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Author for correspondence:

Lyna M.N. Hutapea

E-mail: lynhutapea@unai.edu

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Student Synergy in Community Stage Field Practice and Cadre Collaboration Against Tuberculosis: Puskesmas Karyawangi Village-West Bandung

¹Lyna M.N. Hutapea

¹Universitas Advent Indonesia, Bandung

Tuberculosis is an aerosol infectious disease caused by *Mycobacterium tuberculosis*. WHO estimated that there are 10.6 million individuals in the world suffering from TB disease in 2021; reversing the downward trend that had occurred slowly over the previous years. The global TB mortality rate in 2021, with an estimate of 1.6 million people, has also increased compared to 1.4 and 1.5 million deaths in 2019 and 2020. Therefore, the problem of TB disease needs to be of concern to all parties, including nurses. One of the things community nurses can do is provide health education to the community to prevent the increasing number of TB sufferers. The aim of this final scientific work is to examine the factors that increase the risk of TB in the people of Karyawangi Village, Parongpong District, West Bandung Regency and to provide community nursing interventions according to the problems found. Based on the results of interviews and observations conducted on 40 families from RW 7, 9, 12 and 14; it was found that 92.5% of families lacked knowledge about TB, 87.5% of families had at least 1 member who smoked cigarettes at home, 62.5% of families did not regularly open the windows of the house, and 55% of families did not regularly consume vegetables and fruit. Based on these findings, health education was carried out with the aim of inviting residents to know about TB and practice healthy & clean living which can help prevent TB disease.

1. Introduction

Germs are a part of human daily life that can be found externally or in the environment, as well as internally or in the human body itself (CDC, 2016). Many germs in our body live without causing disturbances, and some of them even have functions that can help us stay healthy. Only a few germs are known and proven to cause disease problems, namely infections. Infectious diseases themselves can be interpreted as diseases whose cause is a pathogen or its toxic products, which occurs due to transmission that can come from infected people or animals, as well as contaminated inanimate objects; to a vulnerable host (van Seventer & Hochberg, 2016). Infectious diseases have a negative impact on the health and economy of the world's people, especially on vulnerable populations. Lower respiratory tract infections, diarrhea, HIV/AIDS, malaria, and tuberculosis; is an infectious disease that is included in the main cause of mortality in the world.

Tuberculosis (often abbreviated as TB or TB) is an infectious disease with the bacterium *Mycobacterium tuberculosis* as the cause (Pralambang & Setiawan, 2021). TB bacteria can spread from TB people to other people through the air when people cough, talk, or sing. When a person with TB sneezes or coughs, he or she will release sputum droplets or nuclei that are very small in size and contain TB bacteria. Its small size makes it easy for it to float in the air and then be inhaled by the people around it. When people have a good immune system, inhaled TB bacteria will be made in a sleeping state. With dormant or latent TB bacteria, the person will have no symptoms and cannot transmit it to others around them. This is the opposite if an individual infected with TB bacteria or a latent TB patient has weak or decreased immunity, then the TB bacteria can become active.

It is estimated that there are more than 2 billion people infected with TB (Sun et al., 2020). Of the 2 billion individuals, most or about 90% of them have controlled TB or latent TB infection (LTB). Then, about 10% of people with LTB will subsequently develop active TB which is generally related to the individual's age status and/or immune status. Data from (WHO, 2022), shows that in 2021 there are an estimated 10.6 million individuals in the world suffering from TB disease, up 4.5% from 10.1 million individuals in the previous year, reversing the slow downward trend over the previous years. The 8 countries (in %) responsible for two-thirds of the world's total TB cases are: India (28), Indonesia (9.2), China (7.4), the Philippines (7), Pakistan (5.8), Nigeria (4.4), Bangladesh (3.6), and the Democratic Republic of the Congo (2.9).

Based on the information above, Indonesia occupies the 2nd position as the country with the highest number of TB patients on a global scale. The incidence of TB in Indonesia itself in 2021 is estimated at 969,000 people or 354 people per 100,000 population, and as many as 22,000

individuals or 8.1 per 100,00 population for TB-HIV cases (Ministry of Health of the Republic of Indonesia, 2023). Just like the global situation, the incidence of TB in Indonesia experienced an increasing trend in 2020-2021. Meanwhile, deaths due to TB are estimated to be 144,000 people or 52 per 100,000 population, and 6,500 individuals or 2.4 per 100,000 population for deaths from TB-HIV. In 2019, TB ranked 5th from the top in the category of the highest cause of death in Indonesia (WHO, 2023).

Summing up the information above that TB disease is one of the deadly diseases and the incidence of TB is increasing, TB disease needs to be the concern of all parties, including nurses. Nurses in the community can provide education to the community so that the number of TB patients does not increase. This is considering that nurses who in carrying out their functions have various roles, one of which is as an educator. Nurses must be able to provide health education that can be aimed at as a preventive, promotive, curative, or rehabilitative form (Astari et al., 2022).

Data collection carried out by Nursing Profession students program Advent University Of Indonesia in several RWs (Rukun Warga) in Employeegi Village that have a risk for TB transmission, shows that residents' knowledge about TB itself and its prevention is still lacking. The results of this finding prompted the author to compile a scientific paper entitled Student Synergy of Community Stage Field Practice and Collaboration of Cadres Against Tuberculosis: Puskesmas (Pusat Kesehatan Masyarakat) Employeegi-West Bandung Village.

2. Method

According to the results of interviews with Parongpong Health Center officers, the number of clients who seek treatment for Tuberculosis has increased compared to the previous year. The health center hopes that this number can decrease in the future. After going through orientation and briefing by the Health Center, Students of Nurse Profession program Advent University of Indonesia were given the task of studying factors that can increase the risk of TB disease in the community and providing nursing interventions for health problems found. The following is an explanation of community nursing care that has been carried out in more depth.

Preparation Stage

The eight students were placed in Employeegi Village, which is one of the work areas of the Parongpong Health Center. Students are instructed to form small groups of 2 members each; So that from Students of the proffession class, 4 groups were formed. Students are not asked

to study all the residents of Employeegi Village; but on a representative basis. Each group was assigned to one RW and asked to study 10 houses (considered at risk of Tuberculosis) located around the homes of TB clients who were treated at the Parongpong Health Center. The RWs in Employeegi Village that are the land for student duty: RW 7, RW 9, RW 12, and RW 14.

Implementation Stage

Before entering the field, the students were given a number that could be contacted by the head of the RW and/or the Village Community Empowerment Cadre (KPMD, Kantor Pemberdayaan Masyarakat dan Desa). The number is used so that each group can contact the RW or KPMD chairman where they are assigned. Furthermore, each group met with the Chairman of RW and KPMD to get to know each other, explain the purpose of their arrival, and explain their follow-up plans in the future.

Review

1. Number of Houses Studied Per RW

Table 1. Homes Studied

RW	Sum
7	10
9	10
12	10
14	10
Total	40 homes

The data in table 1. shows that the number of houses studied in Employeegi Village RW 7, 9, 12, and 14 are 10 houses, 10 houses, 10 houses, and 10 houses, respectively. Thus, in total, there are 40 houses studied in this community nursing care activity.

2. Number of Family Members in a Home

Table 2. Number of Individuals Per House

House	RW 7	RW 9	RW 12	RW 14
1	5	4	4	4
2	4	4	4	2
3	4	5	3	2
4	3	5	5	2
5	2	3	2	2
6	4	4	2	5
7	3	2	2	4
8	3	2	2	3
9	2	2	2	4

10	3	2	2	2
Sum	33	33	28	30
Total	124 Individual			

The data in table 2. showed that there were 124 individuals from a total of 40 houses studied. In more detail, there are 33 people out of 10 houses studied in RW 7, 33 people for RW 9, 28 people for RW 12, and 30 people for RW 14.

3. Distribution of Citizens' Gender

Table 3. Gender

RW	Man	Woman	Sum
7	15	18	33
9	17	16	33
12	14	14	28
14	12	18	30
Totals & percentages	58 (47%)	66 (53%)	124 (100%)

The data in table 3. showed that the majority of residents included in the study were female (66 people or 53%) and the remaining 58 people (47%) had male gender.

4. Age Distribution of Citizens

Table 4. Age of Residents

Age	RW 7	RW 9	RW 12	RW 14	Sum	Percentage
<6 years	1	1	1	4	7	5.6%
6-12 years	8	4	2	3	17	13.7%
13-18 years old	2	3	1	3	9	7.3%
19-40 years old	12	14	12	10	48	38.7%
41-65 years old	9	9	10	6	34	27.4%
>65 years	1	2	2	4	9	7.3%
Total	33	33	28	30	124	100%

The data in table 4. showed that the majority of the residents of Employeegi Village studied were those aged 19-40 years with a total of 48 people (38.7%), followed by residents aged 41-65 years old who amounted to 34 people (27.4%), residents aged 6-12 years who amounted to 17 people (13.7%), residents aged 13-18 years and those aged >65 years who

each amounted to 9 people (7.3%), and finally residents aged <6 years who amounted to 7 people (5.6%).

5. Distribution of Citizens' Last Education

Table 5. Education Level

Education	RW 7	RW 9	RW 12	RW 14	Sum	Percentage
Hasn't Attended School	1	2	1	6	10	8%
Hasn't Graduated From Elementary School	6	3	1	2	12	9.7%
Elementary School	19	3	5	15	42	33.9%
Junior High School	3	13	9	5	30	24.2%
Senior High School	4	11	8	2	25	20.2%
D3	0	1	1	0	2	1.6%
D4	0	0	3	0	3	2.4%
Total	33	33	28	30	124	100%

Data in table 5. showed that most of the residents of Employeegi Village who were studied had the last elementary education as many as 42 people (33.9%), followed by the last junior high school education as many as 30 people (24.2%), the last high school education as many as 20.2%, the education that is still elementary school as many as 12 people (9.7%), the unschooled as many as 10 people (8%), the last education of D4 as many as 3 people (2.4%), and finally the last education of D3 as many as 2 people (1.6%).

6. Distribution of Citizen Jobs

Table 6. Job Field

Work	RW 7	RW 9	RW 12	RW 14	Sum	Percentage
Not working	11	13	13	13	50	40.3%
Students	11	7	4	6	28	22.6%
Farmer	8	6	6	9	29	23.4%
Breeder	1	1	0	0	2	1.6%
Entrepreneur	2	4	3	2	11	8.9%
Employee	0	2	2	0	4	3.2%
Total	33	33	28	30	124	100%

The data in table 6. showed that the majority of the residents of Employeegi Village who were studied did not work (including housewives, preschool children, the elderly) with a total of 50 people (40.3%), then those who worked as farmers (including rice farmers,

garden farmers) totaled 29 people (23.4%), students totaled 28 people (22.6%), entrepreneurs (including traders, tailors) totaled 11 people (8.9%), employees of certain companies totaling 4 people (3.2%), and finally breeders totaling 2 people (1.6%).

7. Income of Working Citizens

Table 7. Types of Income

Income	RW 7	RW 9	RW 12	RW 14	Sum	Percentage
Daily	7	8	5	11	31	67.4%
Weekly	0	1	4	0	5	10.9%
Monthly	4	4	2	0	10	21.7%
Total	11	13	11	11	46	100%

The data in table 7. shows that the number of residents of Employeegi Village who work as a whole is 46 people (37.1%). Most of these workers get daily wages paid by 31 people (67.4%). Others get weekly wages for 5 people (10.9%) and monthly for 10 people (21.7%).

8. Citizen Health Status

Table 8. Health Conditions

Health	RW 7	RW 9	RW 12	RW 14	Sum	Percentage
Healthy	29	31	24	25	109	87.9%
Sick	4	2	4	5	15	12.1%
Total	33	33	28	30	124	100%

The data in table 8. showed that the majority of the residents of Employeegi Village studied were in good health or disease-free with a total of 109 people (87.9%). Some of the population, namely 15 people (12.1%); are sick or have certain diseases.

9. Diseases of Sick Residents Today

Table 9. Current Illness

Disease	RW 7	RW 9	RW 12	RW 14	Sum
Hipertensi	3	1	1	2	7
DM	0	0	0	2	2
ISPA	0	4	0	0	4
Typhus	0	0	1	0	1
Stroke	0	0	0	1	1
Myopic	0	1	0	1	2
Osteoarthritis	0	0	0	1	1

Physical disability	1	0	0	0	1
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The data in table 9. showed that the diseases suffered by the 15 residents of Employeeegi Village who were studied varied, ranging from acute to chronic diseases. The most common disease is hypertension with a total of 7 patients, followed by respiratory tract infections with a total of 4 patients, diabetes mellitus & myopia suffered by 2 people each, and typhus, stroke, osteoarthritis, and physical disabilities all experienced by 1 person each. Please note that there are some people who suffer from more than one disease.

10. Health Facilities Visited by Families if Sick

Table 10. Destination Health Facilities When Sick

Health Facilities	RW 7	RW 9	RW 12	RW 14	Sum
Phc	10	10	10	9	39
Doctor's Clinic	2	0	0	1	3
Hospital	0	0	0	2	2
Village midwife's house	0	0	0	4	4

Data in table 10. showing the health facilities that the family visited when they were sick; Some families mentioned 2 health facilities. 39 families/homes answered that the health center is their goal to seek treatment when sick. Some families also mentioned that doctors' clinics (3 people), hospitals (2 people), and village midwives' homes (4 people) are their other options to visit when they are sick.

11. Individual Citizen Hygiene

Table 11. Hygienic Ability

Higiene	RW 7	RW 9	RW 12	RW 14	Sum	Percentage
Independent	29	30	26	24	109	87.9%
Assisted	4	3	2	6	15	12.1%
Total	33	33	28	30	124	100%

The data in table 11. showed that most of the residents of Employeeegi Village were 109 people (87.9%), able to carry out personal hygiene activities independently or without the help of others. Another 15 people (12.1%) needed partial or full assistance to meet hygiene needs. These people include young children and the elderly.

12. The Existence of Home Windows

Table 12. Home Window

Window	RW 7	RW 9	RW 12	RW 14	Sum	Percentage
Exist	6	8	9	8	31	77.5%
None	4	2	1	2	9	22.5%
Total	10	10	10	10	40	100%

Data in table 12. showed that most of the houses of the residents of Employeegi Village, namely 31 houses (77.5%), had windows that could be opened. The rest or 9 houses (22.5%) do not have windows or have windows but cannot be opened.

13. Habits of Opening Windows or Doors of the House

Table 13. Routine of Opening a Window or Door

Opening the Window	RW 7	RW 9	RW 12	RW 14	Sum	Percentage
Routine	4	3	4	4	15	37.5%
Not routine	6	7	6	6	25	62.5%
Total	10	10	10	10	40	100%

The data are in table 13. showed that of the 40 houses of Employeegi Village residents studied, 25 houses (62.5%) did not have the habit of opening the windows of the house every day (including houses that did not have windows or houses that had windows that could not be opened) and on the contrary, 15 houses (37.5%) had this habit.

14. General Consumption Patterns

Table 14. General Diet

Diet	RW 7	RW 9	RW 12	RW 14	Sum	Percentage
Balanced	4	5	5	4	18	45%
Unbalanced	6	5	5	6	22	55%
Total	10	10	10	10	40	100%

The data are in table 14. showed that 18 families (45%) of the Employeegi Village studied had consumption patterns that could be said to be generally balanced. Meanwhile, the

other 22 families (55%), in general, can be said to have an unbalanced diet (regularly consuming carbohydrate and protein sources, but rarely eating vegetables and fruits).

15. Smoking Behavior in Residents

Table 15. Smoking Habits

Smoke	RW 7	RW 9	RW 12	RW 14	Sum	Percentage
Yes	9	9	10	7	35	87.5%
No	1	1	0	3	5	12.5%
Total	10	10	10	10	40	100%

The data are in table 15. showing a picture of the smoking activities of the residents of Employeeegi Village that were studied. Although there were only 38 individuals out of 124 residents surveyed who used to smoke every day, in fact in 35 families/households (87.5%) had at least 1 family member who had smoking behavior at home; which can make other family members become passive smokers. In 5 families (12.5%) no member smoked.

16. Basic Knowledge about Tuberculosis

Table 16. Tuberculosis Knowledge

Knowledge	RW 7	RW 9	RW 12	RW 14	Sum	Percentage
Know	0	1	2	0	3	7.5%
Little Knowing	10	9	8	10	37	92.5%
Total	10	10	10	10	40	100%

The data in table 16. showing an overview of the basic/general knowledge of families in Employeeegi Village who are studied about TB. This data was obtained by asking what basic information the family knew about TB disease. The results showed that most of the families, namely 37 families (92.5%), lacked knowledge about TB, and there were 3 families (7.5%) who knew enough about TB disease.

17. Analyzes Data

Table 17. Data Analysis

Subjective Data	Objective Data	Problem
1. 39 families/homes from 40 families (97.5%) said that the health center was their destination for	1. There were 9 houses (22.5%) that had no windows or had windows but could not be opened.	The TB knowledge deficit in the residents of Employeeegi Village is related to the lack of

<p>treatment when they were sick.</p> <ol style="list-style-type: none"> 2. 25 families (62.5%) said they do not regularly open their windows every day (including homes without windows as well as homes with windows that can or cannot be opened). 3. 35 families (87.5%) said they had a family member who smoked every day at home. 4. 37 families (92.5%) said they knew less about tuberculosis. 5. Based on residents' statements about the food groups they consume daily, it can be concluded that 22 families (55%) have an unbalanced diet. 	<ol style="list-style-type: none"> 2. Apart from the family's statement that they routinely/do not routinely open the windows or doors of the house every day, most of the residents' houses appear to have closed windows, curtains, and doors; So that fresh air and sunlight from outside are difficult to enter. 	<p>exposure to TB disease information and its prevention is evidenced by a lack of understanding of TB disease and healthy behavior in the majority of residents.</p>
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Nursing Diagnosis

The TB knowledge deficit in the residents of Employeeegi Village is related to the lack of exposure to TB disease information and its prevention is evidenced by a lack of understanding of TB disease and healthy behavior in the majority of residents.

Community Nursing Practice Activities

The following is a description of community nursing practice activities by Nurse Profession students program Advent University of Indonesia in Employeeegi Village:

1. First week, an assessment of 10 families/houses around the homes of tuberculosis clients who were treated at the Parongpong Health Center in RW 7, 9, 12, and 14 Employeeegi Village was carried out while still participating in health center activities such as posyandu (Pos Layanan Terpadu) services in certain village RWs, screening activities and immunization programs at schools, and also including services at the health center itself.
2. Second week, complete the assessment and tabulating of data to get an overview of information about residents' health & hygiene patterns and find out if there are problems

in residents related to factors that increase the risk of tuberculosis.

3. The third week, from the problems found, together with lecturers and supervisors from the health center, a community nursing follow-up plan was determined, namely health counseling with the topic of getting to know TB disease and a healthy & clean lifestyle to prevent TB.
4. The fourth week, the needs of counseling activities (counseling materials, location, logistics, consumption, events) were prepared. Supervisors of Community-Family Nursing stations, supervisors from health centers, RW heads, cadres, and residents were invited to participate in counseling activities.
5. The fifth week, health counseling activities about TB by Nurse Profession class University Indonesia.

Community Nursing Intervention Plan

Table 18. Nursing Plan

Nursing Diagnosis	Intervention	Implementation	Indicator	Outcome Criteria	Time
The deficit of tuberculosis knowledge in the residents of Employeegi Village is related to lack of exposure to TB disease information and its prevention is evidenced by a lack of understanding of TB disease and healthy behavior in the majority of residents.	Health education	<ol style="list-style-type: none"> 1. Collaborate with RW leaders, cadres, and residents themselves to participate in counseling activities. 2. Collaboration with 2 students to become counseling resource persons. 3. The counseling was held at the Employeegi Village Hall which is close to the 	<ol style="list-style-type: none"> 1. The collaboration went well. 2. 2 students are willing to be resource persons and attend the event. 3. Invitations can attend counseling. 1. Residents listened to the material presented, so that they could get to know TB disease and TB prevention through a healthy and clean lifestyle. 	<ol style="list-style-type: none"> 1. The counseling went smoothly. 2. Invitations can be present at the counseling. 3. Residents can get to know TB disease and TB prevention through a healthy and clean lifestyle. 1. Residents provided questions and answers to questions 	Friday

		<p>Parongpong Health Center, quite close to the Indonesian Adventist University, and its location is familiar to residents.</p> <p>1. Materials to be presented: basic information on TB disease and lifestyle to prevent TB.</p>		asked about counseling materials.	
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Implementation of Community Nursing Care

Table 19. Nursing Implementation

Nursing Diagnosis	Activities	Time and Place	Participants	Executive	Obstacles	Solution
<p>The deficit of tuberculosis knowledge in the residents of Employeegi Village is related to lack of exposure to TB disease information and its prevention is evidenced by a lack of understanding of TB disease and healthy behavior in the majority of residents.</p>	<p>1. Foreword from the chief executive and supervisor from the health center to reaffirm the purpose of the series of activities that have been carried out (study) and activities to be carried out (counseling).</p> <p>2. Health counseling by 2 students of Adventist University Indonesia, with</p>	<p>Friday, at the Employeegi Village Hall</p>	<p>Residents of RW 7, 9, 12, and 14 Employeegi Village that have been studied previously</p>	<p>Nurse Profession Students Class D class of 2023 Adventist University Indonesia</p>	<p>1. At 16.00, the participants were still quiet; causing the event to be postponed for 30 minutes.</p> <p>2. The counseling activity consist</p>	<p>1. Participants who have arrived on time are given food & drinks and leaflets in advance so that they can be consumed and read while waiting for the event to start.</p>

	<p>the topics "Getting to Know Tuberculosis" and "Healthy & Clean Living to Prevent Tuberculosis."</p> <p>3. Providing time for residents who have questions to ask, also providing questions for residents to see if the material is delivered well.</p> <p>4. Provide conclusions and additional information to close, namely to maintain personal health and hygiene as well as the environment, not stigmatize TB disease, and independently to check yourself at the health center if there are signs and symptoms of TB, have contact with active TB patients, or have traveled to places with high TB cases.</p>				<p>ed of 2 separate presentations with different topics and speakers, making participants possibly bored.</p>	<p>2. In between the first and second presentations, the organizer gave time for participants to ask questions and also gave prizes so that there was a 2-way interaction and participants became more excited. This was also done after the presentation of the second topic.</p>
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Community Nursing Care Evaluation

Table 20. Nursing Evaluation

Nursing Diagnosis	Strength	Weakness	Opportunity	Threatened
The deficit of tuberculosis knowledge in the residents of Employeegi Village is related to lack of exposure to TB disease information and its prevention is evidenced by a lack of understanding of TB disease and healthy behavior in the majority of residents.	<ol style="list-style-type: none"> 1. Health counseling activities seem to be going well. 2. Residents answered questions and also gave questions about the material that had been brought. 	Not all invited residents attended the health counseling event.	<ol style="list-style-type: none"> 1. There are cadres and RW chairmen who are ready to help their citizens, including those who are sick. 2. The health center opens its doors for residents who want to check themselves and provides free OAT for those who are confirmed to have TB disease. 	There is no cure for ILTB condition.

3. Result and Discussion

Review

Through the study, positive and negative factors related to health disorders and community resources can be identified so that strategies aimed at promoting health can be designed. Methods used for community studies include interviews, surveys, environmental observations, specific group discussions, and document studies. The study was conducted on 40 families/houses in RW 7, 9, 12, and 14 Employeegi Village using the interview method.

In conducting interviews with residents, the author and his fellow authors encountered factors that have an influence on the data collection process, both supporting and inhibiting factors. For supporting factors, the author found that the friendliness and willingness to help provide the necessary information from the RW chairman, cadres, and the village community itself; making the community assessment process comfortable and smooth.

As for the inhibiting factors, one of the obstacles experienced when conducting the assessment process is the incompatibility of data collection time with citizen activities. Students had visited residents' homes several times while their residents were working or resting, making

the study of the family unable to be carried out or postponed.

Diagnosis

Community/community health issues can be raised through health status assessments, data on other factors (social, environmental) that have a relationship with health, evaluation results of community ability to solve health problems, or priority setting & interventions. Community nursing diagnosis can be actual, risky, or health promotional. The information that the author has obtained through the review stage, is tabulated so that it is easier for the author to identify the problems that exist in the residents of Employeegi Village and determine the appropriate nursing diagnosis. The community nursing diagnosis established by the author is health promotional.

Planning

In this third step, nursing actions are planned which can be promotive, preventive, curative, rehabilitative, or resocialitative; which applies as primary, secondary, or tertiary prevention. Because as mentioned above, the nursing diagnosis raised is health promotional, the students of the Nurse Profession Program Advent University of Indonesia also plan to provide nursing actions in the form of health counseling, which is a nursing intervention in the form of promotive and secondary prevention. The health education content that will be presented is based on the health problems found.

In this planning process, the teaching lecturers and supervisors of the health center always help guide the students in preparing for the health counseling activities that will be carried out, which of course is a supporting factor for this stage. On the other hand, determining the right place and time for health counseling is an inhibiting factor experienced. Because residents come from different RWs, health counseling implementers need to think about places that are familiar and easy to reach by invitees. The first planned place is the parking lot of the Parongpong Health Center. However, after discussing with the puskesmas (Pusat Kesehatan Masyarakat) supervisor, it was known that holding health counseling in the parking lot of the puskesmas seemed to be less conducive. Another place that is sought and will eventually be used is the Parongpong Village Hall which is located close to the health center. For the time factor, the implementer needs to consider the time of the implementation of the counseling event with the time of residents' activities and rest. The implementing party also decided to hold a health counseling activity on Friday, with the consideration that during the afternoon – evening period on Friday residents have free time or are not doing activities after leaving Friday prayers (considering that the majority of residents are Muslims).

Implementation

In the implementation stage, the previously formed plan is realized by community nurses. In the implementation of community nursing actions, nurses collaborate with other health workers such as health centers, village cadres, village midwives, RW & RT (Rukun Tetangga) chairmen, and the community. The health counseling event was attended by the invitation of residents, the health center, teaching lecturers, and the organizing committee itself. The event began with remarks by the chief executive and the health center. There were 2 presentations entitled "Getting to Know Tuberculosis" and "Healthy & Clean Living to Prevent Tuberculosis," which were presented by 2 students from the implementing party themselves. Each presentation ended with the speaker giving prizes to the participants and a question and answer session which was assisted by the teaching lecturer and the health center, which at this time the participants actively participated. The health center gave a conclusion based on the two materials that had been presented.

Evaluation

This last step includes measuring the success of the nursing process and intervention. One method that can be applied in writing an evaluation is to use the SOAP or SWOT model (Swarjana, 2016), which is used by the author. The community nursing care process carried out by Nurse Profession Students Program Advent University of Indonesia ran smoothly from assessment to implementation. Although the implementation of health education could not be attended by all residents (24 residents out of a target of 30 people), health counseling activities went well thanks to the performance and support of all parties involved. Participants of the counseling event listened carefully to both presentations and were able to answer the questions given and ask questions about the newly presented material.

4. Conclusion

The community nursing practice that has been carried out by the eight students of the Nurse Profession Program Advent University of Indonesia provides experience to practice nursing care on a community scale, especially in providing community nursing care to residents with factors that increase the risk of tuberculosis. In more detail, this community nursing practice provides students with experience in assessing communities at risk of TB, analyzing the results of assessments and establishing nursing diagnoses for communities at risk of TB, making nursing action plans and implementing them to communities at risk of TB, evaluating

communities at risk of TB that have been given nursing interventions, and documenting nursing care that has been carried out to communities at risk of TB.

Through an assessment of 40 families from RW 7, 9, 12, and 14 Employeegi Village, Parongpong District, West Bandung Regency; The authors and colleagues found that the health problem of lack of TB knowledge was evidenced by a lack of understanding of TB disease and healthy behavior in the majority of the population (smoking, rarely consuming vegetables, poor ventilation of the house). Based on this problem, the students of the Nurse Profession Program Advent University of Indonesia plan health counseling activities, with the students themselves being the implementers and collaborating with teaching lecturers from the campus, land supervisors from the health center, and residents of Employeegi Village. The health counseling activity is expected to increase information and knowledge of residents about TB disease and its prevention.

From the results of the above research, the following suggestions can be done in the future, among others, it is hoped that the community can remember, practice, and disseminate the material that has been taught for the benefit of themselves and others. Cadres and RW chairmen must always play an active role in supporting the health of residents. Puskesmas are expected to routinely go to the community to monitor the health of residents and provide resources for examination and treatment for those with suspected tuberculosis, and active TB. Teaching lecturers must keep up with the latest community nursing trends and issues in order to teach, discuss, and apply them with students. Nursing students must use the experience of community nursing practice as learning, maintaining strengths, and correcting shortcomings during the community nursing care process in order to become reliable professional nurses in the future.

5. References

- Astari, D. W., Noviantani, A., Herawati, T., & Pramukti, I. (2022). HUBUNGAN PERAN PERAWAT SEBAGAI EDUKATOR DENGAN PENGETAHUAN DAN KESADARAN PADA PASIEN DIABETIC RETINOPATHY. 14(1), 71-78. <http://journal.stikeskendal.ac.id/index.php/Keperawatan>
- CDC. (2016). Infection Control: How Infections Spread. <https://www.cdc.gov/infectioncontrol/spread/index.html>
- CDC. (2021, March 29). Tuberculosis (TB): Slide Sets - Introduction to Tuberculosis. <https://www.cdc.gov/tb/default.htm>
- Chai, Q., Zhang, Y., & Liu, C. H. (2018). Mycobacterium tuberculosis: An adaptable pathogen associated with multiple human diseases. *Frontiers in Cellular and Infection Microbiology*, 8(158). <https://doi.org/10.3389/fcimb.2018.00158>

- Citra, E. (2020). Interferon Gamma Release Assay sebagai diagnosa Infeksi Laten Mycobacterium tuberculosis. *Medula*, 10(3), 429–436. <https://www.journalofmedula.com/index.php/medula/article/download/90/9>
- Fransiska, M., & Hartati, E. (2019). FAKTOR RESIKO KEJADIAN TUBERCULOSIS. *Jurnal Kesehatan*, 10(3), 252–260. <https://doi.org/10.35739/jk.v10i3.459>
- Gonzalo, A. (2023). Nola Pender: Health Promotion Model. *Nurseslabs*. <https://nurseslabs.com/nola-pender-health-promotion-model/>
- Inayah, S., & Wahyono, B. (2019). Penanggulangan Tuberkulosis Paru dengan Strategi DOTS. *HIGEIA*, 3(2), 223–233. <https://doi.org/10.15294/higeia/v2i3/25499>
- Iwamoto, S. (2023). Developing a Theory of Community Caring for Public Health Nursing. *Healthcare (Switzerland)*, 11(3). <https://doi.org/10.3390/healthcare11030349>
- Joegijantoro, R. (2019). Penyakit Infeksi. *Intimedia*. www.intranspublishing.com
- Kartiningrum, E. D., Alberta, L. T., Puspitaningsih, D., & Kusuma, Y. L. H. (2017). Konsep Dasar Keperawatan Komunitas. *STIKes Majapahit Mojokerto*.
- Kautsar, A. P., & Intani, T. A. (2016). Kepatuhan dan Efektivitas Terapi Obat Anti Tuberkulosis (OAT) Kombinasi Dosis Tetap (KDT) dan Tunggal pada Penderita TB Paru Anak di Salah Satu Rumah Sakit di Kota Bandung. *Jurnal Farmasi Klinik Indonesia*, 5(3), 215–224. <https://doi.org/10.15416/ijcp.2016.5.3.215>
- Kementrian Kesehatan RI. (2020). PEDOMAN NASIONAL PELAYANAN KEDOKTERAN TATA LAKSANA TUBERCULOSIS. <https://repository.kemkes.go.id/book/124>
- Kementrian Kesehatan RI. (2023). Laporan Program Penanggulangan Tuberkulosis Tahun 2022.
- Lewis, S. L., Dirksen, S. R., Heitkemper, M. M., & Bucher, L. (2014). *Medical-surgical nursing : assessment and management of clinical problems (9th ed.)*. Elsevier.
- Margaretha, T. (2018). *Pedoman Asuhan Keperawatan Komunitas: Individu, Keluarga dan Komunitas di Puskesmas*. Lima Bintang.
- Mar'iyah, K., & Zulkarnain. (2021). Patofisiologi penyakit infeksi tuberkulosis. *UIN Alauddin Makassar*, 88–92. <http://journal.uin-alauddin.ac.id/index.php/psb>
- McCance, K. L., & Huether, S. E. (2014). *Pathophysiology: the biologic basis for disease in adults and children (7th ed.)*. Elsevier.
- Nofalia, I., & Nurhadi. (2018). *Modul Pembelajaran Komunitas 1*. Icme Press.
- Pal, V., MK, K., Utpat, K., Desai, U., & Joshi, J. (2022). Complication and Sequelae of Pulmonary Tuberculosis: A Tertiary Care Center Experience. *International Journal of Pulmonary & Respiratory Sciences*, 5(5). <https://doi.org/10.19080/ijoprs.2022.05.555674>
- Porth, C. M. (2015). *Essentials of Pathophysiology (4th ed.)*. Wolters Kluwer.
- Pralambang, S. D., & Setiawan, S. (2021). Faktor Risiko Kejadian Tuberkulosis di Indonesia. <https://journal.fkm.ui.ac.id/bikfokes/article/view/4660>
- Rastoder, E., Shaker, S. B., Naqibullah, M., Wille, M. M. W., Lund, M., Wilcke, J. T., Seersholm, N., & Jensen, S. G. (2019). Chest x-ray findings in tuberculosis patients identified by passive and active case finding: A retrospective study. *Journal of Clinical Tuberculosis and Other Mycobacterial Diseases*, 14, 26–30. <https://doi.org/10.1016/j.jctube.2019.01.003>
- Sadeghi, K., Poorolajal, J., & Doosti-Irani, A. (2022). Prevalence of modifiable risk factors of tuberculosis and their population attributable fraction in Iran: A cross-sectional study. *PLoS ONE*, 17(8). <https://doi.org/10.1371/journal.pone.0271511>
- Sipayung, J. S., Hidayat, W., & Silitonga, E. M. (2023). Faktor Risiko yang Memengaruhi Kejadian Tuberkulosis (TB) Paru di Wilayah Kerja Puskesmas Perbaungan. *Jurnal Ilmiah Kesehatan Masyarakat*, 15(2), 55–63.
- Smeltzer, S. C., Bare, B. G., Hinkle, J. L., & Cheever, K. H. (2010). *Brunner & Suddarth's Textbook of Medical-Surgical Nursing (12th ed.)*. Lippincott Williams & Wilkins.

- Sukoco, R. T. Y., Sutadipura, N., & Romadhona, N. (2022). Imunisasi Bacille Calmette Guerin Sebagai Pencegahan Tuberkulosis: Kajian Pustaka. *Bandung Conference Series: Medical Science*, 2(1), 217–223. <https://doi.org/10.29313/bcsms.v2i1.587>
- Sun, J., Shi, Q., Chen, X., & Liu, R. (2020). Decoding the similarities and specific differences between latent and active tuberculosis infections based on consistently differential expression networks. *Briefings in Bioinformatics*, 21(6), 2084–2098. <https://doi.org/10.1093/bib/bbz127>
- Swarjana, I. K. (2016). *Keperawatan Kesehatan Komunitas*. Andi Offset.
- van Seventer, J. M., & Hochberg, N. S. (2016). Principles of Infectious Diseases: Transmission, Diagnosis, Prevention, and Control. In *International Encyclopedia of Public Health* (pp. 22–39). Elsevier Inc. <https://doi.org/10.1016/B978-0-12-803678-5.00516-6>
- Wardani, H. R., Mertaniasih, N. M., & Soedarsono. (2020). FAKTOR YANG BERHUBUNGAN DENGAN TUBERCULIN SKIN TEST POSITIF PADA PETUGAS KESEHATAN DI RUMAH SAKIT DI KOTA JEMBER. *Jurnal Ilmiah Keperawatan*, 6(2), 261–267. <https://journal.stikespemkabjombang.ac.id/index.php/jikep/article/view/649>
- WHO. (2022). *Global Tuberculosis report 2022*.
- WHO. (2023). *TB Joint External Monitoring Mission Report 2022*.
- Wikurendra, E. A., Nurika, G., Tarigan, Y. G., & Kurnianto, A. A. (2021). Risk Factors of Pulmonary Tuberculosis and Countermeasures: A Literature Review. *Open Access Macedonian Journal of Medical Sciences*, 9, 549–555. <https://doi.org/10.3889/oamjms.2021.7287>.