermatitis wounds at the *Ciracas* Village Community Health Center, Jakarta, Indonesia. **Method:** A quasi-experimental study, pre-test, and post-test were approached. In this study, research subjects were given a questionnaire pre-test before intervention (health education using a booklet). After that, a questionnaire post-test will be given to see the final results of the intervention. The sampling technique was carried out using purposive sampling with 33 respondents. The statistical tests used were univariate and bivariate, using a paired sample t-test. **Result:** The results showed that there were differences in the results of the pre-test and post-test with a p-value of 0.000. There are changes in knowledge, attitudes, and behavior. **Conclusion:** Health promotion with booklet media influences knowledge, attitude, and behavior. **Recommendation:** It is hoped that information regarding the prevention of dermatitis wounds can be combined with another preventive method.

Keywords: dermatitis wounds; booklet; health education; wound care



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INTRODUCTION

Dermatitis is the skin inflammation that affects the layers of the epidermis and dermis as a reaction to external or endogenous causes (1). According to the World Health Organization (WHO), the American Academy of Allergy, Asthma, and Immunology (AAAAI) survey reported that dermatitis is a common skin condition that generates 5.7 million doctor visits annually. In general, long-term dermatitis conditions most often affect adolescents (2).

Skin diseases are often found in Indonesia because of its tropical climate. This climate aids the growth of fungi, parasites, and bacteria. Many skin conditions are diseases that often develop due to poor personal hygiene (1).

Dermatitis ranks third in the top ten diseases based on the description of skin diseases and other subcutaneous disorders, with 86% of 192,414 cases of skin diseases in various public hospitals in Indonesia in 2011 experiencing dermatitis.³ DKI Jakarta is one of the 14 provinces in Indonesia with a higher prevalence of dermatitis than the national average (4).

The incidence of dermatitis in the working area of the Ciracas Village Health Center is relatively high in 2022, namely 260 cases. This data showed 75 cases of children, 82 cases of teenagers, 56 of adults, and 47 of older adults. The interventions that were given were the administration of antihistamines and corticosteroids to reduce dermatitis symptoms (1).

The impact of dermatitis that often occurs in adolescents who suffer from dermatitis can be intense itching and scratching accompanied by skin hypersensitivity (1) – changes in the composition of the stratum corneum fat cause the skin to dry out. A child's cycle of scratching and itching can disturb their sleep at night. Scratching can cause several skin conditions, including bumps and erythematous, excoriated, and crusting lesions associated with eczema (5). When young children continue to strike, it will stimulate an itchy condition that harms the skin and increases the possibility of secondary infection (5). Rashes due to continuously scraped dermatitis can cause skin damage in the form of dermatitis wounds. This open wound can become infected, and the infection can spread to

the deeper layers of the skin (cellulitis) or form a pocket of pus (abscess) (6).

Non-pharmacological management is needed through health education on how to prevent dermatitis wounds (7). Health education is an activity or effort to convey health messages to communities, groups, or individuals, hoping that knowledge will influence behavior (7). Accumulating knowledge by inspiring selective exposure to and selective elaboration of relevant information can affect the attitude (22). Lack of attention to this matter has often resulted in declining consumer health, such as poisoning due to unhygienic storage and presentation processes (23).

The health education media used in this research is using booklets. A booklet is a small book that functions as a leaflet, promotional medium, and information medium, accompanied by attractive pictures or illustrations (17).

The results of this study can be used as input to planning and decision-making. They can serve as a reference for health service providers and practitioners in government and non-government organizations to enhance policies to achieve better and more efficient provision of health care. As a health education media, Booklet has more advantages than other media.

OBJECTIVE

This study aims to examine the effect of health education on knowledge, attitudes, and behavior in adolescents to prevent dermatitis wounds.

METHODS

Design

This study used a quasi-experimental method, one group pre-test, and post-test. This research uses educational media in the form of booklets for health promotion.

Sample, Sample Size, and Sampling Technique

The respondents in this study were 33 teenagers who suffered from dermatitis in the Ciracas Village Health Center Jakarta Timur. The technique used was purposive sampling. The inclusion criteria for this study were teenagers aged 12-18 years suffering from

dermatitis. The uncooperative teenagers with cognitive impairment were not included in the participants of this study.

Data Collection Process

Relevant data from the participants were collected and recorded by the researchers. The tool used a questionnaire about knowledge, attitude, and behavior of dermatitis wounds. Information was provided to enable participants to decide on their involvement in the study. Information given includes the objectives, significance, and the nature of their participation; their rights, privileges, and safety information. However, in this particular study, there are no risks involved. After providing this information to the respondents, they signed the consent forms voluntarily.

Next, the researchers explained how to fill in the lectures, fill in identity, and write answers. Respondents completed the pre-test questionnaire independently within 15 minutes. Researchers provide interventions, related health promotion activities prevention of dermatitis wounds using Booklet for 20 minutes. They then ended by conducting a post-test using the same questionnaire after seven days.

Anonymity, no violation of privacy, and the right to self-determination were observed. All data gathered were handled with strict confidentiality.

Instrument for Data Collection

This research instrument consists of three questionnaires developed by researchers: knowledge, attitude, and behavior. Each questionnaire consists of 7-10 questions. The validity and reliability testing had been done with Cronbach alpha 0.886, indicated by the reliable instrument.

Health Education

The Booklet contains information on preventing dermatitis wounds, which is given along with an explanation by the researcher for 30 minutes. Respondents were given seven days to study the Booklet.

Table 1. Health Education Activities

Time	Activities	Method	Respondent
3'	Welcome	Greetings	Listening

10'	Deliver the Booklet	Lecture	Listening
4'	Evaluation	Discussion	Asking and answering
3'	Summary & closing	Lecture	Answering greetings

Data Analysis

Data obtained from the participants were tabulated and analyzed using descriptive statistics such as frequencies and percentage distribution. The results of the data normality test are that the data is normally distributed, so the t-test is carried out to find the differences between the two groups.

Ethical Consideration

Before the actual data gathering, ethics clearance was obtained from the Research Ethics Committee of the Health Science Faculty, Universitas Nasional, with No: 233/D/SP/FIKES/V/2023. The researcher has received permission from the research site. Ethical principles in research consist of being free from suffering, exploitation, and risk, focusing on respecting the subject's rights, and the direction of justice.

RESULTS

Characteristic of Respondents

Table 2 describes the characteristics of respondents. The result found that 51.5% of respondents were male. More than half of respondents were 15-18 years old. The majority of respondents were from the Javanese tribe (27.3%).

Table 2. Characteristic of Respondents

No	Variables	n	%
1	Gender		
	Male	17	51.5
	Female	16	48.5
2	Ethnic Group		
	Aceh	1	3.0
	Ambon	1	3.0
	Bali	2	6.1
	Banjar	2	6.1
	Batak	4	12.1
	Betawi	2	6.1
	Bugis	2	6.1
	Jawa	9	27.3
	Manado	2	6.1
	Minang	1	3.0
	Sunda	7	21.2

3	Aged			
	12 - 15 years old	16	48.5	
	15 - 18 years old	17	51.5	
4	Educational Background			
	tertiary school	29	87.9	
	Secondary school	4	12.1	
	Primary school	0	0.0	

Frequency Distribution of Knowledge, Attitudes, and Behavior Before and After Health Education

Table 3. Frequency Distribution of Knowledge, Attitudes, and Behavior Before and After Health Education

Variable	Category	Before		After	
		n	%	n	%
Knowledge	Good	4	12.1	15	45.5
	Enough	15	45.5	18	54.5
	Less	14	42.5	0	0
Attitude	Negative	32	97	2	6.1
	Positive	1	3	31	93.9
Behavior	Good	24	72.7	33	100
	Less	9	27.3	0	0

The frequency distribution of knowledge before and after health education was categorized into good, enough, and poor. The frequency distribution of attitudes before and after health education was categorized into negative and positive. The frequency distribution of behavior before and after health education was organized into good and poor behavior.

Differences in Knowledge, Attitudes, and Behavior Before and After Health Education

The mean difference of knowledge, attitude, and behavior in terms of dermatitis wound prevention before and after health education was tested using a paired sample t-test and was found to be 0.000 ($p < 0.05$), which means H_0 is rejected, and H_1 is accepted which means there is a difference between the values knowledge about the prevention of dermatitis wounds before and after the health education at the Ciracas Village Health Center.

Table 4. Differences in Knowledge, Attitudes, and Behavior Before and After Health Education

Variable	Group	n	Mean	Std. Deviation	p
Knowledge	Pre-test	33	5.67	1.493	0.00
	Post-test	33	7.76	1.640	

		Pre-test	Post-test	t	p
Attitude	Pre-test	33	18.03	1.311	0.00
	Post-test	33	27.30		
Behavior	Pre-test	33	18.3	1.267	0.00
	Post-test	33	26.5		

DISCUSSION

The methods used in health education to convey messages to communities, groups, families, and society are known as health education techniques. This research uses an attractive, full-color booklet complete with information and pictures. Books have a significant influence on increasing knowledge in adolescents (8).

The reason for providing health education using booklet media is because the material provided is not only written but is equipped with colored pictures, so it will make young women more interested in reading it (9). Booklets also have several advantages; they can be studied at any time because the design is in the form of a book and contains much more information than the poster.

Adolescents' knowledge increased after being given health education interventions through booklets to prevent dermatitis wounds, as evidenced by the mean value of adolescent knowledge in Table 3, which was 5.67, increasing to 7.76. The results of statistical tests showed significant differences between knowledge, attitudes, and behavior before and after being given an intervention using a dermatitis wound prevention booklet. It means that knowledge is conveyed in child-friendly brochures (19)(20)(21).

One of the strategies to gain knowledge change is education, where this method begins with how to provide health information. Health education in a short time can produce changes, increasing individual knowledge. Knowledge is essential for a person to access all forms of change in life. With expertise, a person will find it easier to find solutions to all of life's problems.

Health education aims to change personal or societal behavior in the health sector. This is in line with other research; the instruction with the GENTING booklet affected adolescent mothers' knowledge, attitude, and

behavior. The GENTING booklet can be used as a health promotion medium to prevent stunting (10). Counseling with Booklet media significantly affects knowledge, attitudes, and behavior (11).

Health education activities are the provision of health information or messages in the form of health education to provide or improve a person's knowledge and attitudes about health through practical learning techniques to change or influence human behavior both individually, in groups, and in society to be more independent and develop healthy behavior (12). Health education using booklets and diary media could increase the self-efficacy of homemakers (18).

The researcher assumes that direct health education provides in-depth information about dermatitis wounds, trigger factors, and prevention. Knowledge, attitudes, and behavior in correct and appropriate hand hygiene are essential in preventing hand dermatitis (13). Providing health education will likely influence a person's attitude toward preventing skin diseases and knowing about the factors that cause skin diseases (14).

Through this education, individuals can understand the importance of preventive measures, including correct skin care practices, using appropriate products, and avoiding triggers that can exacerbate dermatitis wounds. It is hoped that further research can examine a broader range of variables, use other health education methods, and explore data using qualitative methods.

CONCLUSION

There is a significant relationship between health education and knowledge, behavior, and attitudes towards preventing dermatitis wounds.

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