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## Monitoring of The Elderly Cholesterol Levels of Sumbersono Village, Mojokerto Regency, East Java Province, Indonesia

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### A B S T R A C T

Parties who become partners in community service activities are the village community of Sumbersono, Mojokerto Regency. Based on the 2017 health profile in Mojokerto District, there are 117,309 elderly people. The Mojokerto district government has a health program for the elderly, namely the Elderly Health Service (Usila). Usila is a health service according to the elderly guidelines in health facilities of an area periodically. Monitoring of the elderly health programmed by the Mojokerto district government has been carried out at the Puskesmas that serves the elderly, but they need more routine checkups to monitor cholesterol levels somehow the medical checkups are relatively expensive. Therefore, the community service program is aimed to monitor blood cholesterol levels using POCT and followed by medical consultation as prevention of diseases. About 44 participants joined the program, not only from the elderly but from middle age. The results program showed about 10 elderly and 7 middle-aged participants had normal cholesterol levels, meanwhile, 17 elderly and 10 middle-aged participants had high and extremely high cholesterol levels. Based on medical consultation showed almost all participants had health complaints due to high cholesterol levels and the participants were interested along with the program. Therefore, the monitoring of cholesterol levels not only suitable for the elderly but also adolescents and adults.

## INTRODUCTION

Sumbersono Village is one of the villages in Dlanggu District, Mojokerto Regency. The village boundaries are as follow the northern part of Sumbersono village is Jrambe village, the east is Mojokarang village, the south is Segunung village, and the west is Sambilawang village. Village potential profile data in the livelihood section of the Sumbersono village community shows that most of the community are farmers / farm laborers / laborers / private. While a small proportion is civil servants, traders, village officials, Police Officer / Armed Forces, and retirees. The number of elderly residents (seniors) was recorded at 478 people. The majority of people who participate in this community service activity are farmers who rely on free medical checkups held at the community health center.

Based on the Health profile in 2017 of Mojokerto Regency, East Java Province, Indonesia there are 117,309 elderly people. The Mojokerto regency government has a health program for the elderly, namely the Elderly Health Service or known as Usila. Usila is a health service according to the standards in the elderly guidelines in health facilities in one work area and period of time. The health coverage of elderly services has increased from 2016, as the result of the efforts of health cadres such as work up the

formation of the Elderly Posyandu (a free routine elderly health checkup) in Sumbersono village, and the Elderly Posyandu in the community health center program in Mojokerto Regency, such as the existence of prolanis (national health insurance elderly program) (Sumbersono, 2019).

The elderly have experienced a lot of derivatives in psychomotor and health. Some of the diseases that are often found in the elderly are degenerative (Amelia et al., 2018; Pamungkas & Gayatri, 2019), cardiovascular (Zhang et al., 2018), cancer (Estapé, 2018), and neurological diseases (Błaszczuk, 2020; Zhang et al., 2018). The various types of diseases that can be found in the elderly certainly really need attention and monitoring. Health monitoring is beyond the financial capability of the elderly in Sumbersono village. This is because most of them come from farming families so the focus on health cannot be done periodically. One of the efforts is to take part in free health checks conducted in the village of Sumbersono. The elderly examination programmed by the Mojokerto regency government has been carried out at the community health center for the elderly, but the elderly need more routine checks to monitor their health. Among the parameters of health checks that are often needed by the elderly is checking cholesterol levels. Another thing that becomes a problem is cholesterol testing which is relatively expensive so that there are limitations for the community to do the examination independently. Therefore, this community service activity was delivered.

## **METHOD**

Cholesterol checks conducted by using the Point of Care Testing (POCT) device without prior fasting. Interviews were also conducted to confirm health complaints experienced by community service participants related to health problems due to high cholesterol levels. The results of the medical test were given directly to community service participants and were processed descriptively in graphical form.

## **RESULT AND DISCUSSION**

The community service was carried out at the village hall of Sumbersono, Dlanggu District, Mojokerto. Public enthusiasm was very high in taking free cholesterol checkup. Almost all participants came for a free cholesterol check which was intended only for the elderly. Of the 44 participants who took the free cholesterol check, 17 were classified as middle age, while 27 were elderly (Figure 1).

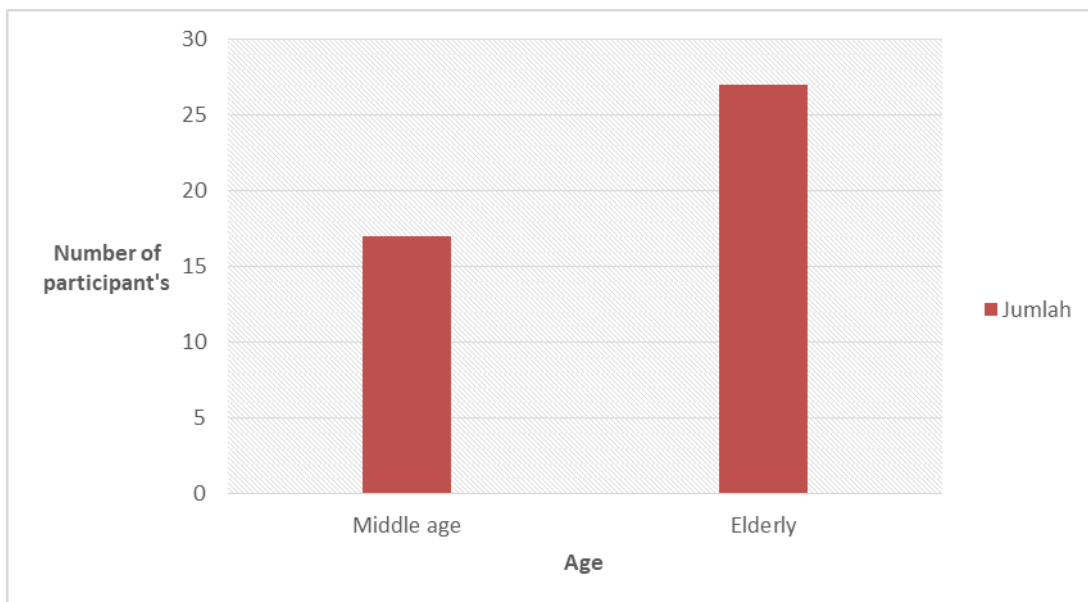


Figure 1. Number of Community Service Participants from Middle Age and Elderly Groups

Cholesterol test results showed varying results. The results were categorized into 3, namely normal cholesterol (less than 200mg / dL), high cholesterol (200-240mg / dL) and very high cholesterol (more than 240mg / dL). The elderly participants showed the results of very high cholesterol as many as 13 people, and high cholesterol by 4 people. As for the elderly participants, there were also 10 normal cholesterol results (figure 2).

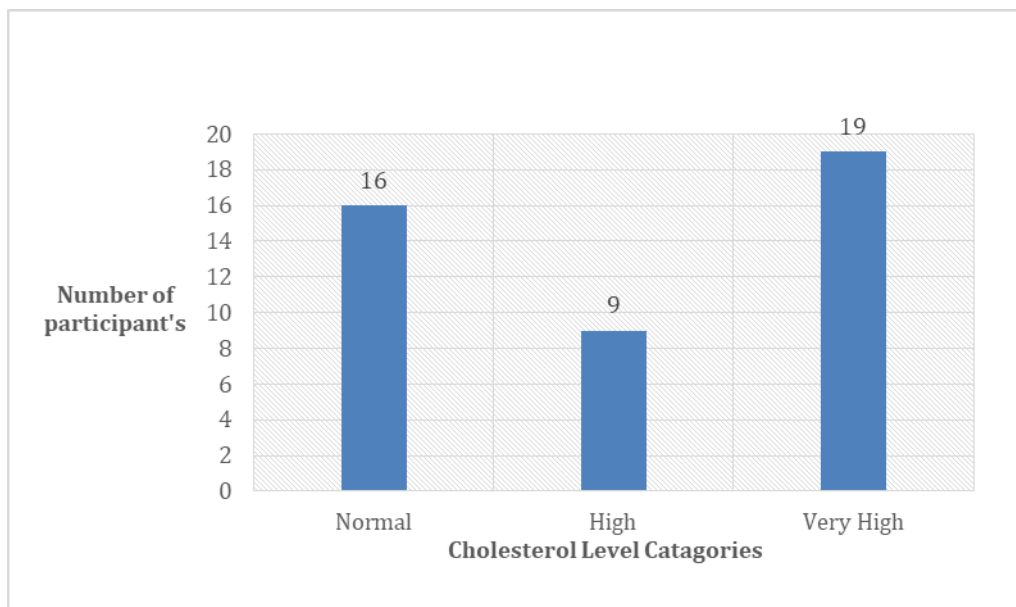


Figure 2. Cholesterol Level Results in the Elderly Participants

The results of examinations in middle-age showed that there were 6 people with very high cholesterol, 5 people with high cholesterol, and 6 people with normal cholesterol (Figure 3).

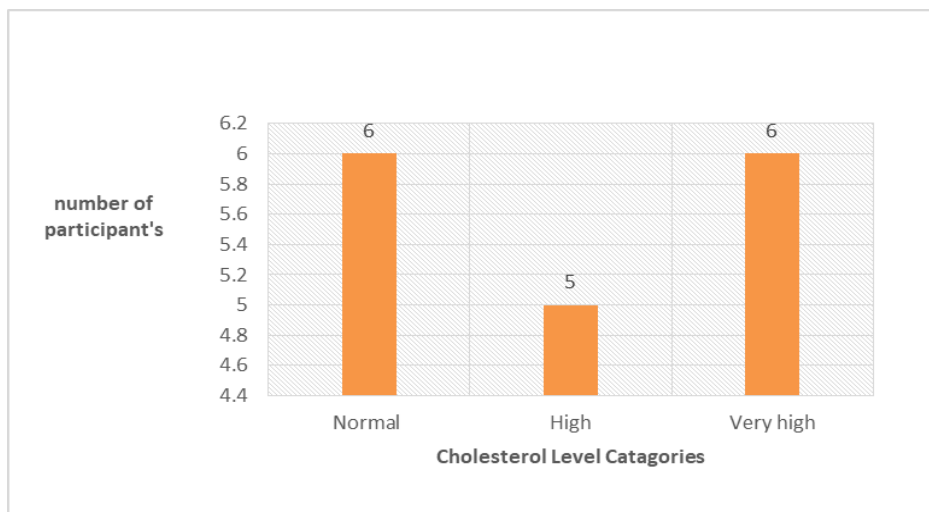


Figure 3. Cholesterol Level Results in Middle Age Participants

Apart from conducted free cholesterol checks, this community service also conducted interviews with participants. This was done to find out more about the health complaints experienced by the participants. The complaints that were asked about included dizziness, tingling sensation, joint pain, neck tension.

Elderly / elderly participants have variations in the health complaints they experienced. Even though the elderly had normal cholesterol levels, complaints were present (Figure 4). This can lead to other diseases or just the age factor. So, it was advised to do other tests besides checking cholesterol levels. Meanwhile, participants with high and very high cholesterol levels had relatively more complaints than participants with normal cholesterol levels (figure 5). Health complaints in the elderly are often found not only of one type (Prayekti, E., Wulandari, D., D., and Sumarsono, 2020). This is due to a decline in health with age. Another method of examination that is recommended to be used in determining the health of the elderly was to use urine analysis using the dipstick method (Andini, A., Prayekti, E, Sa'diyah, N., Nisa, A., Sahira, F., Arica, M.P., Salsabila, 2020).

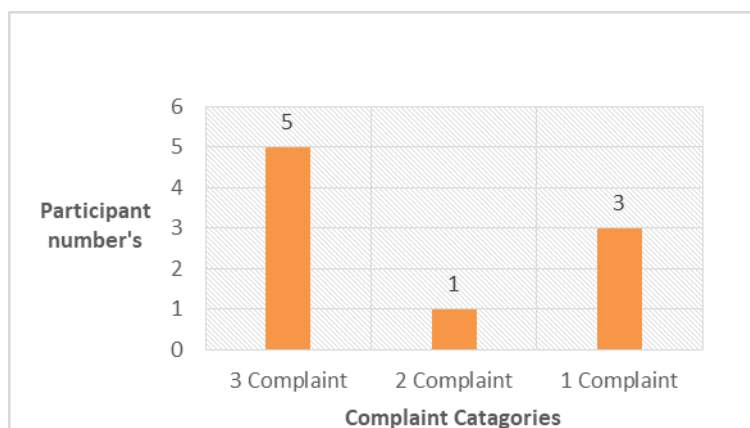


Figure 4. Number of Health Complaints Owned by Elderly Participants with Normal Cholesterol Levels

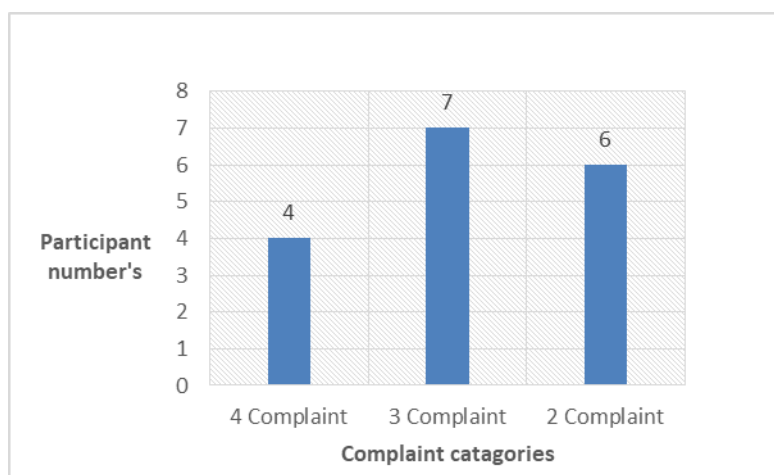


Figure 5. Number of Health Complaints Owned by Elderly Participants with High and Very High Cholesterol Levels

Health problems do not only occur in the elderly but also occur in middle age (range 45-59 years). Middle-age participants were motivated to carry out cholesterol checks due to several health complaints experienced. Participants with normal cholesterol levels had several health complaints (Figure 6), whereas participants with high and very high cholesterol levels had relatively more complaints (Figure 7).

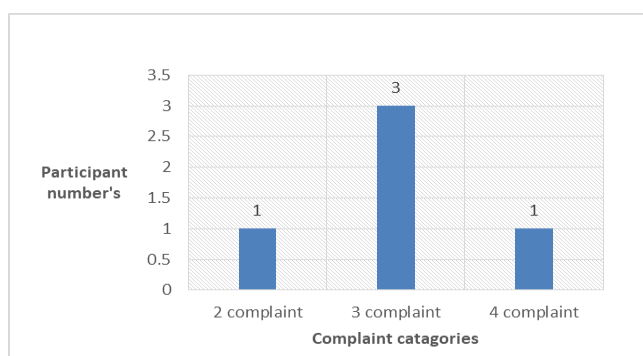


Figure 6. Number of Health Complaints of Middle Age Participants with Normal Cholesterol Levels

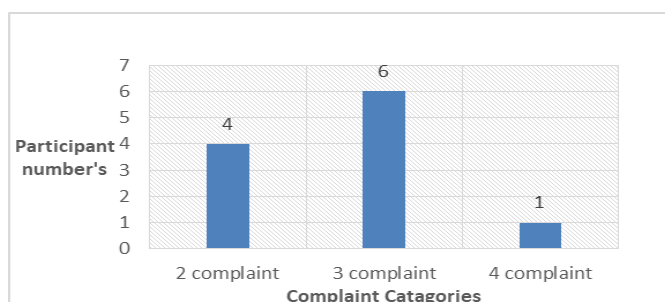


Figure 7. Number of Complaints Owned by Middle Age Participants with High and Very High Cholesterol Levels

The complaints experienced by the participants varied, including headaches, body fatigue, aches, and joint pain. The results of the interview showed that 82% of respondents were consuming a fried-based diet and 60% of them were elderly with high cholesterol levels.

## CONCLUSION

The results of the examination of elderly participants in Sumbersono Village, Ndlangu District, Mojokerto, have varied results. Whereas 27 elderly who did the examination, 17 had high and very high cholesterol levels. Meanwhile, 10 elderly have normal levels. The results of the interview showed that, although the elderly with normal cholesterol levels, they had health complaints such as complaints of cholesterol disease.

## ACKNOWLEDGEMENTS

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