Health Socialization and Prevention of Heart Disease as Well as a Description of the Basic Health of the Community in Cisaat Village, Pangauban, Bandung Regency

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Abstract. Based on a direct survey in Cisaat Village, Pangauban District, Pacet Subdistrict, Bandung Regency, 70% of the population are elderly individuals who frequently experience health problems, particularly related to the heart. The main issue identified was that most residents rarely visit community health centers (puskesmas); instead, they rely on over-the-counter medications, visit local healers or informal practitioners, and frequently consume energy drinks. One of the solutions to address this issue is to improve community knowledge and awareness regarding health maintenance. Therefore, the community engagement program conducted by the Faculty of Medicine, Bandung Islamic University, aimed to provide health education and promote awareness about health and the prevention of cardiac emergencies.Methods that being used in this community service program included two stages: (1) a health education session focusing on cardiac health and emergencies, and (2) health screening for residents, which included measuring blood pressure, BMI, age, glucose levels, uric acid, and cholesterol. The collected data were analyzed descriptively using univariate analysis and presented in tables and charts. Result showed that the majority of participants were female (70%) and middle-aged adults (40–59 years) (46%). Most participants had normal glucose levels (83.67%), normal uric acid levels (85.71%), and normal cholesterol levels (69.39%). The data indicated that most participants had elevated blood pressure, though other biochemical risk factors (glucose, uric acid, and cholesterol) remained within normal limits. This finding suggests that increased blood pressure may be an early manifestation of cardiometabolic disturbances before significant biochemical changes occur. Early detection and control of blood pressure are essential, even in individuals with a normal metabolic parameters.

Keywords: socialization, cardiac health, cardiac emergencies

A. Introduction

Based on interviews and discussions conducted both online and offline with community leaders, as well as results from direct field surveys, data from Cisaat Village, Pangauban Sub- village, Pacet District, Bandung Regency, show that the community profile reflects the characteristics of a typical rural area — a close-knit society with diverse daily activities. The village has a total population of approximately 13,073 people, consisting of 6,801 males and 6,272 females. The topography of the area is mountainous, with an elevation of around 960 meters above sea level. The village boundaries are as follows: North: Maruyung Village and Mekarjaya Village, South: Cikitu Village, West: Cinangela Village, East: Cikitu Village The land in this area consists of dry soil used for small-scale plantations and rice fields with simple irrigation systems. The distances to government centers are approximately 39 km to the provincial capital, 36 km to the regency center, and 5 km to the district office. The partner location, Pangauban Village in Pacet District, Bandung Regency, is about 37.2 km from the Faculty of Medicine, Bandung Islamic University, which takes around 1 hour and 44 minutes by car.[1–3]

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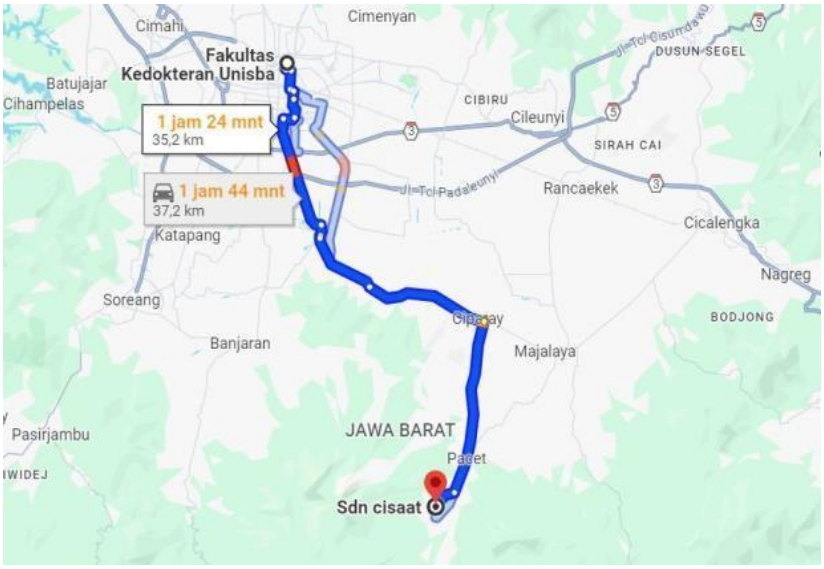


Gambar 1. Map of Cisaat Village

Important health-related information obtained from the survey in Cisaat Village, Pangauban Sub-village, indicates that around 60–70% of the population—mainly elderly residents— frequently experience various health complaints. Some residents have been diagnosed with heart-related diseases, including cases of severe chest pain accompanied by shortness of breath, which, after further medical examination, were confirmed as heart attacks.

In addition to cardiac conditions, due to factors such as age and occupation, many residents also suffer from hypertension, diabetes mellitus, rheumatism, muscle pain, and other ailments. Since most residents work in agriculture, plantations, and livestock, community leaders noted that many of them are farm laborers who work hard from early morning until noon. Despite their busy work routines, the community still makes time for collective activities. A key moment for social interaction among community leaders is Friday afternoons**,** after Friday prayers**,** when they gather at the mosque to discuss and address local issues. Based on the survey results and situation analysis presented above, the primary issues faced by the community can be categorized into two main groups 1). Human Resource (HR) issues, particularly limited knowledge about cardiac health, and 2). Challenges in accessing and utilizing healthcare facilities, whether through direct visit to the community health centre *(puskesmas)* or using telemedicine.

Based on this background, there is potential for community leaders to take advantage of this moment to organize activities that are useful in helping to address the health issues that many of them have complained about through , namely socialization and assistance with health issues that are often found in people of a certain age as risk factors for heart health problems.

The problem identified is that most people rarely seek treatment at health centers and usually only use/consume medicines from shops or go to traditional healers and wise men, and often consume energy drinks. After identifying the partners' problems, analyzing the situation, and discussing with the partners, the solution to the problem was carried out through socialization and counseling activities on healthy living, health, and heart emergencies, as well as screening/filtering of disease risk factors among the residents. The steps taken to solve the above problems are in accordance with the 2021-2026 Bandung Regency Long-Term and Medium-Term Development Plan (RPJMD) and the Unisba FK PKM road map in the field of Health Service from an Islamic Perspective Based on Community, Individual, and Biomolecules. Attention to health is mandatory for every human being because Allah has created humans in the best possible way, as stated by Allah SWT in Surah At-Tin verse 4, which reads لَقَدْ خَلَقْنَا الْإِنسَانَ فِي أَحْسَنِ تَقْوِيمٍ ﴿٤﴾ meaning "Indeed, We have created man in the best form"

because humans have a moral and spiritual responsibility to maintain all the blessings that Allah has given, including physical and spiritual health. The concept of health maintenance, which emphasizes prevention over cure, is not yet widely known among the public. People still follow their own assumptions in maintaining and preserving their health, even though in Islamic teachings there

is a verse that explains "And spend (your wealth) in the way of Allah, and do not throw yourselves into destruction, and do good, for indeed, Allah loves those who do
وَظَلَّلْنَا عَلَيْكُمُ ٱلْغَمَامَ وَأَنزَلْنَا عَلَيْكُمُ ٱلْمَنَّ وَٱلسَّلْوَىٰ ۖ كُلُوا۟ مِن 57: verse Al-Baqarah Surah 195) 2: good.(QS shaded "We themselves. wronged they﴿٥٧﴾ طَيِّبَٰتِ مَا رَزَقْنَٰكُمْ ۚ وَمَا ظَلَمُونَا وَلَٰكِن كَانُوٓا۟ أَنفُسَهُمْ يَظْلِمُونَ
you with clouds and We sent down manna and quails for you. Eat from the good things We have provided for you. They did not wrong Us, but they wronged themselves." (QS. AlBaqarah verse 57).

B. Method

Two activities were conducted: stage 1 involved health education on heart health, heart emergencies, and their risk factors, presented by expert cardiologists and related specialists. The second stage involved health screening, including BMI data, laboratory data to record risk factors for disease, namely glucose, uric acid, and cholesterol levels, as well as blood pressure checks for participants. The data was then processed descriptively and univariately to see a baseline picture of the residents' health data. The data was presented in tables and diagrams. The implementation was carried out in the village of Cisaat, Pacet sub-district, Bandung district. Age data is grouped based on WHO classifications: young adults 18-39 years, middle- aged adults 40-59 years, and elderly >60 years. Blood pressure is divided into two groups: 120/80 mmhg and >120/80 mmhg. Glucose levels were measured with a normal reference value of <200 mg/dl

C. Result and Discussion

Health Education

This activity was carried out on June 24, 2025, by holding a meeting between the community service team representatives and community leaders. During the activity, the symptoms of coronary heart disease (CHD), risk factors, and other symptoms in the form of CHD emergencies were explained.

Baseline health data screening

73 residents participated in physical examinations, including height, weight, blood pressure, and laboratory tests. Of all attendees, only 58 residents could be included in the risk factor screening report in the form of laboratory tests, as laboratory risk factor testing was only intended for residents over 40 years of age.

Distribution of participant characteristics

The distribution of participants was based on age, gender, blood pressure values, and laboratory test results. The characteristic data can be seein in Table 1.

Tabel 1. Distribution of participant characteristics

Parameter	N	%
Gender		
Male	17	29
Female	41	71
Total	58	100
Age (years)		
18-39 (Young adults)	13	22
40-59 (Middle-aged adults)	27	47
> 60 (Elderly)	18	31
Total	58	100
Normal Blood pressure	< 120 mmhg	>120 mmhg
18-39 (Young adults)	5	8

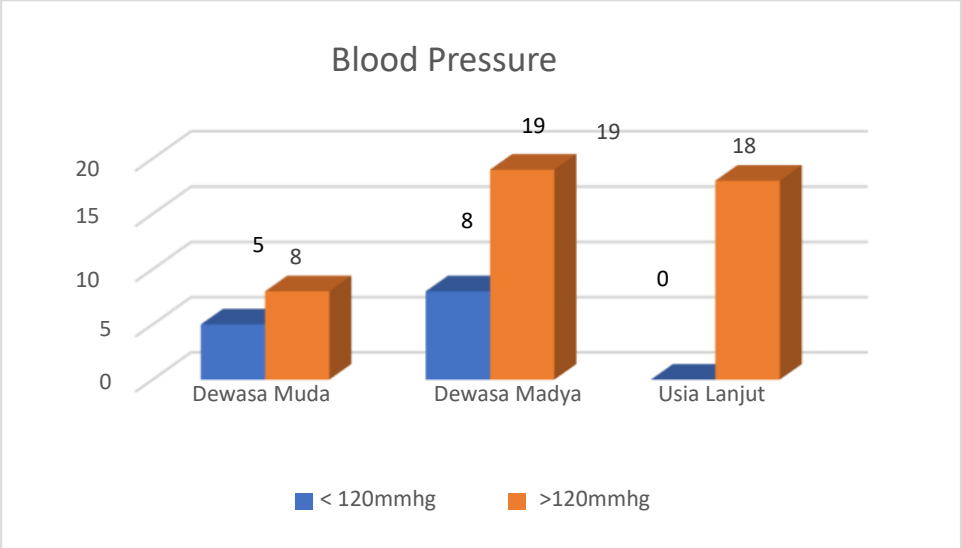
Parameter	N	%
40-59 (Middle-aged adults)	8	19
> 60 (Elderly)	0	18
Total	13 (22%)	45 (78%)
Laboratory examination of risk factor N:49		
Glucose	≤ 140 mg/dl	>140 mg/dl
18-39 (Young adults)	5	0
40-59 (Middle-aged adults)	22	4
> 60 (Elderly)	14	4
Total	41 (84%)	8 (16%)
Uric Acid	Normal	Abnormal
18-39 (Young adults)	5	0
40-59 (Middle-aged adults)	27	0
> 60 (Elderly)	10	7
Total	42 (86%)	7 (14%)
Choslesterol	≤ 200 mg/dl	>200 mg/dl
18-39 (Young adults)	4	1
40-59 (Middle-aged adults)	21	6
> 60 (Elderly)	9	8
Total	34 (69%)	15 (31%)

The data shows that the majority of participants in the health examination were women (71%), with the largest age group being middle-aged adults (40-59 years old) at 47%. The results of the glucose level examination showed that 84% were within the normal range, the majority of uric acid levels were also within the normal range at 86%, and the majority of cholesterol levels were also within the normal range at 69%.

The majority of residents who participated in the examination were women, possibly because this activity was carried out on weekdays, so that women who work more at home/housewives were able to participate compared to men.

The majority of participants were middle-aged adults, as this is the age range where diseases begin to emerge but people are still active, so this age group dominated the attendance.

The blood pressure of residents examined as baseline health data was predominantly above normal, i.e., above 120/80 mmhg, at 78%. This finding is in line with the distribution of participant characteristics based on age groups according to the WHO, where the middle-aged and older adult age groups ( ) accounted for 78%. This condition is consistent with the aging process, as physiological changes occur in the cardiovascular system with increasing age, including reduced vascular elasticity and increased peripheral resistance, which contribute to elevated blood pressure. (8.-) (10) As shown in the diagram below.



Gambar 2. Blood pressure diagram based on age

Risk factor examinations were only conducted for those aged 40 years or older or those with risk factors for disease, totaling 49 participants. The results showed that glucose, uric acid, and Young adults Middle-aged Elderly blood pressure < 120mmHg >120 mmHg cholesterol levels were more often normal than abnormal (> 140mg/dl). This could be due to several possibilities, namely that the examination was only conducted at a time that did not accurately reflect the actual condition, as a proper examination uses fasting glucose and/or 2 hours after eating. Another possibility is that the population, which mostly consists of farmers, has characteristics of hard workers and tends not to have excessive lifestyles and eating patterns like those in cities.Although the results are generally good, abnormal results increase with advancing age. This can be seen in the following diagram.

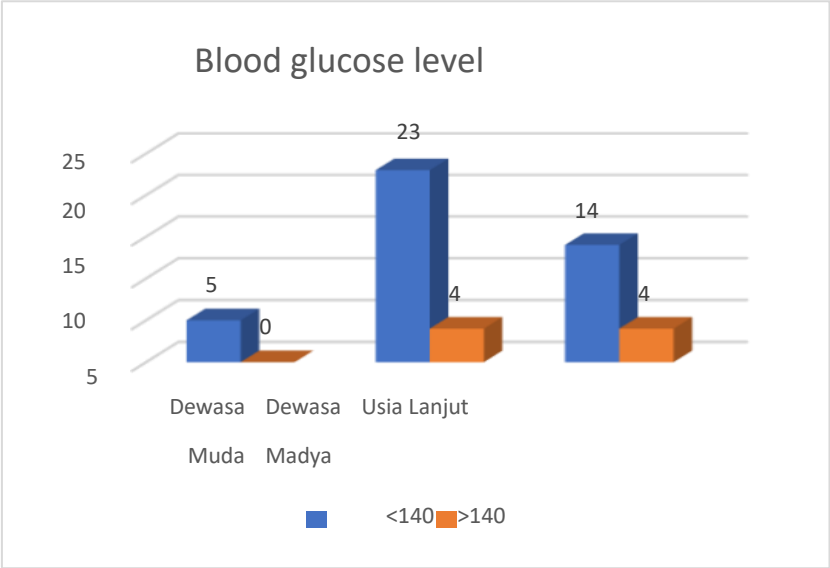


Figure 3. Glucose levels based on age

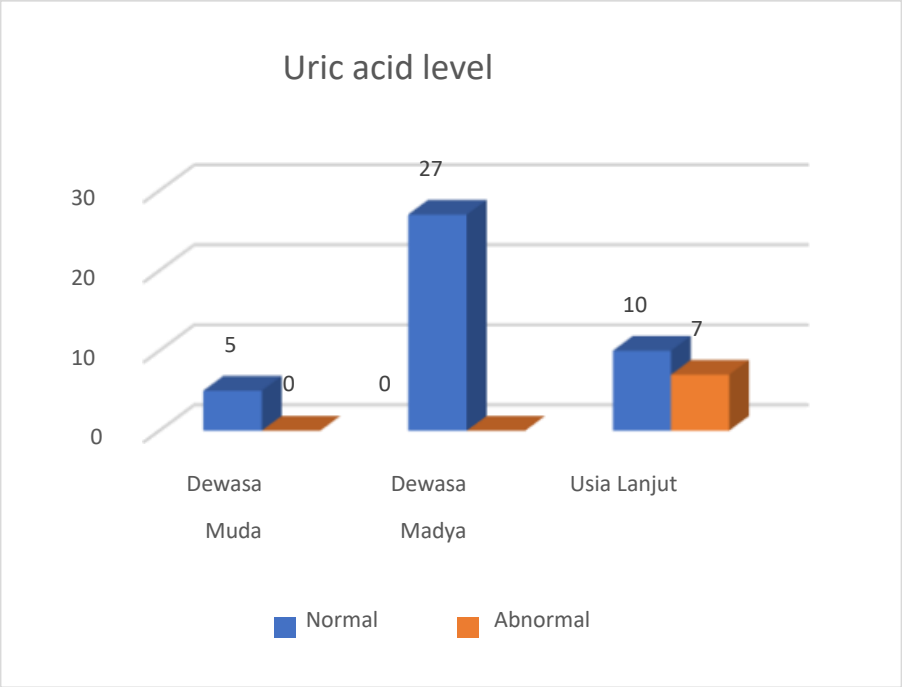


Figure 4. Uric acid levels based on age

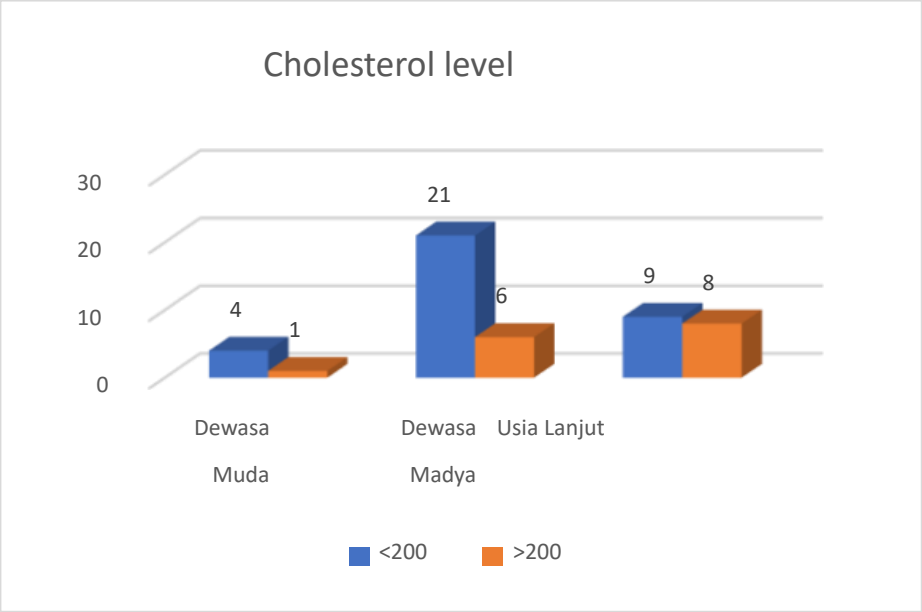


Figure 5. Cholesterol levels based on age

D. Conclusion

The data obtained from this PKM activity shows that the majority of residents/participants have a high (abnormal) blood pressure, but their glucose, uric acid, and cholesterol levels are still predominantly within normal limits. This indicates that an increase in blood pressure can be an early manifestation of cardiometabolic disorders before significant changes occur in biochemical risk factors. Early detection and control of blood pressure are crucial, even in individuals with normal metabolic levels.

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