Epidemiology and Society Health Review | ESHR
Vol. 6, No. 1, 2024, pp. 24-38 ISSN 2656-6052 (online) | 2656-1107 (print)
http://journal2.uad.ac.id/index.php/eshr/index eshr@ikm.uad.ac.id

Research Article

Community Diagnosis in Banguntapan Village Bantul Regency, Yogyakarta

Rokhmayanti Rokhmayanti[1], Ira Pebri Wulandari[1], Dewi Fitriani[1], Ezra Sabrina Arfiiani[1], Aulia Rahmadina Pratiwi[1], Amelia Nurhaliza Puteri[1], Fitha Nurizza Quratulain[1], Titim Martini[1], Siti Kurnia Widi Hastuti[1], Fardhiasih Dwi Astuti[1*]

[1]Faculty of Public Health, Universitas Ahmad Dahlan, Yogyakarta, Indonesia

*** Correspondence:** fardhiasih.dwiastuti@ikm.uad.ac.id

Received 28 December 2023; Accepted 05 February 2024; Published 15 February 2024

ABSTRACT

Background: Community diagnosis is an activity to identify problems by collecting data in the community that can locate broad issues and cover various aspects of society. The emergence of health problems is not only caused by individual negligence but can also be caused by community ignorance due to a lack of correct information about a disease. The purpose of this study is to obtain an overview of the health problems in Tegaltandan hamlet, Banguntapan sub-district to determine problem priorities and obtain appropriate alternative solutions to overcome the priority problems that have been resolved.

Method: This study used descriptive quantitative analysis by conducting interviews using a community diagnosis questionnaire. The analysis was used to prioritize health problems using the USG method and village community meetings. The sampling technique was purposive sampling with 132 samples obtained.

Results: Ten major health problems in the research area that need attention are no organic trash collection center covered in homes, using spray-repellent, not used to wearing a helmet during riding, not sprinkling larvacide powder on the washed water dump as dengue prevention, not applying repellents as dengue prevention not using gloves while chopping ingredients with a knife for cooking, no props when moving heavy objects, not taking care of fish larvae eaters, hypertension and diabetes mellitus. After prioritizing using USG and village community meetings, they all agreed to decide diabetes mellitus as the main health problem in this area.

Conclusion: Diabetes mellitus was considered a major problem at the study site that requires further intervention.

Keywords: Community diagnosis; Diabetes mellitus; Epidemiology; Environmental health

INTRODUCTION

Health development is not independent of more resources, means, or funds. For addressing health issues, health concerns should be prioritized.[1] Promoting and preventing health development efforts also take precedence over the development of public health. Activities assessed according to these principles are among the diagnoses of communities.[2] Community diagnosis is a systematic effort that includes solving family health problems as a primary unit of community communities, which is the focus of community diagnosis. A community diagnosis aims to identify and analyze fundamental health problems, prioritize problems, and work out solutions to alternative problem-solving. By using this approach, problems in society can be gradually identified.[3] Community diagnosis and community assessments are carried out in several stages of activity. These steps establish guidelines for more planned activities. There are eight stages of shaping teams: collecting primary and secondary data, analyzing data, aggregating data, reporting results to communities, prioritizing problems, creating assessment or diagnosis documents, and performing actions according to plan or intervention.[4] Based on the steps, it is understandable that community diagnosis is a dynamic process that promotes health and improves community health problems.[5]

Community diagnosis is carried out in the Public Health Center of Banguntaan III, Banguntapan sub-district. Banguntapan III Health Centre has an area directly adjacent to Yogyakarta City, and it has a large working area. The demographic situation in the Banguntapan III Puskesmas working area with details of the total population in 2021 based on data from the Population and Civil Registration Office of Bantul Regency, Banguntapan Village has 38,605 people consisting of 19,064 men (49.38%) and 19,541 women (50.62%). The highest age group is 40-44 years old. There are 13,095 households consisting of 10,128 male households and 2,877 female households. [6] According to the health profile of Health 2022, some health problems occur and need control in Banguntapan III.[7] Therefore, this research aims to determine the description of health problems using the community diagnosis approach in the Banguntapan area.

METHOD

This research used a quantitative descriptive research design. Data collection was conducted by surveys and interviews using a community diagnosis questionnaire modified from the 2018 basic health research questionnaire.[8] The research was conducted in Tegaltandan hamlet, part of Banguntapan III Puskesmas PHC's working area. The population in this study were all people who had a family card in Tegaltandan hamlet with an age of over 18 years. Purposive sampling was applied to select the respondents with the following criteria: people residents in this region proven by who have their family card who live in Tegaltandan hamlet and were willing to be interviewed, aged >18 years, people who have just moved to Tegaltandan RT 20, 24 and 25 but already stayed for 3 months.

The survey was conducted on 132 samples and the data obtained was then analyzed descriptively by looking at the proportion of each variable. Problem prioritization analysis was also conducted using the USG (Urgency, Seriousness, Growth) scoring method and village community deliberation to determine health interventions that are by the existing problems.

RESULTS

Table 1 shows that most respondents were female (71.21%), and most were aged 56 - 65 years or in the late elderly category (23.48%). Most of the respondents education graduated from high school (34.09%), and most of them worked in the private sector (73.48%). (The majority of people's income is more than the regional minimum salary of Bantul which is IDR 2,066,438.82, namely 69.70%

Vol. 6, No. 1, 2024, pp. 24-38 10.26555/eshr.v6i1.9691

Table 1. Characteristics of respondents in the Tegaltandan, Banguntapan

Characteristics	n	%
Sexs		
Male	38	28.79
Female	94	71.21
Age		
Late Adolescence (17-25 Years)	5	3.79
Early Adulthood (26-35 Years)	23	17.42
Late Adulthood (36-45 Years)	28	21.21
Early Elderly Period (46-55 Years)	24	18.18
Late old age (56-65)	31	23.48
Old Age (> 65 Years)	21	15.91
Level of education		
Elementary School	6	4.55
Junior High School	14	10.61
Senior High School	45	34.09
First Diploma	12	9.09
Tree diploma	43	32.58
Bachelor's	6	4.55
Master's	1	0.76
Doctoral	4	3.03
No school	1	0.76
Type of work		
Civil servants	11	8.33
Private sector	97	73.48
Professional	5	3.79
Housewife	4	3.03
Unemployed	14	10.61
No answer	1	0.76
Income level		
< Regional minimum salary (< IDR 2,066,438.82)	24	18.18
= Regional minimum salary (= IDR 2,066,438.82)	16	12.12
> Regional minimum salary (> IDR 2,066,438.82)	92	69.70
COVID-19 Vaccinatione status COVID-19		
Dosage1 and 2	37	28.03
Dosage 1	2	1.52
Dosage 1, 2, Booster 1 and 2	1	0.76
Dosages 1, 2, and Booster	89	67.42
No vaccine	3	2.27

An assessment of existing health facilities was carried out regarding travel time, transportation costs, and the transportation used to get to the health facility. Table 2 shows that most respondents need a short time to come to health facilities (75%) at a low cost, and 82.58% of those involved. Access to health services: Most respondents use personal vehicles (motors, cars, etc.), as much as 95.45%, indicating the ease with which health services are available.

Vol. 6, No. 1, 2024, pp. 24-38 10.26555/eshr.v6i1.9691

Table 2. Access to health facilities

Access to Health Facilities	n	%
Time to take to health facilities		
0 – 10 minutes	99	75.00
11 – 25 minutes	22	16.67
>30 minutes	11	8.33
Transportation costs to health services		
IDR 0,00 –20,000.00	109	82.58
IDR 20,000 –40,000.00	14	10.61
IDR >Rp 50,000.00	9	6.82
Transport equipment to health centre		
Walk on foot	3	2.27
Personal motor vehicle (motorcycle, car, etc.)	126	95.45
Personal non-motorcycle (personal vehicle such as bicycle)	2	152
Public transportation	1	0.76

A description of non-communicable diseases that occur in the community based on respondent interviews regarding doctor's diagnoses experienced a year before this community diagnosis survey was conducted can be seen in Table 3. The most common non-communicable diseases in society are hypertension (23.48%) and diabetes mellitus (12.12%).

Table 3. Overview of non-communicable diseases

Non-communicable diseases	Yes		No	
	n	%	n	%
Asthma	2	1.52	130	98.48
Cancer	0	0	132	100.00
Diabetes mellitus	16	12.12	116	87.88
Heart	4	3.03	128	96.97
Hypertension	31	23.48	101	76.52
Strokes	4	3.03	126	95.45
Kidney failure	2	1.52	130	98.48

This research found that there were daily routine activities that were not safe and had the potential to harm health. An overview of work safety for several everyday activities usually carried out at home can be seen in Table 4. It is known that everyday activities that can endanger occupational safety and health are not safe from cooking and without the aid of moving heavy objects at 127 homes each (96.21%).

Table 4. Description of work health and safety at home

Activity	Yes		No	
	n	%	n	%
The living environment contains sounds that cause noise.	4	3.03	128	96.97
A damaged/broken socket was installed in the house.	3	2.27	129	97.73
Use safety on LPG gas cylinders	130	98.48	2	1.52
Use gloves when cutting food with a knife in preparation for cooking.	5	3.79	127	96.21

Vol. 6, No. 1, 2024, pp. 24-38 10.26555/eshr.v6i1.9691

Activity	Yes		No	
	n	%	n	%
Dangerous liquids are labeled and located out of reach of children.	46	34.85	86	65.15
The use of aids in moving heavy objects	5	3.79	127	96.21
Food storage is permanently closed	125	94.70	7	5.30
All the containers have handheld (buckets, baskets, and boxes	102	77.27	30	22.73
In the home, there is one double contact stop (accumulate)	101	76.52	31	23.48

Table 5 shows that the majority of communities already have sufficient lighting in homes 67 (50,76%), that most people who go around motorcycle riding have already used helmets on as many as 131 (99.24%), and that in habitual behavior, they have done so 74 people (56.06%). This table also indicates that the majority of household garbage treatment in one area of the household was done by a periodic staff of 125 households (94.70%). Most communities also have wastewater dumps from bathrooms/dishwashers, with 127 houses (96.21%). As many as 30 respondents were in their homes with toddlers, and 26 (86.67%) had already been placed under the toilet. However, most communities still need as many organic waste management tools as 67 homes (50,76%).

Table 5. Lighting Conditions, Equipment Usage, Helmet Compliance, and Waste Overview

Condition measured	Criteria	n	%
Lighting condition in the house	**Adequate lighting**		
	EnoughSufficient	67	50.76
	Dark	1	0.76
	Bright	64	48.48
Equipment used when riding	**Personal protective equipment type**		
	Helm	131	99.24
	Mask	125	94.70
	Jacket	77	58.33
	Gloves	9	6.82
	Glasses	1	0.76
Behavior using helmet during riding	**The habit of wearing helmets**		
	Yes, sometimes	58	43,94
	Yes, always	74	56,06
Garbage handling	**Waste handling carried out**		
	Transported officer	125	94.70
	Dumped yourself in the polls	11	8.33
	Compost made	3	2.27
	Burned	1	0.76
	Other	5	3.79
Overview of waste management	**Conditions and methods of waste disposal**		
	Enclosed sewage disposal	127	96.21
	Infant waste disposal in latrine (n=30)	26	86.67
	Covered organic waste disposal	65	49.24

Vol. 6, No. 1, 2024, pp. 24-38 10.26555/eshr.v6i1.9691

Clean water is one of the essential needs of human life and forms a natural resource that performs a vital function. Table 6 depicts the main household water facilities used for drinking, cooking, personal expenses, and washing.

Table 6. Description of main household water facilities

Main water facilities	n	%
Water to drink		
Refills water	28	21.21
Bottled water with brand	63	47.73
Tap water	2	1.52
Self-cooked water	3	2.27
Dig well	25	18.94
Bore/pump	34	25.76
Water for cooking needs, personal hygiene, and washing		
Refills water	5	3.79
Bottled water with brand	12	9.09
Tap water	4	3.03
Water tank	1	0.76
Dig well	54	40.91
Bore/pump	71	53.79

Table 6 shows that the public's most widely used water supply is 63 homes with bottled water (47.73%). The type of water most commonly used for cooking, personal cleanliness, and washing is the drill/pump well in 71 homes (53.79%). The description of how people treat dengue fever prevention can be seen in Table 7.

Table 7. Description of how to avoid mosquito bites.

Behavior avoiding mosquito bites	n	%
Turn off the room light	5	3.79
Using mosquito repellent and mosquito repellent lotions	98	74.24
Using a racket	1	0.76
Using an electronic mosquito repellent	5	3.79
Using spray-repellent	7	5.30
Sleeping under a bed net without an insecticide	7	5.30
Not there	12	9.09

Table 8. DHF prevention behavior

Category	Yes		No	
	n	%	n	%
Drain and scrub the tub >1 times a week.	117	88.64	15	11.36
Drain and brush water dispenser >1 times a week.	94	71.21	38	28.79
Closing the water storage pens	102	77.27	30	22.73
Making use of thrift	18	13.64	114	86.36
Cleaning gutters out of leaf litter	63	47.73	69	52.27
Avoiding the hanging of old clothes	104	78.79	28	21.21
Closing the closet for dirty laundry	103	7803	19	14.39
Raised a snapping fish	13	985	119	90.15

Vol. 6, No. 1, 2024, pp. 24-38 10.26555/eshr.v6i1.9691

Category	Yes		No	
	n	%	n	%
Growing repellents	5	379	127	96.21
Using mosquito repellent	108	8182	24	18.18
Using lotion repellent	20	1515	112	84.85
Using an electronic mosquito repellent	69	5227	63	47.73
Using gauze in ventilation holes	42	31.82	60	45.45
Sprinkle larvacide powder on a cleansed water shelter	3	2.27	129	97.73

Based on Tables 7 and 8, it is known that most communities take precautions to avoid mosquito bites while sleeping using mosquito repellent, and mosquito repellent was used in 98 houses (74,24%). DHF prevention behaviors, as well as the majority of communities, have done preventive measures in 108 homes (81.82%), while many more prevention behaviors still to be done is by injecting larvacide powder at the water shelter of 129 houses (97.73%). The top 10 health problems in the Tegaltan hamlets, Banguntapan Sub-district are present in Table 9.

Table 9. Top ten health problems

Top Ten Health Problems	PersentasePercentage (%)
No organic trash collection center is covered in homes.	50.76%
Using spray-repellent	5.30%
Sometimes, wearing a helmet	43.94%
Not sprinkle larvacide powder on the washed water dump	97.73%
Do not plant repellents.	96.21%
No gloves during the process of cutting ingredients with a knife for cooking.	96.21%
No props when moving heavy objects.	96.21%
Not taking care of fish larvae eaters	90.15%
Hypertension	23.48%
Diabetes mellitus	12.12%

The analysis used to determine problem priorities in this research uses methods: urgency, seriousness, and growth. In USG techniques, scores are generally used on a particular scale. The scale score used is 1 – 5; the higher the priority of the score for each element, the higher the score. Based on Table 10, the main problems that are prioritized for treatment are hypertension, diabetes mellitus, and occasional use of helmets.

Table 10. Priority Health Issues

Priority Health Issues	U	S	G	Total Score	Ranking
No organic trash collection center is covered in homes.	12	12	11	35	4
Using spray-repellent	8	6	6	20	7
Sometimes, wearing a helmet	14	12	10	36	3
Not sprinkle larvacide powder on the washed water dump	9	7	5	21	6
Do not plant repellents.	9	8	7	24	5
No gloves during the process of cutting ingredients with knives for cooking	7	6	4	17	10
No props when moving heavy objects	8	7	5	20	8
Not taking care of Fish larvae eaters	7	6	5	18	9
hypertension	17	17	14	48	1
Diabetes Miletus	15	15	14	44	2

Vol. 6, No. 1, 2024, pp. 24-38 10.26555/eshr.v6i1.9691

DISCUSSION

Different community characteristics can have a significant impact on solving a health problem. Accordingly, it is essential to understand and consider the characteristics of society to find a practical approach to solving a problem. Individual characteristics and the environment function in shaping individual behavior in society. Individual behavior, especially in the health sector, influences the emergence of health problems.[9–12] Development essentials need to be carried out in a multi-sector and multi-dimensional manner. Efforts to improve the economy, availability of basic needs, employment, educational attainment, access to health services, gender equality, and increased community participation must be made to achieve development. This applies in the field of health development because to achieve good national health status, all sectors must be considered and adapted to the inherent characteristics of society.[13]

Individual characteristics can certainly identify exposure to a disease. This is important because, in addition to prevention and decision-making, it can be useful for control and is expected to increase early vigilance against future diseases. One of the individual characteristics that are closely related to determining health status and commonly used as basic data in identifying disease exposure are age and gender. WHO explains that as a person ages, they may experience various conditions or health problems at once. This occurs due to the accumulation of various molecular and cellular damage over time. This results in a gradual decline in physical and mental capacity which results in an increased risk of disease and death.[14] In this study, the majority were in the age group of 56-65 years, namely the elderly. Previous research states that a person aged >60 years experiences a decline in health conditions.[15] As people age, the probability of experiencing one or more chronic diseases, such as respiratory disease, arthritis, stroke, depression, and dementia, tends to increase. These health conditions can impact various aspects, including appetite, functional ability, and swallowing ability, ultimately resulting in changes in food intake and compromising nutritional status.[16]

Public education levels in the Banguntapan region are mostly highly educated. People with a high level of education will generally have a wealth of health knowledge. With such knowledge, people will have a consciousness to maintain their health.[17] Knowledge levels also affect one's physical activity because of the work involved. People with more education often work more in offices with less physical activity. Whereas people with lower levels of education are more likely to become laborers or farmers with moderate or vigorous physical activity.[18–20] Increased education will enhance awareness of healthy living and pay attention to patterns and diets. Less educated people often need to pay more attention to lifestyle, eating habits, and what must be done to prevent health problems.[17,21,22] The American diabetes association (2012) states that working people have significant benefits because blood glucose levels can be controlled through physical activity and prevent complications. Work factors affect the high risk of diabetes mellitus. [23,24] Moderate physical activity causes a lack of energy burning in the body and an excess in the body to be stored in the form of fat, resulting in obesity as a factor in the risk of diabetes mellitus.[25,26]

Indonesia's geographic conditions differ widely, affecting health services throughout Indonesia. Easy, affordable access becomes essential to ensuring that all levels of society, especially those with low incomes, can easily access health services.[27] Long journeys can make it difficult to reach health facilities. If it takes more than half an hour to reach the medical center, there may be a decrease in the number of people using it. The duration of travel time, therefore, affects the ease of access to health facilities. Achievable facilities in less than 30 minutes tend to be used more often than those requiring more than 30 minutes.[28,29] A community diagnosis is that it takes most people no more than 10 minutes to reach the nearest health facility. Thus, it can be said that health facilities in the region are easily accessible to the public.

Vol. 6, No. 1, 2024, pp. 24-38 10.26555/eshr.v6i1.9691

Prolonged exposure to health facilities can reduce access to health services and adversely affect people's conditions. Dealing with far-reaching time-travel issues is essential to ensuring fair access to health services for communities, especially those in remote and isolated areas.[30] Transportation plays a key role in facilitating communities' access to health services. Public access to healthcare facilities should be easy so that they can successfully receive the healthcare they need. When transportation costs become too high, it can harm people's quality of life since a large part of their budget must be allocated to transportation costs. If the distance to health facilities is long and long, it can make access to health services even more difficult. People are more likely to use such healthcare facilities if they are accessible.[31,32] Access to health facilities profoundly affects how often people use health services. At times, inactivity in health facilities such as medical centers, hospitals, or health clinics may result from physical or social distance that is too far between the facilities and the community, high costs, unsatisfactory services, and other causes.[33,34]

The increase in mortality and noncommunicable cases such as cancer, heart disease, and stroke suggests that Indonesia is experiencing changes in the typical disease pattern known as the epidemiological transition. Although there is a decline in the number of people affected by infectious diseases, these diseases still abound. Therefore, there is a strong demand for health services, especially referral services in hospitals, as a result of the increase in the number of people suffering from non-communicable diseases and death.[35,36] Base community diagnosis It is known that in the last year in Banguntapan, more people were diagnosed with disease hypertension and diabetes mellitus.

Hypertension is when systolic blood pressure exceeds 140 mmHg, and diastolic blood pressure exceeds 90 mmHg when measured twice by a five-minute interval of rest or rest. Without prompt treatment, this increased blood pressure can harm vital organs such as the kidney the heart, which can cause coronary heart disease, and the brain, which can cause stroke. To avoid enormous consequences, it is essential to identify hypertension early and provide proper treatment.[37] Knowledge plays a significant role in controlling hypertension, where the level of education affects one's ability. Good knowledge causes one's consciousness. Public awareness of the risk factors of hypertension will alert them to a change in lifestyle.[38]

The chronic condition of diabetes mellitus is characterized by higher-than-normal glucose levels. If left untreated, diabetes Mellitus can cause several problems in the eyes, kidneys, heart, blood vessels, and nerves, thus endangering lives and lowering quality of life. Complications can be acute and repetitive. [39] Rapid drop or rise in blood sugar levels is linked to acute difficulties, but the long-term effect of increased blood sugar levels over time is linked to chronic problems. These problems can shorten a client's life expectancy, cause disability, and increase the financial burden on the client and his family. The patient will have diabetes throughout his life, which will have a significant impact on his quality of life. The complications of Mellitus's chronic diabetes ulcer would affect the quality of life.[40,41]

Preventing serious body diseases may begin with controlling the diet by consuming foods that have balanced nutritional value. This is because excess consumption triggers some harmful and deadly illnesses. However, maintaining a diet alone is not enough if it is not followed by controlling other causes, such as psycho-cultural and psychosocial factors such as stress and depression.[42,43] Various factors in the home environment are potentially risky, including the physical, chemical, biological, ergonomic, and psychological aspects. These risks can significantly affect the safety and well-being of the householder. In the home, we may find insects and bacteria that thrive in certain areas, the use of potentially dangerous chemicals, strained interpersonal relationships, and other potential hazards. Some of the risks that need attention in the home are inadequate indoor lighting, lack of health standards, the lifting and transporting of recommended objects, and an unhygienic work position. These factors can adversely affect the health and safety of those who live at home. Recognizing the existence

Vol. 6, No. 1, 2024, pp. 24-38 10.26555/eshr.v6i1.9691

of these risk factors is essential for taking proactive action to prevent potential danger. Each individual must understand and stay alert to the potential risks in their home environment. Thus, they can proactively preserve the safety and well-being of themselves and their family members and encourage more significant health and safety.[44]

They were using a helmet while driving is also an effort to apply health and safety, especially in driving. Still, high traffic accidents are evidence that the application of driving safety still needs to be done. Most communities are aware of the importance of wearing helmets while driving. However, their use is largely ignored because of factors such as how they feel about distances and pathways not being crowded.[45,46] Previous studies suggest that attitude and self-control affect a person's decision to wear a helmet and drive safely, which involves the psychological dynamics of obeying predetermined traffic laws.[47]

The waste problem requires more attention from various parties, both the government and the surrounding community. Until now, the problem of waste has not been resolved. The current population growth rate has triggered increased waste production in the environment. Apart from causing unpleasant odors and disturbing aesthetics, unmanaged waste also becomes a breeding ground for vectors and rodents. Waste that is not handled properly will have an impact on reducing the quality of life and the beauty of the environment; the potential for flooding will be more significant because it does not rule out the possibility that waste in the area will block airflow, resulting in natural disasters such as floods and a decline in the quality of health of residents living around the area.[48,49]

The commonly used mosquito repellents are spray mosquito repellent and electric mosquito repellent. Dengue hemorrhagic fever is still a public health concern, mainly in tropical and subtropical regions. DHF is one of the acute diseases of the virus transmitted by the Aedes aegypti mosquito and the Aedes albopictus females. [50] Infectious diseases are also linked to geography/spatial factors because one source of disease occurs without environmental factors. Previous studies have suggested that poverty makes it difficult to provide a home with good health, a supply of drinking water, and a correct garbage disposal.[51–53]

The mosquitoes inside them contain the virus and then transfer it onto the healthy person after biting them, and so on. The rise and distribution of DHF cases is likely due to high population mobility, urban region development, climate change, densities and distribution changes, and other epidemiological factors that still require further research. Additionally, the annual rise in DHF cases is related to environmental sanitation conditions, where females - containing containers of clear water (bathtubs, discarded cans, and other water shelters) are desired.[54,55]

According to the Ministry of Public Works and People's Housing Policies discusses about on the use of water resources mentions that water is all that is found in and or comes from sources of water, both above and below the surface.[56] The "drinking water" refers to houses that obtain a major supply of water from protected Wells, springs, and sheltered pipes (channeled to homes, yards, neighbors, and hydrants). It also refers to Wells that are drilled or pumped. Households that exploit domestic drinking water sources that use brand water, refill water, unsheltered Wells, unsheltered springs, and water levels (rivers, lakes, ponds, irrigation channel DAMS), among other things, are not feasible. Suppose a family uses a suitable water source for cooking, bathing, washing their hands, and other items other than drinking. In that case, it is regarded as using a suitable source of drinking water.[57]

According to the ministry, domestic water management and water management aim to improve and maintain both water quality and water quality, as well as to apply the principle of food sanitation hygiene in food management.[58] Good water treatment is essential to prevent germs from entering the body.[59] Thus, from the physical quality aspect, clean water must be qualified for health so that any managed water can be used to treat the food they consume.[60]

Vol. 6, No. 1, 2024, pp. 24-38 10.26555/eshr.v6i1.9691

Dengue hemorrhagic fever is a disease caused by Dengue virus infection. Manifestations of dengue are fever for 2-7 days accompanied by bleeding, a decrease in platelets (platelets), a concentration of plasma leaks (increased hematocrit, ascites, the effusion of pleura, hypoalbuminemia). In addition, it can be accompanied by palpitations such as headache, muscle and bone pain, and the appearance of skin rashes to the back of the eyeball.[61] Based on Indonesian health profile data, dengue fever cases reported in 2019 were 138,127. The number of cases has increased compared to 2018, amounting to 65,602 cases. Deaths due to dengue fever in 2019 also increased, from 467 deaths in 2018 to 919 deaths in 2019. Indonesia's dengue fever incidence rate also increased in 2019, 51.48 per 100,000 population.[62]

Community diagnosis results show that people are already taking measures to prevent the transmission of dengue fever, such as holding tanks, closing places that allow mosquitoes to grow, and using drugs to eradicate mosquitoes. Several risk factors for the transmission of Dengue Hemorrhagic Fever are population density, urbanization factors that are not well planned and controlled, increasingly advanced transportation systems so that population mobilization becomes very easy, waste management systems, and the provision of clean water that is impossible to have an impact on the development of the spread and density of mosquitoes. Apart from the environmental factors mentioned above, a person's immunological status is also very influential. The infecting virus, age, and genetic history also influence the transmission of dengue fever.[61,63]

Based on the health problems described above, the top 10 health problems were determined, consisting of no organic trash collection center covered in homes, using spray-repellent, sometimes wearing a helmet, not sprinkle larvacide powder on the washed water dump, do not plant repellents, no gloves during the process of cutting ingredients with a knife for cooking, no props when moving heavy objects, not taking care of fish larvae eaters, hypertension and diabetes mellitus. These problems are included in the priority health problems that will be assessed using the USG scoring method (Urgency, Seriousness, Growth) to determine health problems that will be given health interventions. According to Kotler (2001) at the scoring stage of the USG method each issue is assessed to evaluate the associated risks and impacts. The process of implementing the USG method is carried out by considering the level of urgency, the severity of the problem at hand, and the potential for increasing expansion of the problem.[64]

After prioritizing the problems to be solved, researchers conducted a Village Community Meeting to brainstorm with stakeholders and the community to determine how to intervene in the health problems. From the top 10 problems that had been determined, it was narrowed down to 3 priority problems that existed in the 3 RTs. Then the community representatives present each chose one health problem to be intervened. Based on the results of the village community deliberation, it was agreed that the intervention to be carried out was related to Diabetes Mellitus (DM), with a target group of residents aged >18 years. The intervention was carried out in the form of counseling and in collaboration with the Banguntapan III Primary Health Center.

CONCLUSION

Based on the ten major health problems found, the priority problems that need to be addressed is diabetes mellitus. In addition, several health problems were found that need to be intervened, namely the application of occupational health and safety at the household level, waste management tools and dengue prevention behaviors. Addressing the priority issue of diabetes mellitus requires a comprehensive public health strategy. Concurrently, it’s critical to implement household-level occupational health interventions, improve waste management,

Vol. 6, No. 1, 2024, pp. 24-38 10.26555/eshr.v6i1.9691

and encourage dengue avoidance practices. Using a multi-sectoral strategy will make society more resilient and healthy.

Acknowledgment

We want to thank the Head of the Banguntapan III Community Health Centre, the Hamlet Head Tegaltandan and the Village Head in Banguntapan, who have given permission and cooperation in this research activity.

Declarations

Authors' contribution

RR contributed to the research design, IPW, DF, ESA, data collection, ARP, ANP FNQ analysis, and TM, SKW, FDA, and RR editing manuscript.

Funding statement
Research has yet to receive external funding.

Conflict of interest
There is no conflict of interest in this research.

REFERENCES

1. Sousa FAM do R, Goulart MJG, Braga AM dos S, Medeiros CMO, Rego DCM, Vieira FG, et al. Setting health priorities in a community: a case example. Rev Saude Publica.2017;51(11).
2. Alberdi-Erice MJ, Martinez H, Rayón-Valpuesta E. A Participatory Community Diagnosis of a Rural Community from the Perspective of Its Women, Leading to Proposals for Action. Int J Environ Res Public Health. 2021 Sep 14;18(18):9661.
3. Syakurah RA, Moudy J. Diagnosis Komunitas Dengan Pendekatan Proceed-Precede Pada Mahasiswa Kepaniteraan Klinik. Jambi Med J. 2022;10(1):1–19.
4. Basseej MH, Holakouie-Naieni K, Ardalan A, Ahmadnezhad E. Community assessment for determining the health priority problems and community diagnosis: A case study of Qala_Sayed village, Kazeroun, Fars Province, Iran. Iran J Public Health. 2015;44(9):1303–5.
5. Public Health England. A Guide to Community-centred Approaches for Health and Wellbeing. 2015. 48 p.
6. Bantul Health Department. Health Profile Bantul District 2021. Bantul; 2021.
7. Bantul Health Department. Health Profile Bantul District 2022. Vol. 3. 2022. 1–47 p.
8. Kemenkes RI. Laporan Nasional RISKESDAS 2018. Jakarta: Lembaga Penerbit Badan Penelitian dan Pengembangan Kesehatan (LPB); 2019. 198 p.
9. WHO. Determinants of health. 2017. [cited 2024 Jan 20]. Available from: https://www.who.int/news-room/questions-and-answers/item/determinants-of-health
10. Widayanti AW, Green JA, Heydon S, Norris P. Health-seeking behavior of people in Indonesia: A narrative review. J Epidemiol Glob Health. 2020;10(1):6–15.
11. Mollborn S, Short SE. Social Determinants and Health Behaviours. Physiol Behav. 2015;176(10):139–48.
12. Short CE, Vandelanotte C, Duncan MJ. Individual characteristics associated with physical activity intervention delivery mode preferences among adults. Int J Behav Nutr Phys Act. 2014;11(1):1–10.
13. Hardisman H. Pembangunan Terestegrasi Sebagai Pendekatan Pemecahan Masalah

Kesehatan Di Indonesia. Vol. 5, Jurnal Kesehatan Masyarakat Andalas. 2011. p. 94–9.
14. WHO. Ageing and health. 2022 [cited 2024 Jan 20]. Available from: https://www.who.int/news-room/fact-sheets/detail/ageing-and-health
15. Marzuki AA, Nor NNFM, Rashid SMRA. Aging Population Trend in the State of Perak, Malaysia. Quantum J Soc Sci Humanit. 2021;2(5):1–9.
16. Leslie W, Hankey C. Aging, nutritional status and health. Healthc. 2015;3(3):648–58.
17. Raghupathi V, Raghupathi W. The influence of education on health: An empirical assessment of OECD countries for the period 1995-2015. Arch Public Heal. 2020;78(1):1–18.
18. Pampel FC, Krueger PM DJ. Socioeconomic Disparities in Health Behaviors. Annu Rev Sociol. 2010;349–70.
19. Abula K, Gröpel P, Chen K, Beckmann J, Scientific A, Sciences M, et al. How are different levels of knowledge about physical activity associated with physical activity behaviour in Australian adults? PLoS One. 2018;7(11):52–62.
20. He XZ, Baker DW. Differences in leisure-time, household, and work-related physical activity by race, ethnicity, and education. J Gen Intern Med. 2005;20(3):259–66.
21. Zajacova A, Lawrence EM. The Relationship between Education and Health: Reducing Disparities Through a Contextual Approach. Annu Rev Public Health. 2018;39:273–89.
22. Andermann A. Taking action on the social determinants of health in clinical practice: A framework for health professionals. Cmaj. 2016;188(17–18):E474–83.
23. American Diabetes Association. Standards of medical care in diabetes - 2012. Diabetes Care. 2012;35 (SUPPL. 1).
24. Mutambudzi M, Javed Z. Job Strain as a Risk Factor for Incident Diabetes Mellitus in Middle and Older Age U.S. Workers. Journals Gerontol - Ser B Psychol Sci Soc Sci. 2016;71(6):1089–96.
25. Yashi K, Daley SF. Obesity and Type 2 Diabetes. StatPearls. 2023.
26. Booth FW, Roberts CK, Laye MJ. Lack of exercise is a major cause of chronic diseases. Compr Physiol. 2012;2(2):1143–211.
27. Ramadina N, Ardisasmita MN, Sujatmiko B. Geographic accessibility towards primary health care in Karawang district. Kesmas. 2021;16(3):199–205.
28. Hendrix N, Warkaye S, Tesfaye L, Woldekidan MA, Arja A, Sato R, et al. Estimated travel time and staffing constraints to accessing the Ethiopian health care system: A two-step floating catchment area analysis. J Glob Health. 2023;13.
29. Khatimah H, Sundari S, Candra C, Al S, Yogyakarta I, Yogyakarta DI. Factors related to access to health services for Indigenous peoples in Jayapura Regency , Province of Papua in 2018. 2019;9(2):150–6.
30. Davy C, Harfield S, McArthur A, Munn Z, Brown A. Access to primary health care services for Indigenous peoples: A framework synthesis. Int J Equity Health. 2016;15(1):1–9. Available from: http://dx.doi.org/10.1186/s12939-016-0450-5
31. Syed ST, Gerber BS, Sharp LK. Traveling Towards Disease. J Community Health. 2013;38(5):976–93.
32. Oluyede L, Cochran AL, Prunkl L, Wang J, Wolfe M, McDonald NC. Unpacking transportation barriers and facilitators to accessing health care: Interviews with care coordinators. Transp Res Interdiscip Perspect. 2022;13:100565. Available from: https://doi.org/10.1016/j.trip.2022.100565
33. Al-Taiar A, Clark A, Longenecker JC, Whitty CJM. Physical accessibility and utilization of health services in Yemen. Int J Health Geogr. 2010;9:1–8.
34. Collado ZC. Challenges in public health facilities and services: evidence from a geographically isolated and disadvantaged area in the Philippines. J Glob Heal Reports. 2019;3.
35. WHO. Noncommunicable diseases. 2023 [cited 2024 Jan 20]. Available from: https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases
36. Siswati T, Paramashanti BA, Rialihanto MP, Waris L. Epidemiological Transition in

Indonesia and Its Prevention: A Narrative Review. J Complement Altern Med Res. 2022;(May):50–60.
37. WHO. Clinical guidelines for the management of hypertension. 2005 [cited 2024 Jan 20]. Available from: https://applications.emro.who.int/dsaf/dsa234.pdf
38. Malik A, Yoshida Y, Erkin T, Salim D, Hamajima N. Hypertension-related knowledge, practice and drug adherence among inpatients of a hospital in Samarkand, Uzbekistan. Nagoya J Med Sci. 2014;76(3–4):255–63.
39. Mouri M, Badireddy M. Hyperglycemia. StatPearls. 2023.
40. Alshahrani JA, Alshahrani AS, Alshahrani AM, Alshalaan AM, Alhumam MN, Alshahrani NZ. The Impact of Diabetes Mellitus Duration and Complications on Health-Related Quality of Life Among Type 2 Diabetic Patients in Khamis Mushit City, Saudi Arabia. Cureus. 2023 Aug 27;15(8):e44216.
41. Sari Y, Purnawan I, Taufik A, Sumeru A. Quality of Life and Associated Factors in Indonesian Diabetic Patients with Foot Ulcers. Nurse Media J Nurs [Internet]. 2018 Aug 14;8(1):13.
42. Schulze MB, Martínez-González MA, Fung TT, Lichtenstein AH, Forouhi NG. Food based dietary patterns and chronic disease prevention. BMJ. 2018 Jun 13;361:k2396.
43. Willett WC, Koplan JP, Nugent R, Dusenbury C, Puska P, Gaziano. TA. Prevention of Chronic Disease by Means of Diet and Lifestyle Changes. The International Bank for Reconstruction and Development. 2006.
44. Che Huei L, Ya-Wen L, Chiu Ming Y, Li Chen H, Jong Yi W, Ming Hung L. Occupational health and safety hazards faced by healthcare professionals in Taiwan: A systematic review of risk factors and control strategies. SAGE open Med. 2020;8:2050312120918999.
45. Ranaei V, Hosseini Z, Dadipoor S. Barriers to using a helmet among motorcyclist students: a qualitative study. J Inj Violence Res. 2021 Jul;13(2):81–6. Available from:
46. Peng Y, Vaidya N, Finnie R, Reynolds J, Dumitru C, Njie G, et al. Universal Motorcycle Helmet Laws to Reduce Injuries: A Community Guide Systematic Review. Am J Prev Med. 2017 Jun;52(6):820–32.
47. Rezapur-Shahkolai F, Vesali-Monfared E, Barati M, Tapak L. Prediction of Helmet Use Behavior among Motorcyclists Based on the Theory of Planned Behavior. J Res Health Sci. 2022 Dec;22(4):e00564.
48. Echendu AJ. Flooding and Waste Disposal Practices of Urban Residents in Nigeria. GeoHazards. 2023 Sep 26;4(4):350–66.
49. Abubakar IR, Maniruzzaman KM, Dano UL, AlShihri FS, AlShammari MS, Ahmed SMS, et al. Environmental Sustainability Impacts of Solid Waste Management Practices in the Global South. Int J Environ Res Public Health. 2022 Oct 5;19(19).
50. Kularatne SA, Dalugama C. Dengue infection: Global importance, immunopathology and management. Clin Med. 2022 Jan;22(1):9–13.
51. Jia P, Dong W, Yang S, Zhan Z, Tu L, Lai S. Spatial Lifecourse Epidemiology and Infectious Disease Research. Trends Parasitol. 2020 Mar;36(3):235–8.
52. Angoua ELE, Dongo K, Templeton MR, Zinsstag J, Bonfoh B. Barriers to access improved water and sanitation in poor peri-urban settlements of Abidjan, Côte d'Ivoire. PLoS One. 2018;13(8):e0202928.
53. Wisapti Ningsih U, Sukesi K, Utami Nugroho H, Shinta A. Preserving the Environment and Alleviating Poverty Through Household Waste Management. Int J Soc Local Econ Gov. 2015;1(2):104–7.
54. Murray NEA, Quam MB, Wilder-Smith A. Epidemiology of dengue: past, present and future prospects. Clin Epidemiol. 2013;5:299–309.
55. Setyadi AW, Yunita A, Muhibuddin N. The Relationship of Environmental Sanitation and Family Attitudes with Events of Dengue Hemorrhagic Fever (DHF) in Working Areas UPTD Public Health Centre Bendo Kediri District. J Qual Public Heal. 2021;4(2):211–8.
56. Regulation of the Minister of Public Works and Housing No. 09/PRT/M/2015/2015 on the

Use of Water Resources. 09 2015.
57. WHO, UNICEF. Global Water Supply and Sanitation Assessment 2000 Report. Geneva: WHO and UNICEF Joint Monitoring Programme for Water Supply and Sanitation. Geneva; 2013.
58. Ministry of Health Indonesia. Community-based Total Sanitation in Indonesia. 2014.
59. CDC. Preventing Waterborne Germs at Home. [cited 2024 Feb 13]. Available from: https://www.cdc.gov/healthywater/drinking/preventing-waterborne-germs-at-home.html
60. Bhagwat VR. Safety of Water Used in Food Production. In: Food Safety and Human Health. Elsevier; 2019. p. 219–47.
61. Ministry of Health Indonesia. Guidelines for the prevention and control of dengue fever in Indonesia. Vol. 5. 2017. 9 p.
62. Ministry of Health Indonesia. Health Profile Indonesia 2019. 2019. 28–28 p.
63. WHO. Dengue and severe dengue. 2023. [cited 2024 Jan 20]. Available from: https://www.who.int/news-room/fact-sheets/detail/dengue-and-severe-dengue
64. Philip K, Amstrong G. Principles of marketing volume 1. Erlangga; 2001.

Vol. 6, No. 1, 2024, pp. 24-38 10.26555/eshr.v6i1.9691