A Quasi-Experimental Study on the Effectiveness of Health Education on the Knowledge, Attitude and Practices about Scabies among Barangay Health Workers in Dagupan City*

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ABSTRACT

Background: Scabies, recognized as one of the neglected tropical diseases (NTDs) by the WHO continues to persist in our locality today. Health education emerges as an indispensable tool, aimed at enhancing the knowledge, attitudes, and practices (KAP) of Barangay Health Workers (BHWs). As the primary frontliners in our community, they encounter a wide array of skin conditions, but often lack the resources to manage them effectively.

Objectives: The primary objective of this study is to assess the impact of health education on the KAP of BHWs concerning Scabies infestation.

Methods: A quasi-experimental, one-group pre-test-post-test design assessed the effectiveness of a 30-minute face-to-face lecture on BHWs' KAP regarding Scabies infestation in the community. The study was conducted on April 25, 2023 at the Dagupan City Health office utilizing random population sampling.

Results: The study included 45 BHW participants, 71.11% of whom had prior Scabies knowledge mainly from seminars/training (42.22%). Initially, most had poor baseline knowledge. Less than half (46.67%) identified skin manifestations and treatment accurately. Most displayed positive attitudes toward environmental management (91.11%) and fomite infection control (77.78%). After the lecture, the participants' total scores increased.

Conclusion: BHWs bridge the gap between healthcare and underserved populations. Equipping them with knowledge of diseases such as Scabies is imperative. This underscores the effectiveness of health education in enhancing their KAP towards Scabies. By empowering them, we can reduce the impact of NTDs in vulnerable communities. These findings have potential implications for future training programs, awareness campaigns, and further studies involving healthcare workers.

Keywords: Scabies, Barangay Health Workers, Health Education

INTRODUCTION

Scabies, one of the most important neglected tropical disease (NTDs)[1], is a skin infestation in humans caused by the mite Sarcoptes scabiei var. hominis. It is transmitted through close physical contact or indirectly via items such as clothing, bedding, or fomites.[2] Scabies leads to a diffuse skin eruption characterized by papules, nodules, and vesicles, commonly affecting interdigital webs, fingers' sides, wrists' volar aspects, and lateral palms. It is accompanied by intense pruritus, often worsening at night. Vulnerable populations, such as immunocompromised individuals, children, and the elderly, are at higher risk. Scabies imposes a substantial health burden, especially in disadvantaged communities with low socioeconomic status, characterized by overcrowded living conditions, inadequate environmental management, and suboptimal personal hygiene.[3] Recent estimates suggest that there are 100-200 million cases of scabies worldwide with 455 million annual incident cases.[4] Scabies is endemic in numerous developing countries, primarily found in hot and humid regions, including Southeast Asia. Among children, the estimated average prevalence ranges from 5% to 10%. However, recent literature on Scabies reports a wide range of prevalence estimates, spanning from 0.2% to 71%.[5] In the Philippines, Scabies infestation ranked as the second leading cause of disability among skin diseases in 2019. Surprisingly, despite its significance, there has been no comprehensive nationwide study documenting the epidemiological characteristics of Scabies in the country.[6] To bridge this gap, a study conducted at the University of the Philippines Manila sought to delineate the demographic, seasonal, and geographic profiles of Scabies in the Philippines. This was achieved by comparing secondary data from two local patient registries: the Philippine Dermatological Society (PDS) registry spanning from 2010 to 2021, and

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the Philippine Pediatric Society (PPD) registry from 2009 to 2021, both of which reported cases of Scabies across the country. In the local setting particularly in our institution, among the various dermatological cases encountered in the Out-Patient Department (OPD), Scabies infestation consistently ranks among the top 10. In both 2018 and 2019, new Scabies cases were identified at a 0.04% incident rate, highlighting the persistence of this condition in our patient population.

Definitive strategies for the control of scabies, including management in endemic settings and outbreak response plans, are under development. Health education is a valuable fundamental tool to strengthen the primary level for efficient health promotion and health provision catering to those who are poor, disadvantaged, and living in far-flung areas. Some considerations included in this framework is to engage communities to promote inclusivity, sustainability, and ownership; as well as to develop and to implement packages to train and upskill the health system staff and program managers regarding Scabies control issues.[4] Thus, this particular study was conducted as a training ground for Barangay Health Workers in a locality in Pangasinan in an effort to control Scabies in the primary level as to prevent complications usually seen in the tertiary level.

Barangay Health Workers (BHWs) are the primary level health care workers present in the community who "serve the underserved", those in mostly rural areas of our country. It is a stated fact that on a daily basis they are faced with a variety of skin conditions however, are unable to manage on their own. A study by Alsaidan et al. stated that the knowledge about scabies among primary care physicians was generally inadequate tapping the need for educational and training programs by health care authorities.[8] Hence, a primary goal exists for the primary level health care workers (HCWs) in this study in particular, Barangay Health Workers starting in our locality to be health educated through regular workshops and training courses. BHWs provide healthcare services that meet the health needs of their constituents in their barangay. Core skills, applied knowledge and a good attitude are vital for these BHWs to complete their jobs effectively and efficiently.[9] A study by Taburnal et al. done in Camarines Sur revealed that BHWs are moderately competent, with a satisfactory rating on attitude with personal and environmental factors having an impact on their competence.[9] To be well- equipped with knowledge and skills, BHWs are encouraged to continuously attend training and seminars. Aligned with this, identifying the Knowledge, Attitudes and Practices of primary HCWs such as BHWs will further evaluate and address misconceptions, knowledge gaps, and determinants of stigma common in the community. Health education in the form of capacity building for Barangay Health Workers has been proven to be an essential element in health promotion and disease prevention therefore, providing an important role in the reduction of Scabies cases in the community.

Conceptual Framework

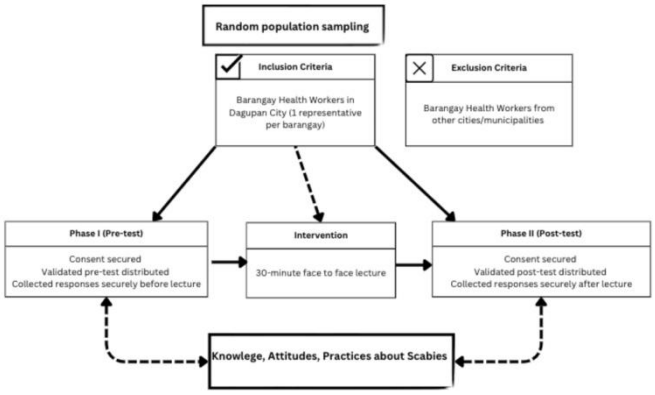

Figure 1. Conceptual Framework on Knowledge, Attitudes, Practices about Scabies

OBJECTIVES

General Objectives

The main objective of this study is to determine the effectiveness of health education on knowledge, attitudes, and practices (KAP) of Barangay Health Workers (BHWs) about Scabies infestation in the community to provide a basis for the foundation for future training initiatives and awareness campaigns.

Specific Objectives

1. To assess the professional profile of Barangay Health Workers (BHWs) in the community:
   a. No. of years in practice or service
   b. Basic knowledge of Scabies and resources
   c. Educational attainment

2. To assess the level of knowledge of BHWs on Scabies with a modified validated questionnaire regarding:
   a. Causative Organism
   b. Mode of transmission

c. Incubation period
d. Clinical manifestations and sites of predilection
e. Susceptible persons
f. Common complications
g. Diagnostics and Management

3. To assess the attitudes of BHWs on Scabies with a modified validated questionnaire including:
   a. Personal hygiene
   b. Environmental management
   c. Fomite treatment
   d. Prompt treatment of patient and family members
   e. Avoidance of skin-to-skin contact

4. To assess the practices of BHWs on Scabies with a modified validated questionnaire including:
   a. Personal hygiene
   b. Environmental management
   c. Fomite treatment
   d. Prompt treatment of patient and family members
   e. Avoidance of skin-to-skin contact

5. To compare the level of knowledge, attitude, and practices of BHWs before and after heath education conducted by a 30-minute face-to-face lecture on Scabies infestation.

The purpose of this study aimed to improve awareness and level of knowledge of BHWs related to Scabies infestation in the community by utilizing pre-test and post-test designs, implementing a health education/face-to-face lecture intervention as a future basis for training programs/workshops, awareness campaigns, and further studies.

Research Hypothesis

The Knowledge, Attitudes and Practices (KAP) of Barangay Health Workers (BHWs) in Dagupan City regarding scabies are determined to identify knowledge gaps, awareness, preferences, fears, and behavioral patterns.

Significance of the Study

The significance and primary endpoint of this study is to improve the Knowledge, Attitudes, and Practices (KAP) of Barangay Health Workers (BHWs) regarding Scabies infestation through targeted health education. This endeavor serves as a crucial cornerstone, offering a basis for future training initiatives, awareness campaigns, and further research endeavors. This is for the purpose of minimizing non-detection, misdiagnosis, and inappropriate management of Scabies cases seen at the primary health care level as well as complicated cases seen at the tertiary level. Health education is pivotal in maintaining good health and should be employed in the community primarily as a key for absolute behavioral change communication strategy in especially resource-scarce areas of the community where it is primarily endemic.

Scope and Delimitation

This study assessed the Knowledge, Attitudes, and Practices (KAP) of Barangay Health Workers regarding scabies. This was conducted at the Dagupan City Health Office, located in A.B. Fernandez Avenue, Dagupan City, Pangasinan. Barangay Health Workers from other cities/municipalities were excluded in this study.

METHODOLOGY

Research Design

A quasi experimental one group pre-test post-test design was done which determined the effectiveness of health education through a 30-minute face-to-face lecture on the knowledge, attitudes, and practices of BHWs towards Scabies infestation in the community.[10]

Research Setting

A Dermatology trainee of a PDS-accredited institution conducted a 30-minute face-to- face lecture on Scabies infestation in coordination with Dagupan City Health Office (CHO) under the Philippines Department of Health (DOH) after approval of the hospital's research institutional review board (IRB). A modified validated questionnaire was administered both before and after the lecture addressing the participant's knowledge, attitudes, and practices related to Scabies.11 The acquired test scores were systematically compiled into tables, facilitating subsequent comparison and analysis. The lecture was designed with a target duration of 2 hours to ensure comprehensive coverage of the subject matter.

Research Population and Sample size

Barangay Health Workers of Dagupan City, Pangasinan (1-2 representatives of each barangay; total of 31 barangays) were invited to participate in the study in coordination with the Dagupan City Health Office. The

following formula was utilized to determine the required sample size:

$$n = \frac{m}{1 + \frac{m-1}{N}}$$

n= sample size
N= population size
E= acceptable sampling error
*95% confidence level and p=0.5 are assumed

A minimum of 45 participants were required and included in this study to achieve a power of 95% and a level of significance of 5%, to detect an effect size of 0.5%.

Eligibility Criteria

Barangay Health Workers of Dagupan City regardless of years of service, gender, and age are eligible to join the study.

Sampling Methods

Participants are selected based on random population sampling. A subset population of only 1-2 representatives of each Barangay in Dagupan City (31 barangays) are randomly selected. Barangay Health Workers who were invited and consented to join the study will be enrolled. Participants who refused to sign the informed consent and sought to withdraw at any moment were both regarded to have withdrawn from the study participation.

Data Collection

After informed consent was obtained, participants were asked to provide their demographic and professional information. Subsequently, a 14-item pre-test was administered, encompassing questions pertaining to knowledge, attitudes, and practices related to Scabies. Each question was scored as 1 for a correct answer and 0 for an incorrect answer. To assess knowledge, the correct responses were summed up to obtain a total knowledge score for each participant. Score stratification are as follows: ≤50%, 65- 50%, and ≥65% correct answers were considered indicators of poor, fair, and good knowledge of Scabies, respectively.[10] For attitude assessment, a 5-point Likert scale was utilized, ranging from 'Strongly agree' (5) to 'Strongly Disagree' (1). Participants' attitude scores were calculated, with a total possible score of 35. Attitudes were categorized as good (≥65%), fair (65-50%), or poor (≤50%).[10] Similarly, for practice assessment, a 5-point Likert scale with the same range was employed. The total possible practice score was 25. Practice levels were categorized as good (≥65%), fair (65-50%), or poor (≤50%).[10] In cases where questions had multiple correct answers, respondents received a point only if they identified all the correct answers. This allowed for a comprehensive evaluation of their understanding.

After the pre-test, a 30-minute face-to-face lecture encompassing key aspects of scabies including a brief background, causative agent, mode of transmission, clinical features, sites of predilection, risk factors, complications, diagnosis, prevention, and management. The instructional approach employed an interactive lecture format complemented by clinical slide presentations. Following the lecture, a post-test was administered, mirroring the pre-test, and the resulting scores were methodically compiled and presented in tabular format for analysis.

All data files and questionnaires obtained will be securely stored within locked file cabinets at our institution. These records will be retained for a minimum of three years following the conclusion of this study. Subsequently, the collected data will be appropriately disposed of through shredding or tearing of paper documents to ensure the continued privacy and confidentiality of the information.

Statistical Analysis Plan

Descriptive statistics will be used to summarize the demographic and professional profile as well as assessment of knowledge, attitudes and practices of participants towards Scabies infestation. Categorical variables will be presented as frequencies and percentages, while continuous variables will be expressed as means and standard deviations (or medians and interquartile ranges). The Shapiro-Wilk test for normality was conducted revealing significant results which suggests that the data deviated from normality (aka it does not follow the typical bell-curve shape). Deviation suggests that parametric tests (such as t-tests) are not ideal for data analysis. Due to deviation from normality, Wilcoxon signed-rank test (non-parametric) was conducted. A p-value less than 0.05 will be considered significant. Data was analyzed using JASP 0.17.2.1 statistical program.

RESEARCH ETHICS

The study underwent review and approval by the hospital's Institutional Review Board with Protocol No. 2022-055. Each participant completed a written informed consent form, ensuring their anonymity and privacy were carefully safeguarded. A unique code was assigned to

every participant, facilitating the tracking of pre- and post-test results while maintaining confidentiality.

Participants did not receive gifts or financial assistance for their involvement in the study. Their participation was entirely voluntary, and they were free to decide whether to take part or not. Moreover, participants had the option to withdraw from the research at any time and for any reason, without any obligation to continue.

There are no conflicts of interest to disclose, and the author did not receive any financial grants or research funding for this study.

RESULTS/ DATA ANALYSIS

Demographic and Professional Profile

A total of 45 participants, all of whom were Barangay Health Workers (BHWs) randomly selected from each Barangay in Dagupan City, willingly provided informed consent. They completed both the pre-test and post-test studies following the face-to- face Scabies lecture. Among these participants, 44 were female. Twenty of the participants were High School graduates (44.44%), 17 were college graduates (37.78%), 21 of which (46.67%) had >10 years of health care service. A significant portion of the BHWs (71.11%) had prior knowledge of Scabies, primarily acquired through seminars and training sessions (42.22%), with online courses also contributing to knowledge acquisition (20%). Table 1 shows the demographic and professional profile of the participants.

Table I. Demographic and Professional Profile of Barangay Health Workers in Dagupan City

Respondent characteristics	Number (n)	Percentage (%)
Age (Mean ± SD)	51.96 (10.23)	
Sex		
Male	1	97.78
Female	44	2.22
Length of Practice		
0-2 years	1	2.22
2-5 years	8	17.78
5-10 years	15	33.33
>10 years	21	46.67
Prior Knowledge on Scabies		
Yes	32	71.11
No	13	28.89
Source of basic knowledge on Scabies		
Books	3	6.67
Journals	1	2.22
Seminars/ Training	19	42.22
Online course	9	20.00
Level of Education		
Elementary	1	2.22
High School	20	44.44
College	17	37.78
Vocational	7	15.56

Knowledge on Scabies

In the pre-test (Table 2.A), most participants exhibited a poor level of knowledge regarding Scabies. Only a small fraction (4.44%) correctly identified the causative agent, Mite, also known as "Tungaw," while a majority (60.00%) recognized the correct culprit as Sarcoptes scabiei var. hominis. When it came to identifying the vulnerable groups affected by Scabies, a substantial number (86.67%) provided accurate responses. However, none of the participants correctly answered the incubation period at 4-6 weeks.

Approximately 55.56% were knowledgeable about Scabies transmission through physical (skin-to-skin) contact. Less than half (46.67%) were aware of the various skin manifestations of Scabies, which include erythematous patches, papules, plaques, crusted nodules in interdigital areas, axilla, genital and inguinal areas, umbilicus, and buttocks, along with nocturnal pruritus. Regarding transmission through infected fomites, the majority (93.33%) gave the correct response. However, none of the participants accurately identified the pathognomonic lesion, Burrow. A modest number (17.78%) were informed about known complications of Scabies, such as skin infections, sepsis, rheumatic heart disease, and acute glomerulonephritis. More than half (57.78%) correctly answered questions related to diagnostic tests, while 80.00% were accurate in specifying the treatment regimen for the disease. Only a few participants (8.89%) correctly identified the first-line treatment, while a smaller percentage (6.67%) correctly recognized the safe treatment regimen for pregnant women and children. Likewise, only a fraction (4.44%) accurately specified the duration and frequency of treatment.

After the face-to-face lecture, there was an increase in the total scores of the participants, most notable on these variables: cause of Scabies (91.11%), causative organism (73.33%), incubation period (64.44%), mode of transmission (97.78%), fomite infection (97.78%), diagnostic tests (93.33%), treatment regimen (97.78%), first line medications (88.89%), treatment for pregnant women and children (75.56%), and duration and frequency of treatment (51.11%).

Table II. A Comparison of Pre-Test and Post-Test Knowledge of Barangay Health Workers on Scabies

Knowledge	Percentage of Correct Responses	
	Pre-Test	Post-Test
1. Cause of Scabies	4.44	91.11
2. Causative Organism	60.00	73.33
3. Groups affected	86.67	82.22
4. Incubation period	0.00	64.44
5. Mode of Transmission	55.56	97.78
6. Clinical Symptoms	46.67	33.33
7. May be infected through clothes, towels, and bedsheets	93.33	97.78
8. Pathognomonic Lesion	0.00	11.11
9. Complications	17.78	22.22
10. Diagnostic tests for Scabies	57.78	93.33
11. Treatment Regimen for Scabies	80.00	97.78
12. First line medications for Scabies	8.89	88.89
13. Treatment for pregnant womenand children	6.67	75.56
14. Duration and frequency of treatment	4.44	51.11

Attitude on Scabies

In the pre-test (Table 3), participants displayed predominantly positive attitudes toward various aspects, including environmental management (91.11%), fomite infection control through weekly washing and drying of mattress and pillow (77.78%), and avoiding sharing towels, clothing, and bedding (66.67%). Furthermore, positive attitudes were observed regarding prompt Scabies treatment (86.67%) and personal hygiene (73.33%). However, there was a relatively lower positive attitude score regarding the avoidance of physical contact (17.78%).

Following the face-to-face lecture, participants exhibited an overall improvement in attitudes. The post-test results (Table 4) revealed that more participants held positive attitudes toward personal hygiene and environmental management, including thorough textile cleaning (95.56%).

Table III. Pre-test responses to questions regarding Barangay Health Workers' attitude towards Scabies

ATTITUDE	1		2		3		4		5		Obs	Total Score	Mean ± SD	Result	Inter-pretation
	F	%	F	%	F	%	F	%	F	%					
I will advise patients to thoroughly wash and dry mattresses and pillows every week.	1	2.22	2	4.44	1	2.22	6	13.33	35	77.78	45	207	4.60 + 0.92	Strongly Agree	(+)
Patients who have Scabies have to be quarantined.	18	40.00	7	15.56	3	6.67	7	15.56	10	22.22	45	119	2.64 + 1.65	Neutral	(+/-)
Patients should not exchange towels, clothes and beddings with others.	6	13.33	0	-	2	4.44	7	15.56	30	66.67	45	190	4.22 + 1.38	Strongly Agree	(+)
Scabies patients should be avoided.	17	37.78	8	17.78	7	15.56	5	11.11	8	17.78	45	114	2.53 + 1.53	Disagree	(-)
Personal hygiene is very necessary to keep the body from Scabies.	3	6.67	2	4.44	2	4.44	5	11.11	33	73.33	45	198	4.40 + 1.20	Strongly Agree	(+)
If found cases of Scabies, treatment should be done promptly to prevent the transmission of disease.	3	6.67	0	-	0	-	3	6.67	39	86.67	45	210	4.67 + 1.02	Strongly Agree	(+)

Besides personal hygiene, there must be a good environment to prevent Scabies infestation.	3	6.67	0	-	0	-	1	2.22	41	91.11	45	212	4.71 + 1.01	Strongly Agree	(+)

F – Frequency, % - percentage of corresponding responses

1.00-1.80 (Strongly Disagree), 1.81-2.60(Disagree), 2.61-3.40 (Neutral), 3.41-4.20 (Agree), 4.21-5.00 (Strongly Agree)

(+) Positive, (-) Negative, (+/-) Neutral

Table IV. Post-test responses to questions regarding Barangay Health Workers' attitude towards Scabies

ATTITUDE	1		2		3		4		5		Obs	Total Score	Mean ± SD	Result	Inter-pretation
	F	%	F	%	F	%	F	%	F	%					
I will advise patients to thoroughly wash and dry mattresses and pillows every week.	1	2.22	0	-	0	-	1	2.22	43	95.56	45	220	4.89 + 0.61	Strongly Agree	(+)
Patients who have Scabies have to be quarantined.	15	33.33	5	11.11	0	-	12	26.67	13	28.89	45	138	3.07 + 1.71	Neutral	(+/-)
Patients should not exchange towels, clothes and beddings with others.	2	4.44	1	2.22	0	-	1	2.22	41	91.11	45	213	4.73 + 0.94	Strongly Agree	(+)
Scabies patients should be avoided.	11	24.44	4	8.89	3	6.67	12	26.67	15	3.33	45	151	3.36 + 1.61	Neutral	(+/-)
Personal hygiene is very necessary to keep the body from Scabies.	1	2.22	0	-	0	-	4	8.89	40	88.89	45	217	4.82 + 0.65	Strongly Agree	(+)
If found cases of Scabies, treatment should be done promptly to prevent the transmission of disease.	1	2.22	0	-	0	-	2	4.44	42	93.33	45	219	4.87 + 0.63	Strongly Agree	(+)
Besides personal hygiene, there must be a good environment to prevent Scabies infestation.	1	2.22	0	-	0	-	1	2.22	43	95.56	45	220	4.89 + 0.61	Strongly Agree	(+)

F – Frequency, % - percentage of corresponding responses

1.00-1.80 (Strongly Disagree), 1.81-2.60(Disagree), 2.61-3.40 (Neutral), 3.41-4.20 (Agree), 4.21-5.00 (Strongly Agree)

Practices on Scabies

In the pre-test (Table 5), participants exhibited positive practices in fomite infection control, including advising patients not to share clothes (68.89%), avoid sleeping on other beds (55.56%), and ensuring thorough drying of towels after use (75.56%). Additionally, an overall positive practice towards personal hygiene was observed (91.11%).

In the post-test (Table 6), there was a notable increase in positive practices, particularly with regards to good personal hygiene (97.78%), indicating a positive shift in participant behavior following the intervention.

Table V. Pre-test responses to questions regarding Barangay Health Workers' practice towards Scabies

PRACTICES	1		2		3		4		5		Obs	Total Score	Mean ± SD	Result	Inter-pretation
	F	%	F	%	F	%	F	%	F	%					
I would advise patients to never share clothes with friends.	2	4.44	0	-	2	4.44	10	2.22	31	68.89	45	203	4.51 + 0.94	Strongly Agree	(+)
I would advise patients to never sleep on other's bed.	9	20.00	2	4.44	4	8.89	5	11.11	25	55.56	45	170	3.78 + 1.62	Agree	(+)
I would advise patients to dry towel after use.	2	4.44	1	2.22	0	-	8	17.78	34	75.56	45	206	4.58 + 0.97	Strongly Agree	(+)
I would advise patients to take a bath every day.	3	6.67	0	-	0	-	1	2.22	41	91.11	45	212	4.71 + 1.01	Strongly Agree	(+)
I would advise to restrict visitors until treatment regimen is complete.	12	26.67	5	11.11	0	-	9	20.00	19	42.22	45	153	3.40 + 1.72	Neutral	(+/-)

F – Frequency, % - percentage of corresponding responses

1.00-1.80 (Strongly Disagree), 1.81-2.60(Disagree), 2.61-3.40 (Neutral), 3.41-4.20 (Agree), 4.21-5.00 (Strongly Agree)

(+) Positive, (-) Negative, (+/-) Neutral

Table VI. Post-test responses to questions regarding Barangay Health Workers' practice towards Scabies

PRACTICES	1		2		3		4		5		Obs	Total Score	Mean ± SD	Result	Inter-pretation
	F	%	F	%	F	%	F	%	F	%					
I would advise patients to never share clothes with friends.	1	2.22	0	-	0	-	4	8.89	40	88.89	45	217	4.82 + 0.64	Strongly Agree	(+)
I would advise patients to never sleep on other's bed.	5	11.11	1	2.22	1	2.22	1	2.22	37	82.22	45	199	4.42 + 1.34	Strongly Agree	(+)

I would advise patients to dry towel after use.	4	8.89	0	-	1	2.22	1	2.22	39	86.67	45	206	4.58 + 1.78	Strongly Agree	(+)
I would advise patients to take a bath every day.	1	2.22	0	-	0	-	0	-	44	97.78	45	221	4.91 + 0.60	Strongly Agree	(+)
I would advise to restrict visitors until treatment regimen is complete.	9	20.00	0	-	1	2.22	10	22.22	25	55.56	45	177	3.93 + 1.56	Neutral	(+/-)

F – Frequency, % - percentage of corresponding responses

1.00-1.80 (Strongly Disagree), 1.81-2.60(Disagree), 2.61-3.40 (Neutral), 3.41-4.20 (Agree), 4.21-5.00 (Strongly Agree)

(+) Positive, (-) Negative, (+/-) Neutral

Comparison between Pre-test and Post-test

In the pre-test, participants demonstrated a relatively low level of knowledge, with a mean score of 5.78. However, following the intervention, there was a noteworthy increase in knowledge, resulting in a mean post-test score of 10.27. This increase was statistically significant, as indicated by a p-value of <0.001 (Table 7).

When comparing attitudes in the pre-test and post-test, positive shifts were observed in attitudes related to fomite infection control, specifically the avoidance of sharing towels, beddings, and clothing (p-value <0.001), as well as the practice of thoroughly washing and drying textiles (p-value 0.006). Additionally, positive attitudes toward avoiding contact with Scabies-infected individuals were evident (p-value 0.002) (Table 8).

Similarly, in the comparison of practices between the pre-test and post-test, there was a significant improvement in positive practices related to fomite infection control, encompassing the avoidance of sharing towels, bedding, and clothing (p-value 0.006), along with the avoidance of sleeping on other people's beds (p-value 0.002) (Table 9).

Table VII. Comparison of Pre-Test and Post-Test Knowledge of Barangay Health Workers on Scabies (n=45)

Knowledge	Mean Score	Std Dev	SE	CV	W	Z	p-Value	95% CI for Rank-Biserial Correlation	
								Lower	Upper
Pre-Test	5.78	1.36	5	0.24	4.2	-5.77	<0.001	-∞	-0.996
Post-Test	10.27	1.56	9	0.15					

Table VII. Comparison of Pre-Test and Post-Test Knowledge of Barangay Health Workers on Scabies (n=45)

ATTITUDE	Pre-Test			Post-Test			Mean Difference	P-value
	Obs	Mean	Std. Dev	Obs	Mean	Std. Dev		
I will advise patients to thoroughly wash and dry mattresses and pillows every week.	45	4.60	0.92	45	4.89	0.61	0.29	**0.006**
Patients who have Scabies have to be quarantined.	45	2.64	1.65	45	3.07	1.71	0.42	**0.028**
Patients should not exchange towels, clothes and beddings with others.	45	4.22	1.38	45	4.73	0.94	0.51	**<0.001**
Scabies patients should be avoided.	45	2.53	1.53	45	3.36	1.61	0.82	**0.002**
Personal hygiene is very necessary to keep the body from Scabies.	45	4.40	1.20	45	4.82	0.65	0.42	**0.01**
If found cases of Scabies, treatment should be done promptly to prevent the transmission of disease.	45	4.67	1.02	45	4.87	0.63	0.2.	0.09
Besides personal hygiene, there must be a good environment to prevent Scabies infestation.	45	4.71	1.01	45	4.89	0.61	0.18	0.13

Table IX. Comparison of Barangay Health Workers' practices before and after lecture

PRACTICES	Pre-Test			Post-Test			Mean Difference	p-Value
	Obs	Means	Std Dev	Obs	Mean	Std Dev		
I would advise patients to never share clothes with friends.	45	4.51	0.94	45	4.82	0.65	0.33	**0.006**
I would advise patients to never sleep on other's bed.	45	3.78	1.62	45	4.42	1.34	0.64	**0.002**
I would advise patients to dry towel after use.	45	4.58	0.97	45	4.58	1.18	0.00	0.385
I would advise patients to take a bath every day.	45	4.71	1.01	45	4.91	0.60	0.20	0.087
I would advise to restrict visitors until treatment regimen is complete.	45	3.40	1.72	45	3.93	1.56	0.53	0.052

DISCUSSION

Scabies infestation continues to be a prominent global health concern, impacting millions of individuals, with a notable prevalence in rural communities characterized by low socioeconomic status and high population density. This neglected tropical disease thrives in environments where overcrowding is rampant, making it essential to address its prevention and management comprehensively.

A pertinent study conducted among nursing students at Sabia University College of Jazan in 2018 revealed encouraging findings regarding their knowledge, attitudes, and practice related to Scabies prevention and transmission. Despite their good understanding of the disease, it is noteworthy that they still recommended the inclusion of this infectious disease as part of their curriculum. This highlights the recognition of Scabies as an infectious disease of significance and emphasizes the need for continuous education and training within the healthcare sector.[12] Additionally, a study conducted among general practitioners (GPs) and dermatologists in Ghent, Belgium, provided insights into healthcare professionals' knowledge levels regarding Scabies. The study found that these professionals generally possessed acceptable knowledge, and their scores were influenced significantly by factors such as their profession, years of

experience, and the number of patients they encountered. This underscores the importance of tailored training and ongoing medical education to enhance healthcare practitioners' competence in dealing with Scabies cases.[13]

However, in contrast to these previous studies, the results of the present study among Barangay Health Workers (BHWs) reveal a different scenario. While BHWs exhibited good attitudes and practices related to Scabies prevention and control, their initial knowledge levels were relatively low. Nonetheless, the face-to-face lecture intervention led to a significant increase in their overall knowledge scores, with a p-value of <0.001, demonstrating the effectiveness of targeted health education.

Furthermore, positive shifts were observed in BHWs' attitudes, particularly regarding personal hygiene and environmental management, as well as the practice of thoroughly washing and drying textiles (95.56%). Positive practices also showed significant improvement, exemplified by the avoidance of sharing towels, bedding, and clothing (p-value of 0.006) and the avoidance of sleeping on other people's beds (p-value of 0.002). These findings emphasize the potential for knowledge-based interventions, such as the 30-minute face-to-face lecture, to bring about meaningful changes in attitudes and practices related to Scabies among frontline healthcare workers.

In summary, while Scabies remains a global health challenge, studies like this shed light on the varying levels of knowledge and preparedness among different groups of healthcare professionals. By recognizing the gaps in understanding and implementing targeted interventions, we can work toward more effective Scabies prevention and control strategies and ultimately reduce its impact on vulnerable communities.

CONCLUSION

Barangay Health Workers (BHWs) hold pivotal roles within the primary healthcare system, serving as accessible and trusted units within communities for the delivery of crucial health education and services. They function as community organizers and educators, playing a vital role in reducing the burden of various diseases.[7] Their unique position allows them to bridge the gap between healthcare services and underserved communities, which can be especially critical in preventing complicated and potentially fatal cases that might otherwise be seen in tertiary hospitals.

Furthermore, the impact of this study extends beyond the immediate context. In the future, the interventions and education provided to BHWs may have a substantial influence on the prevalence and incidence of Scabies within the community. Scabies is often underreported and unseen by doctors and dermatologists, making it imperative to equip frontline healthcare workers like BHWs with the knowledge and tools needed for early detection and prevention.

This study highlights the effectiveness of health education, particularly in the form of a concise 30-minute face-to-face lecture, as a means to significantly enhance the knowledge base of BHWs. The subsequent improvements observed in attitudes and practices among participants underscore the potential of such interventions to bring about positive change.

Looking ahead, this study can serve as a valuable foundation for future training initiatives and awareness campaigns focused on Scabies for Barangay Health Workers. By continually empowering these community healthcare champions, we can work towards a healthier and better-informed population, ultimately reducing the impact of neglected tropical diseases like Scabies on vulnerable communities.

LIMITATIONS AND RECOMMENDATIONS

We recognize several limitations within the scope of this study. Firstly, it became evident that some questions, particularly those within the attitudes and practices section, may not have been adequately clarified for all participants during the survey administration. Addressing this issue during the survey process itself would have been beneficial in ensuring uniform comprehension among participants.

Secondly, the post-test was administered immediately after the lecture. While this allowed us to measure the immediate impact of the intervention, it presents limitations concerning the long-term retention of knowledge, comprehension, and the sustained influence on future attitudes and practices. In practice, knowledge retention and behavioral changes may require ongoing reinforcement. Therefore, regular and routine training sessions and awareness campaigns may be necessary to maintain and build upon the level of improvement observed in this study.

To enhance our assessment, we recommend that future studies consider conducting a follow-up evaluation of Knowledge, Attitudes, and Practices (KAP) surveys at a second time point, ideally at intervals of around 3 to 6 months post-intervention. This would provide valuable insights into the durability of the intervention's impact and whether any additional reinforcement or adjustments are needed over time.

Furthermore, for future comparative studies, it would be valuable to explore the effect of interventions like this one on the prevalence or incidence of Scabies cases within the community. By tracking changes in disease occurrence, we can gain a more comprehensive understanding of the intervention's overall impact on public health outcomes.

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