

Socialization of Balanced Nutrition with Comic Media and Assistance for Urban Gardening in Waiheru Village

Sosialisasi Gizi Seimbang dengan Media Komik serta Pendampingan Pelaksanaan *Urban Gardening* di Desa Waiheru

Khartini Kaluku¹, Martha Puspita Sari^{*2}, Yeni Fikasari³

^{1,2,3} Politeknik Kesehatan Kemenkes Maluku

^{1,2}Nutrition Department, Politeknik Kesehatan Kemenkes Maluku

³Sanitation Department, Politeknik Kesehatan Kemenkes Maluku

*e-mail: martha.puspita6@gmail.com

Abstrak

Data Riset Kesehatan Dasar Kementerian Kesehatan Republik Indonesia pada tahun 2018, menunjukkan secara nasional masalah obesitas sentral pada usia ≥ 15 tahun masih tinggi, yakni 31%, sedangkan prevalensi obesitas sentral pada usia ≥ 15 tahun di Maluku mencapai 33%. Obesitas mulai menjadi masalah kesehatan diseluruh dunia, bahkan WHO menyatakan bahwa obesitas sudah merupakan suatu epidemi global. Obesitas merupakan suatu problem kesehatan yang harus segera ditangani karena merupakan faktor risiko terjadinya penyakit degeneratif dan sindroma metabolik. Obesitas yang terjadi pada remaja perlu mendapatkan perhatian serius, konsisten dan disikapi bersama. Sebagai upaya peningkatan derajat kesehatan serta optimalisasi pertumbuhan dan perkembangan remaja, diperlukan penerapan pola makan yang sehat melalui sosialisasi gizi seimbang dengan media komik dan pendampingan pelaksanaan urban gardening kepada remaja melalui remaja masjid dapat menjadi salah satu upaya guna menerapkan pola makan sehat pada remaja demi status gizi dan kesehatan yang optimal.

Keywords: Gizi seimbang, komik, urban gardening

Abstract

Basic Health Research data from the Ministry of Health of the Republic of Indonesia in 2018 showed that nationally the problem of central obesity at the age of 15 years was still serious, namely, 31%, while the prevalence of central obesity at the age of 15 years in Maluku reached 33%. Obesity is becoming a health problem worldwide; even the WHO states that obesity has become a global epidemic. Obesity is a health problem that must address immediately because it is a risk factor for degenerative diseases and metabolic syndrome. Obesity in adolescents needs to get serious attention, be consistent, and be addressed together. To improve health status and optimize adolescent growth and development, it is necessary to apply a healthy diet through the socialization of balanced nutrition with comic media and implementation assistance. Urban gardening for teenagers through mosque youth can be an effort to implement healthy eating patterns for teenagers for optimal nutrition and health status.

Keywords: Balanced nutrition, comic, urban gardening

1. INTRODUCTION

Adolescence is an important phase of life, marked by increased nutritional needs to achieve optimal growth and development. In adolescence, unmet dietary needs can delay sexual maturation and linear growth retardation. Eating patterns since adolescence can last into adulthood, so a healthy eating pattern needs to be practiced from an early age ((Vereecken et al., 2015).

Basic Health Research data from the Ministry of Health of the Republic of Indonesia in 2018 shows that nationally the problem of central obesity at the age of 15 years is still severe, namely 31%, while the prevalence of central obesity at the age of 15 years in Maluku reaches 33% (Riskasdas 2018, 2019). Obesity is becoming a health problem worldwide; even the WHO states that obesity has become a global epidemic. Obesity is a health problem that must address

immediately because it is a risk factor for degenerative diseases and metabolic syndrome. Obesity in adolescents needs severe, consistent, and joint attention (Almatsier, S; Soetardjo, S; Soekatri, 2019).

Obesity occurs because energy intake is more significant than energy output, resulting in excess energy in fat tissue. Extra calories cause this excess fat tissue in food which are converted into triglycerides and stored in adipose tissue, increasing the size of adipose tissue (Niman, 2013). This is primarily due to lifestyle modification (lifestyle) and socio-cultural influences, physical activity or exercise, and metabolic (O'Dea et al., 2006). Lifestyle changes that lead to westernization and sedentary lifestyles are often found in big cities in Indonesia. This lifestyle change causes shifts in knowledge, attitudes, eating patterns, as well as the selection of the type and amount of snack food consumed, which refers to a high-calorie, fat, and cholesterol diet, fast food which has an impact on increasing obesity (Hidayati et al., 2006; Khomsan, 2004).

Unhealthy eating patterns often occur due to ignorance of the impact and lack of knowledge about snack foods. Knowledge affects attitudes in choosing snacks. Good learning is expected to affect the consumption of good food to lead to good nutritional status. Lack of knowledge about nutrition and mistakes in choosing snacks will affect nutritional status (Sediaoetama, 2008).

Nutrition education is needed to ensure that adolescents have nutritional knowledge to prevent deviations in food consumption (Syahrir, 2013). Nutrition education requires media aids whose selection must be based on learning objectives and learning abilities (Moerdiyanto, 2008). The study results indicate a significant difference in the knowledge of choosing healthy snacks before and after being given nutrition education with the comic method. The results of other studies also showed a considerable increase in learning ($p < 0.01$) in elementary school students who were given comics about the diversity of snacks and the safety of snacks (Widajanti et al., 2009). Therefore, to improve health status and optimize adolescent growth and development, it is necessary to apply a healthy diet. Socializing balanced nutrition with comics media and assisting in implementing urban gardening for mosque youth can be an effort to implement healthy eating patterns for adolescents for optimal nutrition and health status. Other studies about Counseling on Balanced Nutrition in Fulfillment of Family Nutrition show that there is an increase in mother's knowledge about balanced nutrition in fulfilling family nutrition, an increase from 12% to 76% (Masrikhiyah, 2020).

2. METHOD

Community service activities are carried out in March-September 2021. The stages of implementing community service activities are divided into 2 stages as shown in table 1.

2.1. Activity plan

Table 1. Action Plan

No.	Activity	Solution steps
1.	Socialization of balanced nutrition with comic media	Provide socialization about balanced nutrition with comic media to mosque youth in order to increase knowledge about balanced nutrition.
2.	Assistance in implementing <i>urban gardening</i>	The implementation of <i>urban gardening for mosque youth</i> can produce healthy food independently in the neighborhood.

2.2. Implementation Methodology

The location of the chosen service is Waiheru Village, Teluk Ambon Baguala District, Ambon City with details of the implementation of activities as illustrated in table 2 below:

Table 2. Details of Activity Implementation

No.	Activity	Target	Time	Location	Procedure	Achievements
1.	<i>Ethical Clearance Eligibility Submission</i>	The Ethics Commission of Health Research - Politeknik Kesehatan Kemenkes Maluku	March 2021	Politeknik Kesehatan Kemenkes Maluku	Submission of ethics by submitting protocols and proposals online to the Politeknik Kesehatan Kemenkes Maluku ethics commission	Ethical eligibility letter from The Ethics Commission of Health Politeknik Kesehatan Kemenkes Maluku
2.	Coordination of balanced nutrition socialization activity plans with comic media and implementing <i>urban gardening</i> for mosque youth	Village Staff	April 2021	Waiheru Village	Coordinate with partners	Achieving the time and place for the implementation of activities
3.	Comic media preparation and creation	Service Team	May - June 2021	Department of Nutrition, Politeknik Kesehatan Kemenkes Maluku	1. Library search 2. Comic making	Printed comic media
4.	Socialization about balanced nutrition	Mosque youth	July 2021	Waiheru Village	Providing socialization for 2 times	Increased knowledge of mosque youth about balanced nutrition
5.	Assistance in implementing <i>urban gardening</i>	Mosque youth	August 2021	Waiheru Village	1. Determining the place for <i>urban gardening</i> 2. Assistance in implementing <i>urban gardening</i>	1. Increased knowledge of mosque youth about healthy food 2. Availability of healthy food independently
6.	Monitoring and evaluating the results of socialization activities and the implementation of <i>urban gardening</i>	Mosque youth	September 2021	Waiheru Village	1. Evaluating the effectiveness of socialization as an effort to increase the knowledge of mosque youth 2. Monitoring and evaluating the sustainability of <i>urban gardening</i>	1. Mosque youth can socialize to other community groups 2. <i>Urban gardening</i> activities can be continued independently

3. RESULTS AND DISCUSSION

3.1. Preparation

Community Service through the Community Partnership Program is carried out by implementing balanced nutrition socialization with comic media in order to increase knowledge about balanced nutrition, then continued with mentoring activities for the implementation of *urban gardening* for youth at the Waiheru Village mosque as an effort to implement healthy eating patterns in adolescents and can produce healthy food independently in the neighborhood. The socialization of balanced nutrition and assistance for the implementation of *urban gardening* in Waiheru Village, Teluk Ambon Baguala Subdistrict Ambon City was carried out for 6 months starting from April to September 2021.

In March 2021, the servant took care of a letter from the Politeknik Kesehatan Kemenkes Maluku Research and Community Service Center with the aim of being the Head of Waiheru Village, to carry out community service activities. The data collection permit was submitted to the relevant parties in mid-April 2021.

In the early stages of the first week of May 2021, the service team was received by the Waiheru Village government and village officials to carry out general discussions to technical matters related to the community service program that will be implemented and conduct coordination relationships by introducing themselves and explaining the timing and objectives of the service community program from the service team of the Politeknik Kesehatan Kemenkes Maluku Department of Nutrition in Waiheru Village, Teluk Ambon District, Baguala, Ambon City.

a. Technical Preparation

The technical preparations carried out by the service team included data collection and division of tasks, preparing balanced nutrition comics and *urban gardening* equipment, banners, LCDs, attendance lists for socialization participants, attendance lists for mentoring participants, and attendance lists for evaluation activities. In addition, the preparation of the location (Waiheru Village Mosque) which will be used for the implementation of community service activities in Waiheru Village, Teluk Ambon Baguala District, Ambon City.

3.2. Activity Implementation

Participants who took part in balanced nutrition socialization activities in May 2021 and *urban gardening* assistance in June–August 2021 were 58 youths from the Waiheru Village mosque. The average age of the respondents was 18 years. The average education level of the participants was senior high school (71%) and junior high school (29%).

1. Balanced Nutrition Socialization with Comic Media

The balanced nutrition socialization activity with comic media was held in May 2021 with a total of 50 participants consisting of all youths from the Waiheru Village mosque. This activity contains discussions with mosque youth about balanced nutrition, the understanding understood by each participant and balanced nutrition guidelines. Most of the participants have heard of balanced nutrition but don't know it because according to the youth of the mosque, balanced nutrition is four healthy five perfect. Then the service team carried out socialization of balanced nutrition by means of discussions using comics. The socialization went well, the participants actively asked questions.



Figure 1. Socialization of Balanced Nutrition with Comic Media



Figure 2. Discussion process during socialization

2. Assistance in the Implementation of *Urban Gardening*

The service team provided assistance to the implementation of *urban gardening* which was held in June–August 2021. The service team and participants prepared the tools and materials used for *urban gardening*, namely styrofoam 50 x 30 cm, vegetable seeds, fruit seeds, planting media (*rockwool*), tubs plastic 50 x 30 x 20 cm, nails, UV plastic (6 x 10 m), wood (4 x 6), hammer, wooden plank (3 x 20 cm), aquarium pump, scissors and TDS meter. The service team divided the participants into 4 groups and then started assisting the hydroponic making process. Group 1 is in charge of cutting wood and preparing hydroponic sites, group 2 is in charge of making hydroponic circuits, group 3 is in charge of preparing hydroponic nutrient flow, and group 4 is in charge of sowing vegetable and fruit seeds.

The process of making hydroponics is carried out for 3 days and seeding is carried out for 7 days, then the seeds are ready to be transferred to hydroponic media. Furthermore, the service team and participants monitored the growth of the seeds and the hydroponic nutrient content every week for 3 months.



Figure 3. Cutting wood by group 1



Figure 4. The process of making hydroponic pipes by group 2



Figure 5. The process of making a hydroponic framework by group 2



Figure 6. The process of making hydroponic nutrient flow by group 3



Figure 7. The process of seeding plant seeds by group 4



Figure 8. The finished hydroponic framework



Figure 9. The process of transferring seeds into the hydroponic framework by group 4

3.3. Activity Evaluation

The community service team evaluates the socialization of balanced nutrition and the implementation of *urban gardening* in September 2021. The method used to evaluate the socialization of balanced nutrition is participant interviews. Participants said that socialization using comics made the material on balanced nutrition easier to understand.

The method used to evaluate the implementation of *urban gardening* activities is to see the success of hydroponic seed growth. Plants that have been planted and monitored every week can successfully grow well and are ready to be harvested.

3.4. Parties involved

The parties involved in Community Service activities in Waiheru Village, Teluk Ambon Baguala Subdistrict, Ambon City which will be held from April – September 2021, include:

- a. Head of Waiheru Village
- b. Neighbourhood Head of Waiheru Village
- c. Head of Center for Research and Community Service Politeknik Kesehatan Kemenkes Maluku

4. CONCLUSION

After carrying out community service activities in the form of the Community Partnership Program for the youth of the Waiheru Village mosque which was carried out in April-September 2021, it can be concluded that:

1. Availability of comic media about balanced nutrition material
2. The knowledge of mosque youth about balanced nutrition increased after being given socialization using comic media.
3. Increasing the skills of mosque youth in implementing healthy eating patterns in adolescents and producing healthy food independently in the neighborhood.

ACKNOWLEDGMENT

The author would like to thank the Ministry of Health who have provided financial support for this service activity.

REFERENCES

- Almatsier, S; Soetardjo, S; Soekatri, M. (2019). *Gizi Seimbang dalam Daur Kehidupan*. Jakarta: PT Gramedia Pustaka Utama.
- Hidayati, S. N., Irawan, R., & Hidayat, B. (2006). *Obesitas pada Anak*. Retrieved from <https://www.yumpu.com/en/document/view/53498441/obesitas-pada-anak-siti-nurul-hidayati-rudi-irawan-boerhan>
- Khomsan, A. (2004). *Pangan dan Gizi untuk Kesehatan*. Jakarta: PT Raja Grafindo Persada.
- Masrikhiyah, R. (2020). Peningkatan Pengetahuan Ibu Mengenai Gizi Seimbang Dalam Pemenuhan Gizi Keluarga. *Dinamisia : Jurnal Pengabdian Kepada Masyarakat*, 4(3), 391–397. doi: 10.31849/dinamisia.v4i3.4378
- Moerdiyanto. (2008). *Pengembangan Model Pembelajaran Kewirausahaan*. Yogyakarta: Departemen Pendidikan Nasional Universitas Negeri Yogyakarta.
- Niman, S. (2013). *Anatomi dan Fisiologi Sistem Pencernaan Manusia*. Jakarta: Trans Info Media.
- O’Dea, J. A., & Wilson, R. (2006). Socio-cognitive and nutritional factors associated with body mass index in children and adolescents: Possibilities for childhood obesity prevention. *Health Education Research*, 21(6), 796–805. doi: 10.1093/her/cyl125
- Risikedas 2018, T. P. (2019). *Laporan Nasional Riskesdas 2018*. Jakarta.
- Sediaoetama, A. D. (2008). *Ilmu Gizi jilid II : Untuk mahasiswa dan profesi* (6th ed., Vol. 2). Jakarta: Dian Rakyat.

- Syahrir, N. H. (2013). *Pengetahuan Gizi, Body Image, dan Status Gizi Remaja di SMA Islam Athirah Kota Makassar Tahun 2013*. Universitas Hasanuddin.
- Vereecken, C., Pedersen, T. P., Ojala, K., Krølner, R., Dzielska, A., Ahluwalia, N., Giacchi, M., & Kelly, C. (2015). Fruit and vegetable consumption trends among adolescents from 2002 to 2010 in 33 countries. In *European Journal of Public Health* (Vol. 25, pp. 16–19). Oxford University Press. doi: 10.1093/eurpub/ckv012
- Widajanti, L., Suryawati, C., & Sugihantono, A. (2009). Pengaruh Komik Makanan Jajanan Sehat dan Bergizi untuk Meningkatkan Pengetahuan dan Sikap Anak Sekolah Dasar. *Indonesian Journal of Public Health*, 6(1), 19–23. Retrieved from journal.lib.unair.ac.id/index.php/IJPH/article/view/989