

Distinguish Test Of Health Promotion Media Toward Skin Diseases Prevention

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ABSTRACT

Garbage transport officer risky for skin disease cause direct contact with various types of trash. A skin disease worsening the condition could reduce productivity and health if not addressed seriously because it is very disturbing for the convenience of patients. The aim of this study was to compare health promotion with lecture and poster on the knowledge and attitudes of skin diseases prevention

This study was a quasy-experimental with pre-post test two group design. Total subjects was 32 divided into 2 groups, namely speech group and poster group. Lecture intervention was given twice, which is lecture and lecture with forum group discussion (FGD). Interventions using posters are given for 2 weeks. Knowledge and attitude about prevention of disease skin obtained from questionnaire before and after education. Effect of disease skin prevention on knowledge and attitude in both groups were tested used Mann-Whitney and Wilcoxon.

There was an increase in knowledge of skin diseases prevention in the lecture group ($p\text{-value} \leq 0,001$) and poster groups ($p\text{-value} = 0,257$), but there was no increase in attitude in both group. There was a difference between post-test scores skin diseases prevention knowledge in speech and poster group ($p < 0,05$). However, there was no difference in attitude changing in both groups.

The results revealed that health promotion with lecture dan poster media can affect in knowledge garbage transport officer of skin diseases prevention. Lecture was more effective at increasing knowledge than poster media.

INTRODUCTION

A skin disease caused by work is a disease that often found (1). A skin disease didn't result in death, but could reduce productivity and worsening health condition if not addressed seriously because it is very disturbing sufferers comfort (2,3).

A skin disease can be caused by microorganisms, such as bacteria, virus and fungi (1). Poor personal hygiene can enlarge microorganisms entrance into body (4) inappropriate use of personal protection equipment also can facilitate skin disease attack the body (5).

Technical Service Unit Hygiene Region I-VIII Environmental Office of Semarang City has main task and function of transporting waste from Temporary Disposal Sites to final disposal site Jati Barang (6). Waste consists of citizen trash, commerce, protocols and public facilities or social facilitie (7).

Garbage transport officer carry out garbage transportation using two types of fleets, namely arm roll and dump truck. Transportation of garbage using arm roll, all done mechanically by driver. However, when the garbage condition is overloaded, the driver transports garbage manually. Transportation of garbage using dump truck, all done manually by drivers and dump truck personnel (7). Garbage transport officer risky for skin disease cause direct contact with various types of trash (8).

Based on observations on 10 workers, 80% of workers didn't use gloves when transporting garbage manually and when cleaning dirty polling station locations. At rest, 90% of workers. At rest, 90% of workers do not wash their hands before eating. 80% of workers claimed to rarely wash gloves after work and 30% of workers claimed to often use the same clothes to work the next day. All workers claimed that they had never received information about occupational health related to the work of transporting garbage.

Health promotion is a conscious opportunity built to learn in the communication design and information to improve health, including increasing knowledge (9). Knowledge will stimulate a change of attitude towards someone. Health promotion activities are influenced by many factors, including methods and media used (10). This study will use the lecture method and media posters containing skin disease prevention materials that are carefully designed, simple, short and easy to understand. The purpose of this study was to analyze the differences in health promotion media on changing knowledge and attitudes towards preventing skin diseases.

MATERIALS AND METHODS

- Method

The type of research used a quasi experiment with a pretest-posttest two group design, consist of two groups that did not need a control group (11).

- Sample

Sample in this study is the garbage transport officer Technical Service Unit Hygiene Region VII (West Semarang and Tugu District) and VIII (Ngaliyan and Mijen District) who included in research criteria. The number of samples was 32 people, divided into 2 intervention groups. In the intervention group 1 was given a lecture, while the intervention group 2 was given poster media.

The intervention group 1 was given a lecture twice. In the first week there was a lecture with prevention of skin diseases material and in the second week, the lecture material previously given was accompanied by forum discussion group. In intervention group 2, poster media was given for 2 weeks, posters were posted in places permitted by the Environmental Service.

Sources of research data are primary data obtained directly from the field and interviews using questionnaire sheets and secondary data obtained from the literature and data sources that already exist in the Environmental Office. Time for conducting research in September 2018.

- Research Instrument

The instruments used in this study were questionnaire sheets, lecture material and posters containing information on skin diseases and skin diseases prevention, and informed consent to obtain approval as subjects of the study.

The questionnaire in this study consisted of individual characteristics which included (age, years of service, education level, history of allergies), questionnaires about knowledge of personal hygiene

and the use of 10 personal protective equipment using single choice questions, questionnaires about personal hygiene and use personal protective equipment totaling 10 statements with answer choices including agree and disagree.

Validity and reliability was tested on 32 people. Test the validity of using Pearson product moment correlation test and reliability test using Cronbach alpha. The results of validity and reliability test obtained 20 questions that were valid and used during the study.

- Data Analysis

Data analysis using univariate analysis to obtain frequency distribution of each group and bivariate analysis to see the increase in knowledge and attitudes of garbage transport officer to prevent skin diseases.

Data is abnormally distributed, to see the effectiveness of health promotion with the lecture and poster method on knowledge and attitudes used the Mann Whitney test at the significance level of $\alpha < 0.05$. Used Wilcoxon test at a significance level of $\alpha < 0.05$ to compare changes in knowledge and attitudes of garbage transport officer before and after given an intervention so that the most effective intervention can be seen.

RESULT AND DISCUSSION

The study shows that characteristics of the respondents are as follows :

Table 1. Distribution of Characteristics of Waste Carrier Workers

Characteristics	Group			
	Lecture		Poster	
	N	%	n	%
Age				
Not productive yet	0	0,0	0	0,0
Productive	16	100	16	100
Unproductive	0	0,0	0	0,0
Working period				
New	7	43,8	1	6,3
Old	9	56,3	15	93,8
Level of Education				
Elementary School	4	44,4	5	55,6
Junior High School	4	40,0	6	60,0
Senior High School	8	61,5	5	38,5
Allergy history				
Exist	0	0,0	0	0,0
Does not exist	16	100	16	100

Table 1 shows that all garbage transport officer in lecture group and poster group are of productive age. Based on the working period, both group have a majority of working period with old category in, lecture group 9 (56.3%) and poster group 15 (93.8%).

Based on level of education, lecture group at senior high school level was as many as 8 people (61.5%), while the poster group had a junior high school education of 6 people (60%). Based on allergy history, both the lecture group and the poster group all did not have a history of allergies.

Table 2. Category on Knowledge Before Given Intervention

Group	Knowledge Pre-test			
	Medium		Low	
	n	%	n	%
Lecture	5	31,2	11	68,8
Poster	1	6,2	15	93,8

Table 2 shows that garbage transport officer knowledge on skin disease prevention before being given lecture, majority on the low category 11 (68.8%) and medium category 5 (31.2%). Garbage transport officer knowledge on skin disease prevention before being given poster, majority on the low category 15 (93.8%) and medium category 1 (6.2%).

Table 3. Category on Knowledge After Given Intervention

Group	Knowledge Post-test					
	High		Medium		low	
	N	%	N	%	N	%
Lecture	9	56,3	7	43,8	0	0
Poster	1	6.3	10	62,5	5	31,3

Table 3 shows that garbage transport officer knowledge on skin diseases prevention after given lecture, majority on high category 9 (56.3%) and medium category 7 (43.8%). Garbage transport officer knowledge on skin diseases prevention after given poster majority in the medium category 10 (62.5%), low category 5 (31.3%) and high category 1 (6.3%).

Table 4. Category on Attitude Before Given Intervention

Group	Attitude Pre-test			
	Positive		Negative	
	N	%	n	%
Lecture	12	75,0	4	25,0
Poster	7	43,8	9	56,3

Table 4 shows that garbage transport officer attitude on skin diseases prevention before being given lecture, majority on positive category 12 (75%). Garbage transport officer attitude on skin diseases prevention before being given poster, majority on negative category 9 (56.3 %).

Table 5. Category on Attitude After Given Intervention

Group	Attitude Post-test			
	Positive		Negative	
	N	%	n	%
Lecture	9	56,3	7	43,8
Poster	8	50,0	8	50,0

Table 5 shows that garbage transport officer attitude on skin diseases prevention after given lecture, majority on positive category 9 (56.3%). Garbage transport officer attitude on skin diseases prevention after given poster, positive and negative attitudes was balanced 8 people (50%).

Table 6. Effectiveness of Lectures on Knowledge

Knowledge pre-test	Knowledge post-test				p [§]
	Tinggi		Sedang		
	n	%	n	%	
Medium	4	80,0	1	20,0	<0,001*
Low	5	45.5	6	54.5	

*Significance level p value 0,05

Table 6 shows that before given lectures intervention, garbage transport officer knowledge on skin diseases prevention on low category 11 (68.8%) and medium category 5 (31.2%). After given lecture, knowledge category increase on the medium category 7 (43.8%) and high category 9 (56.3%). It reveals there is an increase in knowledge.

On Wilcoxon test obtained p value = <0.001. The value of p <0.05, so it can be concluded that lecture method is effective to increase knowledge of respondents.

Table 7. Effectiveness of Lectures on Attitude

Attitude Pre-test	Attitude post-test				p [§]
	Positive		Negative		
	n	%	n	%	
Positive	7	58,3	5	41,7	0,257
Negative	2	50.0	2	50.0	

*Significance level p value 0,05

Table 7 shows before being lecture, garbage transport officer attitude on skin diseases prevention on negative category 4 (25%) and positive category 12 (75%). After given a lecture, garbage transport officer attitude on skin diseases prevention in negative category 7 (43.8%) and positive category 9 (56.3%). On Wilcoxon test obtained p-value=0.257 (p> 0.05), so it can be concluded that lecture is less effective to improve attitude of respondent.

Table 8. Effectiveness of Poster Media on Garbage Transport Officer Knowledge

Knowledge pre-test	Knowledge post-test						p ^s
	High		Medium		Low		
	n	%	n	%	n	%	
High	0	0	0	0	0	0	0,002*
Medium	0	0	1	100	0	0	
Low	1	6.7	9	60.0	5	33.3	

*Significance level p value 0,05

Table 8 shows that before given intervention with poster media, garbage transport officer knowledge in low category 15 (93.8%) and medium category 1 (6.2%). After given intervention, there is an increase in knowledge on low category 5 (31.3%), medium category 10 (62.5%) and high category 1 (6.3%). It states that there is an increased knowledge on the group poster.

Wilcoxon test obtained p-value = 0,002 ($p < 0.05$), so it can be concluded that poster media is effective to improve knowledge of the respondent.

Table 9. Effectiveness of Poster Media on Garbage Transport Officer Attitude

Attitude pre-test	Attitude post-test				p ^s
	Positive		Negative		
	n	%	n	%	
Positive	5	71,4	2	28,6	0,655
Negative	3	33,3	6	66,7	

*Significance level p value 0,05

Garbage transport officer attitude on skin diseases prevention before given poster intervention in negative category 9 (56.3%) and positive category 7 (43.8%). After given intervention, positive and negative attitude was equal 8 (50%). Table 9 revealed that there was no increase in attitude on the poster intervention.

On Wilcoxon test obtained p-value=0.655 ($p > 0.05$), so it can be concluded that poster intervention is less effective to improve the attitude of the respondent.

Table 10. Comparison of Knowledge Before Given Lecture and Poster Skin Disease Prevention on Garbage Transport Officer

Group	Knowledge Pre-test						p [‡]
	High		Medium		Low		
	n	%	n	%	n	%	
Lecture	0	0	5	31,3	11	68,8	0,075
Poster	0	0	1	6.3	15	93.8	

*Significance level p value 0,05

Table 10 shows knowledge in the lecture group in low category was 11 (68.8%) and the poster group knowledge in low category was 15 (93.8%). Mann Whitney test obtained the value of $p = 0.075$ ($p > 0.05$), so it can be concluded that before getting intervention, the knowledge level of the lecture group and poster group was not much different.

Table 11. Comparison of Knowledge After Given Lecture and Poster Skin Disease Prevention on Garbage Transport Officer

Group	Knowledge Post-test						p [§]
	High		Medium		Low		
	n	%	n	%	n	%	
Lecture	9	56,3	7	43,8	0	0	0,001*
Poster	1	6.3	10	62.5	5	31.3	

*Significance level p value 0,05

Table 11 shows that after given intervention, knowledge category in the lecture group was high 9 (56.3%), while knowledge category in the poster group was medium 10 (62.5%). On Mann Whitney test obtained p-value = 0.001 ($p < 0.05$), it can be concluded that lectures are more effective at increasing knowledge than poster media.

Table 12. Comparison of Attitude Before Given Lecture and Poster
Skin Disease Prevention on Garbage Transport Officer

Group	Attitude Pre-test				p ^s
	Positive		Negative		
	n	%	n	%	
Lecture	12	75	4	25	0,077
Poster	7	43,8	9	56,3	

*Significance level p value 0,05

Table 12 shows that Mann Whitney test obtained p-value = 0.077 ($p > 0.05$), so it can be concluded that before getting intervention, attitude of the lecture and poster groups was not much different.

Table 13. Comparison of Attitude After Given Lecture and Poster
Skin Disease Prevention on Garbage Transport Officer

Group	Attitude Post-test				p [§]
	Positive		Negative		
	n	%	n	%	
Lecture	9	56,3	7	43,8	0,727
Poster	8	50.0	8	50.0	

*Significance level p value 0,05

Table 13 shows that after given an intervention, attitude in the lecture group with a positive category was 9 (56.3%), while in the poster group with a positive category was 8 (50%). Mann Whitney test obtained p-value = 0.727 ($p > 0.05$). So it can be concluded that there were no significant differences in attitudes between the lecture and poster groups after intervention. Lecture and poster are less effective in increasing attitude of respondents.

There is the effectiveness of health promotion with lecture on increasing knowledge of respondent between knowledge before and after given lecture (p-value= $<0,001$). In line with research by Cheraghi, there was an average difference in knowledge before and after counseling to mothers regarding injury prevention and safety promotion in children <5 years old in Hamadan City, West Iran (12). Likewise research by Kikelomo on consciousness and taking a test for cervical cancer screening (Pap Smear) in the community of market women traders in Lagos, Nigeria. There was a significant knowledge increase in the intervention group after giving health promotion with counseling (p-value <0.05) (13).

In this study, there was no increase in attitudes of respondents before and after lecture given ($p=0.257$). Based on observations at the time of the study, researchers found an inconsistent between the attitude statement expressed with the respondent's response to the attitude object. This study supports research Isha Patel on student health sector in the United States on the prevention of Ebola Virus Disease with lectures, proves there is no significant change in nursing student attitude (14). Likewise Mina research on breakfast consumption behavior with lectures on 4th and 5th grade elementary school female students in

Ahvaz, Iran. Showed there is no significant difference attitudes of respondents after given lectures (15).

There is effectiveness of health promotion with posters media on increasing respondents' knowledge, between before and after given poster media ($p\text{-value} = 0.002$). In line with Pokkamol research on rural communities in Northeastern Thailand about preventing infection with *Strongyloides stercoralis* poster media, shows that there is a significant influence in the intervention group than the control group ($p\text{-value} \leq 0.05$) (16). Likewise with Cecilia research on students Junior High School in Hong Kong on Emergency Management of Dental Trauma using posters showed a significant increase in knowledge of the respondents ($p\text{-value} = 0.0407$) (17).

In this study, there was no increase attitudes of respondents before and after a given poster ($p = 0.655$). There is an inconsistent between the attitude statement expressed with the respondent's response to the attitude object. In line with Renate research on management of patients with suicidal behavior in professional health care staff, Department of Emergency and Psychiatry in Flanders, shows that there is no significant change in attitude on emergency department staff (18). Likewise with Oriane research on individual sensitivity to cues threat immigrant men as sexual danger in the State Switzerland and Germany, proves that there is no significant change in attitude on responden (19).

Poster media put more emphasis on the power of the message, visual and color can influence knowledge, attitudes and behavior of people in doing thing (20). Use of posters as a means of counseling with image according to conditions faced daily will accelerate understanding by respondent (21). Education poster made quite simple, easily understood and universally effective enough to improve knowledge on responden (22,23).

Increased knowledge is one indication of effectiveness education that has been carried out (24). Increased knowledge obtained from the process of learning by using all the senses, where 13% of the knowledge obtained through the senses of hearing and 35-55% through the senses of hearing and vision (25).

Attitude is a person's readiness to respond to something, both in a positive or negative response from an object. Someone has a certain mindset and can change after gaining experience, education and knowledge through social interaction (26). In social interaction, there are interrelated relationships between individuals with each other, there is also a reciprocal relationship that influence behavior of each individual (27). Change of attitude requires interpretation and judgment have a base because attitude is very closely related to the values adopted (28). Attitudes must also have consistency, where there is harmony between statement of attitude and response to attitude object (27).

Mann Whitney statistical test obtained $p\text{-value} = 0.001$ ($p < 0.05$), so it can be concluded that lectures are more effective in increasing knowledge than poster media. The lecture method is appropriate for large groups (if participants are more than 15 people) with a target of higher or lower education (29). The advantages of using the lecture method include the speaker being able to present extensive material and being able to convey core material that needs to be emphasized in accordance with needs and desired goals (30).

In line with Majlessi research on teenage girls in Iran about puberty health, stating that there are significant differences in the mean value of the post-test knowledge on lecture group compared with the group education package ($p < 0.001$). It can be concluded that health promotion lecture more effective use to improve the knowledge responden (31). Likewise with Mostafa research on nutrition health used lecture and booklet for students in the guidance and counseling department in Qom City, Iran. Showed there were significant differences knowledge in the lecture group than booklet group ($p\text{-value} < 0.05$). So

it can be concluded that education method with lectures is more effective in increasing knowledge than printed media booklet (32).

Health promotion using lecture method is the right method for large groups with more than 15 participants. The lecture method is right for targets with higher or lower education (29). Combining lecture with slides is quite effective in increasing knowledge because the material can be delivered more detail (25). The effectiveness of increasing knowledge of respondents was also influenced by frequency factor of the provision of health education (33). In this study, lecture was given twice, so the lecture was more effective in increasing respondents' knowledge because it was done repetitively.

CONCLUSION

There was an increase in knowledge of garbage transport officer between before and after lecture intervention and poster media. However, there was no change in attitude between before and after lecture intervention and poster media were given. Health promotion using lectures is more effective in increasing knowledge than poster media.

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