Increasing Awareness of Sustainable Oral Health in The Elderly With The Peer Group Methods at Klinik Pratama 'Aisyiyah Moyudan Sleman Yogyakarta 2023

Sri Utami¹*, Novitasari Ratna Astuti ¹, Rini Maya Puspita ²
1 Departament of Dental Public Health, Faculty of Dentistry, Universitas Muhammadiyah Yogyakarta, Indonesia
2 Departament of Biomedic, Faculty of Dentistry, Universitas Gadjah Mada Yogyakarta, Indonesia
Email: sri.utami@umy.ac.id¹*, oviumy@umy.ac.id¹, rini_puspita@ugm.ac.id³

Abstract. The link between disease and age is extremely complicated. Age explains more variation in disease incidence than any other known factor, including oral diseases. Periodontal infections and dental caries are the most frequent human diseases and the leading causes of tooth loss. Both disorders can impair nutrition and have a detrimental impact on self-esteem and quality of life. The aim of this study is to maximize self-efficacy and health literacy through health empowerment, elderly adults with Diabetes Mellitus (DM), hypertension, or other systemic disorders require dental health promotion by creating dental and oral health cadres, the goal is to raise elderly's awareness of dental and oral health through peer groups. Forming and educating cadres in oral health was one of the tasks done. Two men and two women who were patients at the Klinik Pratama ‘Aisyiyah Moyudan Sleman Yogyakarta Indonesia and also members of chronic disease management Program (PROLANIS), were chosen as cadres. The cadres were given tooth brushing aids and dental and oral health posters, which were then used to train 30 elderly participants on how to brush their teeth properly and correctly. The training participants worked on pre-test and post-test questions before and after the training. Oral health cadres have been selected and trained to provide education to fellow elderly and participants. The education conducted by the cadres for 30 other participants generated very good results, where the average post-test score experienced a high increase (90) compared to the pre-test average score (60). In the second and third month after the program's execution, cadres' activities were independently monitored. Dental and oral health cadres could teach the people how to brush their teeth effectively. Promotive and preventive efforts carried out by cadres who were fellow elders employing peer group methods get excellent results, whereas education carried out from and by the internal community was more targeted and achieved excellent results.

Keywords: Cadres, Elderly, Promotive and Preventive Program

1 Introduction

The number of elderly people in Indonesia is 20 million people, equivalent to 8.03% of the entire population of Indonesia. In 2020 there will be 28.8 million people, equivalent to 11.34% of the entire population of Indonesia. The elderly population in the Special Region of Yogyakarta ranks first, namely 14.7 million people in 2020 ¹. Epidemiological studies show that the prevalence of DM and Impaired Glucose Tolerance (GTG) increases with age
Complications of DM in the oral cavity include periodontitis, periapical lesions, dental caries, xerostomia or hyposalivation, taste disturbances, burning mouth syndrome, and oral mucosal lesions. Dental caries and periodontal disease are sensitive alarms to unhealthy diets, and predict future disease onset.

The main risk factors for periodontitis include poor oral hygiene, smoking, DM, medication, stress, and aging. Gingival inflammation, tooth luxation and halitosis greatly affect the quality of life. Periodontitis is the main cause of tooth loss, which affects masticatory dysfunction. Decreased masticatory efficacy is a predisposing factor to malnutrition. Tooth loss causes malocclusion and TMJ disorders, and is directly related to a decrease in a person's quality of life. Periodontal infections and dental caries are the most frequent human diseases and the leading causes of tooth loss. Both disorders can impair nutrition and have a detrimental impact on self-esteem and quality of life. Periodontal disease can have an impact on an individual's quality of life, with a greater degree of disease severity that will have a greater impact. Hypertension drugs consumed in the long-term cause xerostomia, gingival hyperplasia, salivary gland pain, changes in the sense of taste and paraesthesia. The number of people with hypertension is expected to continue to increase to 1.5 billion in 2025 with a mortality rate of 9.4%.

Elderly people who suffer from DM and/or hypertension, or other systemic diseases need oral health and dental health promotion to achieve optimal self-efficacy and health literacy through health empowerment. Health promotion and health empowerment are needed in the elderly, both in general and dental and oral health to improve the quality of life. Health promotion is a process of assisting individuals and communities in improving their abilities and skills to control various factors that affect their health, so as to improve their health status. Health promotion is a combination of health education approaches and organizational, economic, environmental approaches, all of which support the creation of conducive behaviour in the health aspect. Health empowerment, health literacy, and health promotion are placed within a comprehensive approach framework. Education related to DM needs to be carried out by involving the community. The formation and training of health cadres for the elderly community aims to create resilient elderly people during the Covid-19 pandemic. Formation and training of health cadres, especially dental and oral health cadres, is very useful for realizing community dental and oral health empowerment. Community empowerment through dental and oral health cadres can increase the knowledge, awareness, and good behavior of community dental and oral health.

2 Methodology

The activities conducted included the formation and training of oral dental health cadres followed by dental and oral health education by the cadres to all members of PROLANIS (Fig.1). Four participants, 2 men and 2 women, of the PROLANIS were selected and acted as dental health cadres. Each cadre was expected to provide education and training on how to brush teeth and dentures properly and correctly. The cadres selected were part of the PROLANIS participants, who were expected to invite their friends, so they would know, understand, and were aware of the importance of maintaining good dental and oral health behavior so that the quality of life of the elderly increased. The four cadres were trained on how to provide counselling, how to brush teeth and dentures properly and correctly.
The cadres who had been selected and trained then conducted education and training on brushing teeth and dentures maintenance properly and correctly for 30 elderly PROLANIS participants (Fig.2). These educational activities included daily healthy behavior, both in general and in the oral cavity. The education was carried out by using posters and props. The four cadres that had been selected then conducted a training on how to brush teeth and clean dentures properly and correctly. The cadres were given toothbrushes which were used to train 30 elderly PROLANIS participants on how to brush their teeth and dentures properly and correctly.

The indicator of success for this community service activity was the increase of knowledge and awareness of the community in general, and the PROLANIS participants in particular. These indicators were measured using measurement tools in the form of pre-test and post-test questions. The training participants worked on pre-test and post-test questions before and after the training. The measurement results were in the form of the average value of the pre-test and post-test. The measurement results found that there was an increase in the average value of the pre-test and post-test, as shown in Table 1 below.

<table>
<thead>
<tr>
<th>Table 1. Average Pre-test and Post-test Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean of Score</td>
</tr>
<tr>
<td>Pre-test</td>
</tr>
<tr>
<td>Pos-test</td>
</tr>
</tbody>
</table>
The evaluation and follow-up of cadres' activities independently were carried out in the second and third month after the implementation of the program. The dental and oral health cadres were able to educate the general public on how to brush their teeth properly and correctly (Fig. 3).

Figure 3. Dental Cadre Conducts Tooth Brushing Education in 2nd and 3rd Month after Implementation Program

3 Results and Discussion

The result of the community service with the aim of increasing awareness of dental and oral health in the elderly through peer groups with the formation of dental health cadres is the increase in the knowledge and awareness of the elderly regarding dental and oral health. The education carried out in this program was the peer group method, health cadres were selected from the internal community, namely PROLANIS, it was expected that they could invite their friends and the surrounding community to behave healthily in everyday life, both in general and dental health. Elderly people who suffer from DM and/or hypertension, or other systemic diseases need oral health and dental health promotion to achieve optimal self-efficacy and health literacy through health empowerment. Health promotion and health empowerment are needed in the elderly, in general, dental, and oral health to improve the quality of life. Health promotion is a process of assisting individuals and communities in improving their abilities and skills to control various factors that affect their health, so as to improve their health status.

Health promotion is a combination of health education approaches and organizational, economic, environmental approaches, all of which support the creation of conducive behavior in the health aspect. Health empowerment, health literacy, and health promotion are placed within a comprehensive approach framework. Empowerment is a dynamic process which starts with the community learning directly from action. Communities must understand about various types of diseases including how they are infected, transmitted, and treated. Understanding will lead the community to make the right decisions about the actions that must be taken. Communities are expected to communicate health issues to other communities. Education related to DM needs to be carried out by involving the community. The formation and training of health cadres for the elderly community aims to create resilient elderly people during the Covid-19 pandemic. Formation and training of health cadres, especially dental and oral health cadres, is very useful for realizing community dental and oral health empowerment. Community empowerment through dental and oral health...
cadres can increase community dental and oral health knowledge, awareness and behavior 14,15,5.

4 Conclusion
Empowerment is a process of helping to strengthen the ability of the community, so that it can bridge the communication distance between providers and target groups. Health empowerment carried out through the peer group method by forming dental and oral health cadres is able to increase knowledge and awareness of dental and oral health in the elderly.

References
[8]. Adrian SJ. Hipertensi Esensial: Diagnosis dan Tatalaksana Terbaru pada Dewasa. 2019;46(3).
[15]. Heningtyas AH, Astuti NR, Utami S. “PERPUSTAKAAN DENTAL KADER DUSUN PENDUL” GERAKAN GEMAR MEMBACA DARI KITA UNTUK SEMUA. Pros
Semin Nas Program Pengabdi Masy. Published online January 28, 2022. doi:10.18196/ppm.43.700