

## Healthy Lifestyle Education to Teenagers in The Adaptation Era of New Normal at SMK Negeri 7 Makassar

Kadek Ayu Erika<sup>1,a)</sup>, Nur Fadilah<sup>1</sup>, Sri Ramadany<sup>2</sup>

*Department of Nursing, Hasanuddin University, Makassar, Indonesia*

*Department of Medicine, Faculty of Medicine, Hasanuddin University, Makassar, Indonesia*

<sup>a)</sup>Corresponding Author: [kadek20\\_uh@yahoo.com](mailto:kadek20_uh@yahoo.com)

### Abstract

One of the problems for teenagers in the post-pandemic adaptation era is an unhealthy lifestyle. The lifestyle of SMK 7 Makassar students is mainly classified as sedentary life playing with gadgets and sitting relaxed. The importance of healthy lifestyle educational activities and nutritional status screening in teenagers can identify and reduce the risk of disease in children in the future. The purpose of this program is to educate and increase teenagers' knowledge about the importance of a healthy lifestyle, assess the nutritional status of teenagers, and find out the description of teenagers' blood pressure in the adaptation era of the new normal at SMK Negeri 7 Makassar. Based on the results of community service activities on 149 teenagers, the average value obtained includes age is 16 years, body weight is 51 kg, height is 155 cm, systolic blood pressure is 110.88 mmHg, and diastolic is 71.84 mmHg, good nutritional status is 70.5% and normal blood pressure as much as 81.2%. There was a significant difference in teenagers' knowledge level based on the pre-post test after education, namely  $p=0.001$ . This shows the importance of education given to teenagers to increase their understanding of a healthy lifestyle as a preventive action. The critical role of health workers in the Puskesmas work area is to identify and intervene in the effects of unhealthy lifestyles and support the school and parents to prevent short and long-term health impacts in teenagers.

**Keywords:** Healthy Lifestyle, Teenager, Nutrition Status, Blood Pressure, Education

### INTRODUCTION

The problem of a healthy lifestyle lacking in teenagers is the impact of the pandemic in the adaptation era of the new normal. The lifestyle indicators consist of five variables, namely hand washing habits, bowel habits, smoking habits in the last month, physical activity, and consumption habits of fruit and vegetable (Fadilah, Pariyana, Anbalagan, Islami, & Syakurah, 2021). Currently, teenagers tend to be less physically active and are the impact of the pandemic. A healthy lifestyle is essential in the new normal era, including physical activity and exercise to maintain physical fitness and health (Atmaja, Astra, & Suwiwa, 2021).

During the pandemic, there was an increased risk of metabolic disease associated with increased calorie intake and decreased physical activity levels. In research, Moore et al. (2020) said that in movement behavior for 24 hours which consisted of physical activity, sedentary behavior, and overall sleep time, the results showed that sedentary behavior was the highest behavior carried out in teenagers during the pandemic. Therefore, during the new normal period, it is important to do physical activity to improve health after social restrictions are carried out. The form of exercise that supports this solution is by providing education about a healthy lifestyle.

In Indonesia, the number of teenagers aged 15-19 continues to increase yearly; in 2016, there were 22.161.100 people. In 2017 there were 22.212.900 people. In 2018, there were 22.242.900 people, and in 2019 there were 22.294.200 people (Badan Pusat Statistik, Proyeksi Penduduk Indonesia 2010-2035, 2013). In South Sulawesi Province in 2020, the number of youth aged 15-19 years is 333.484 for men and women it is 385.730, and in Makassar, the number of teenagers aged 15 to 19 years is 77.972 for men and women it is 88.022. This number is relatively high compared to other Regencies/Cities in South Sulawesi Province (Badan Pusat Statistik, Proyeksi Penduduk Kabupaten/Kota Tahunan 2010-2020 Provinsi

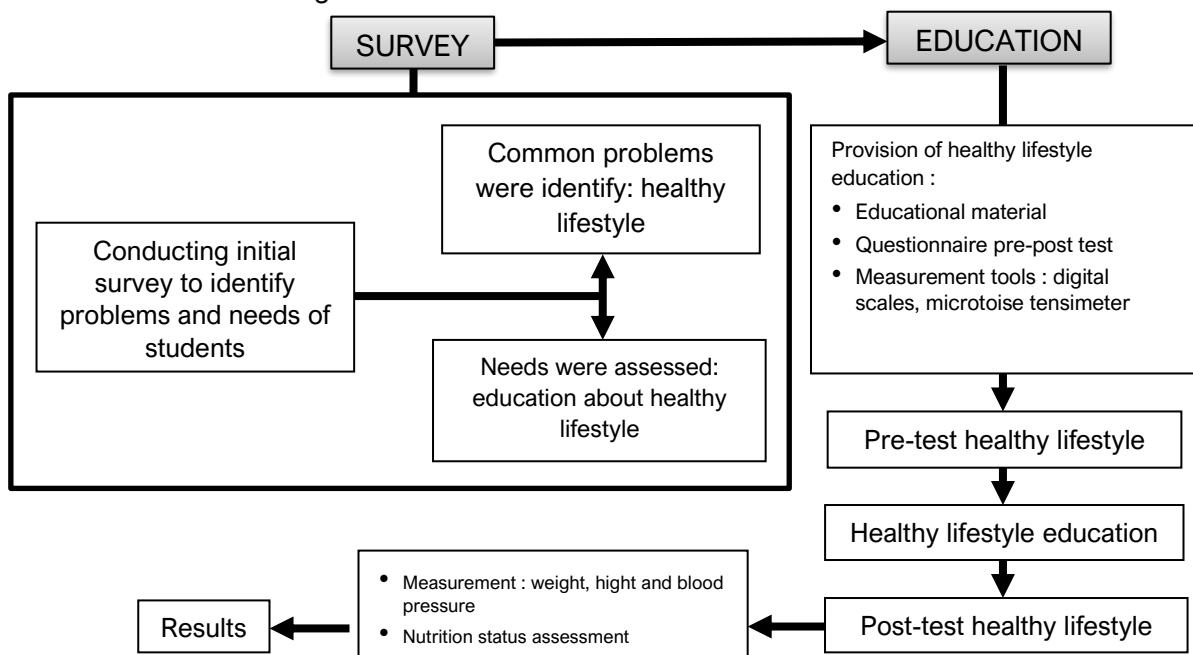
Sulawesi Selatan, 2015). Meanwhile, for Vocational High School (SMK) Negeri 7 Makassar alone, the number of teenagers was 871 consisting of 242 men and 629 women. Previously, research data collection had been carried out at SMK Negeri 7 Makassar, a Vocational High School with 595 students. The results show that most of them are classified as sedentary (91.6%). The type of sedentary life that most students do is playing gadgets/tablets (90.7%) and sitting relaxed (60.3%).

Sedentary life or a sedentary relaxed lifestyle, if it occurs for a long time, will pose a health risk. Decreased physical activity can cause disturbances in the neuromuscular system, such as muscle atrophy and denervation (Narici et al., 2020). Reducing physical activity over a long period risks health problems such as diabetes, cancer, osteoporosis, and cardiovascular disease (Lippi, Henry, & Sanchis-Gomar, 2020). Changes in eating patterns also occur, both in the frequency of eating and the types of food that lead to an increase in body weight (Ardella, 2020). Teenagers with a sedentary lifestyle  $\geq 5$  hours/day are 4.3 times more likely to be obese than those with a sedentary lifestyle  $< 5$  hours/day (Mandriyarini, Sulchan, & Nissa, 2017).

Teenagers are a group that is vulnerable to the quality of healthy life behavior. This is because teenagers still lack health knowledge; therefore the purpose of this program is to educate and increase teenagers' knowledge about the importance of a healthy lifestyle, assess teenagers' nutritional status and obtain an overview of teenagers' blood pressure at SMK Negeri 7 Makassar, which can motivate teenagers to do a healthy lifestyle properly.

## METHOD

Community service activities begin with a survey identifying students' main problems and needs. The next stage is preparing education by preparing materials on healthy lifestyles in the adaptation era of the new normal based on an initial survey consisting of definitions of teenagers and healthy lifestyles, the impact of nutrition and physical inactivity, and tips on healthy lifestyles for teenagers. In addition, the preparation was in the form of a pre-post test questionnaire consisting of 10 multiple choice questions, and measurement tools, namely digital scales, microtoise, and tensimeters. After the educational preparation, it is followed by an educational stage which begins with a pre-test, provision of healthy lifestyle material, post-test, measurement of weight, height, and blood pressure, as well as assessment of nutritional status. The educational activity ended with giving souvenirs to SMK Negeri 7 Makassar. These activities can be seen in Figure 1.



**Figure 1.** Methods of community service activities at SMK Negeri 7 Makassar

## **RESULTS**

Community service activities regarding healthy lifestyle education in the adaptation era of the new normal were carried out at SMK Negeri 7 Makassar with a total of 149 teenagers consisting of 93 men and 56 women in classes X and XI. The average age of teenagers in this community service activity is 16 years. The average adolescent weight is 51 kg, height is 155 cm, body mass index is 21.02, systolic blood pressure is 110.88 mmHg, and diastolic blood pressure is 71.84 mmHg. Normal blood pressure (81.2%), followed by increased blood pressure (12.1%), grade 1 hypertension (4.0%), grade 2 hypertension (1.3%) and hypotension (1.3%). Most of them were good nutritional status (70.5%), followed by excess nutrition (12.1%), undernutrition (9.4%) and obesity (5.4%). There is a significant difference in the level of knowledge of teenagers before and after being given education ( $p=0.001$ ). During the education provision, the participants were active and enthusiastic in asking the presenters. Participants asked about the government's efforts to improve the healthy lifestyle of teenagers due to the high number of teenagers' sedentary lifestyles.

## **DISCUSSION**

The results of measuring the nutritional status of teenagers showed the most good nutritional status. Supported by research results Aulia (2021) found a relationship between nutritional knowledge and energy intake, nutritional status, and attitudes about students' nutrition at SMPN 02 Banjarharjo. Knowledge of nutrition will affect the consumption of food intake or the selection of nutritious foods that meet the body's nutritional needs. The blood pressure measurements results showed that most teenagers were in the normal blood pressure category. It is supported by research results by Suryati, Miradwiyana, Nurulhuda, & Kamsatun (2022) that teenagers are significantly at risk of developing hypertension due to an unhealthy lifestyle with causes in the form of smoking habits, lack of sports activity, and poor diet.

Differences in the level of knowledge as measured through the pre-post test indicate the benefits of health education given to teenagers. Post-test results showed an increase in correct answers regarding the definition of a healthy lifestyle in teenagers. This increased knowledge related to the purpose of a healthy lifestyle. According to the World Health Organization (2015, 2020), a healthy lifestyle for teenagers is beneficial for teenagers aged 10–19 years in a way that minimizes the risk of severe illness and early death. In addition, the increase in correct answers on the length of physical activity in teenagers. Physical activity in teenagers is carried out for 60 minutes (1 hour) or more every day in the form of sports or aerobic activities that expend energy (Prevention Plus Wellness, 2022). According to Syam, Erika, Fadilah, & Syahrul (2021), there is a strong relationship between physical activity and the incidence of obesity in school-age children. Not only in physical activity, but the number of correct answers also increased in questions about healthy nutritional habits and healthy food in teenagers. Eat a balanced diet of carbohydrates, proteins, fats, minerals, and vitamins (National Institute of Diabetes and Digestive and Kidney Diseases, 2016). Supported by research results, Sabrina, Andriani, & Kurniasari (2022) stated that there was increased knowledge before and after counseling on balanced nutrition, clean and healthy living behavior, and stress management during a pandemic. In addition, increased knowledge about balanced nutrition can also be received by students through virtual health counseling via Zoom with fun methods in the form of PPT, videos, and posters by involving students, student's parents, and the school so that the result of increasing knowledge is obtained before and after being given education by answering all question correctly and enthusiastically (Sari, Shalahuddin, & Pramukti, 2021).

Sleep time and how to control stress in teenagers also saw an increase in correct answers. Teenagers are advised to have enough sleep for 8-10 hours a day and manage stress by exercising, doing active relaxation (relaxing deep breaths and placing the body in a relaxed/yoga/meditation position), taking vacations by visiting favorite places, spending time alone, and enjoying hobby and gratitude so that the mind and heart will be calm (Prevention

Plus Wellness, 2022). In addition, the increase in correct answers is found in questions about good habits when looking at electronic screens, staring at electronic screens for no more than 2 hours a day and avoiding screen time or staring at screens 1 hour before going to bed and changing positions from sitting to standing every hour during screen time (Prevention Plus Wellness, 2022). This result is supported by research from Tufaidah, Purwaningsih, & Trimawati (2019) that healthy lifestyle behaviors in 314 teenagers at the SMK NU Ungaran were mainly in the relatively good and slightly unfavorable categories. Teenagers' healthy lifestyle behavior is influenced by several aspects; namely, most results are good in spiritual development, interpersonal relationships, and characteristics of stress management.

According to the U.S. Department of Agriculture (2020), the unhealthy lifestyle of teenagers, including patterns of nutritional intake that are less than optimal and lack of physical activity, contributes to being overweight (obesity) at the growth stage and risk for health problems. Teenagers can experience high blood pressure, high cholesterol, and impaired glucose tolerance. In addition, they are also at higher risk of developing cardiovascular disease and type 2 diabetes later in life. Psychological problems, such as anxiety and depression, as well as social problems, such as bullying and stigma, can also occur in teenagers who are overweight (obese). According to research by Erika, Puspitha, Ilkafah, & Syahrul (2020) that children who are overweight and obese have prediabetes, and the HbA1c level is on the verge of prediabetes. The development of diabetes risk in the future experienced by pre-diabetic teenagers can be given dietary interventions and physical activity such as glycemic control, increased insulin sensitivity, changes in body mass index, and weight loss (Mulyati, Erika, & Yusuf, 2022).

### **CONCLUSION AND RECOMMENDATION**

Education about a healthy lifestyle is essential for teenagers to have adequate information about the impact of a healthy lifestyle that is lacking and tips on implementing the right one. In addition, students can also find out their blood pressure category and nutritional status. The role of health workers in providing information about the prevention and management of a healthy lifestyle that does not need the support of all parties, including the school and parents. The critical role of health workers in the Puskesmas work area is to identify and intervene in the effects of unhealthy lifestyles and support the school and parents to prevent short- and long-term health impacts that occur in teenagers.

### **ACKNOWLEDGMENTS**

We thank Lembaga Penelitian dan Pengabdian Masyarakat (LPPM) Universitas Hasanuddin for funding this community service and for support from the Faculty of Nursing Universitas Hasanuddin. We also thank the principal, teachers, and students of SMK Negeri 7 Makassar who were involved in this community service activity.

### **REFERENCES**

- Ardella, K. B. (2020). Health risks due to changes in dietary habit and physical activity level during covid-19 pandemic. *Jurnal Medika Utama*, 2 (1), 292-297.
- Atmaja, P. M., Astra, I. K., & Suwiwa, I. G. (2021). Aktivitas fisik serta pola hidup sehat masyarakat sebagai upaya menjaga kesehatan pada masa pandemi covid-19. *Jurnal Ilmu Keolahragaan Undiksha*, 9 (2), 128-135.
- Aulia, N. R. (2021). Peran pengetahuan gizi terhadap asupan energi, status gizi dan sikap tentang gizi remaja. *Jurnal ilmiah gizi dan kesehatan*, 2 (2), 31-35.
- Badan Pusat Statistik. (2013). *Proyeksi Penduduk Indonesia 2010-2035*. Jakarta: Badan Pusat Statistik.
- Badan Pusat Statistik. (2015). *Proyeksi Penduduk Kabupaten/Kota Tahunan 2010-2020 Provinsi Sulawesi Selatan*. Jakarta: Badan Pusat Statistik.
- Erika, K. A., Puspitha, A., Ilkafah, & Syahrul, S. (2020). Prediabetes among overweight and
-

- obese school-aged children: a cross-sectional study. *Enfermeria Clinica*, 30 (2), 49-54
- Fadilah, M., Pariyana, Anbalagan, L., Islami, R. N., & Syakurah, R. A. (2021). Pengetahuan masyarakat terhadap gaya hidup di rumah saja pada era new normal. *PREPOFIT Jurnal Kesehatan Masyarakat*, 5 (2), 545-552.
- Lippi, G., Henry, B. M., & Sanchis-Gomar, F. (2020). Physical inactivity and cardiovascular disease at the time of coronavirus disease 2019 (covid-19). *European Journal of Preventive Cardiology*, 27 (9), 906-908.
- Mandriyari, R., Sulchan, M., & Nissa, C. (2017). Sedentary lifestyle sebagai risiko kejadian obesitas pada remaja sma stunted di kota semarang. *Journal of Nutrition Collage*, 6 (2), 149-155.
- Moore, S. A., Faulkner, G., Rhodes, R. E., Brussone, M., Chulak-Bozzer, T., Ferguson, L. J., . . . Tromblay, M. S. (2020). Impact of the COVID-19 virus outbreak on movement and play behaviours of Canadian children and youth: a national survey. *International Journal of Behavioral Nutrition and Physical Activity*, 17 (85), 1-11.
- Mulyati, Erika, K. A., & Yusuf, S. (2022). Efektivitas diet dan aktivitas fisik terhadap pencegahan diabetes pada remaja pra-diabetes: literature review. *Jurnal Ilmiah Keperawatan*, 8 (1), 41-50.
- Narici, M., Vito, G. D., Franchi, M., Paoli, A., Moro, T., Gluseppe, M., . . . Maganaris, C. (2020). Impact of sedentarism due to the COVID-19 home confinement on neuromuscular, cardiovascular and metabolic health: Physiological and pathophysiological implications and recommendations for physical and nutritional countermeasures. *European Journal of Sport Science*, 614-635.
- National Institute of Diabetes and Digestive and Kidney Diseases. (2016, Desember). *Take Charge of Your Health: A Guide for Teenagers*. Retrieved from [niddk.nih.gov: https://www.niddk.nih.gov/health-information/weight-management/take-charge-health-guide-teenagers](https://www.niddk.nih.gov/health-information/weight-management/take-charge-health-guide-teenagers)
- Prevention Plus Wellness. (2022). *Healthy Lifestyle Guidelines for Youth Goal Setting*. Retrieved from [preventionpluswellness.com: https://preventionpluswellness.com/pages/healthy-lifestyle-guidelines-for-youth-and-young-adult-goal-setting](https://preventionpluswellness.com/pages/healthy-lifestyle-guidelines-for-youth-and-young-adult-goal-setting)
- Sabrina, Andriani, E., & Kurniasari, R. (2022). Clean and healthy living patterns, balanced nutrition, and stress management in the covid-19 pandemic. *ABDIMAS UMTAS : Jurnal Pengabdian Kepada Masyarakat*, 5 (1), 2050-2054.
- Sari, C. W., Shalahuddin, I., & Pramukti, I. (2021). Adolescent nutrition action as a part of achieving healthy generation in smpn 37 babakan sari kiaracondong bandung. *ABDIMAS UMTAS: Jurnal Pengabdian Kepada Masyarakat*, 4 (2), 1107-1114.
- Suryati, Miradwiyana, B., Nurulhuda, U., & Kamsatun. (2022). Pengaruh pendampingan pendidikan kesehatan terhadap gaya hidup terkait pencegahan risiko hipertensi pada remaja di sma depok. *Syntax Literate : Jurnal Ilmiah Indonesia*, 7 (10), 15718-15739.
- Syam, Y., Erika, K. A., Fadilah, N., & Syahrul, S. (2021). Physical activity among obese school-age children: a cross-sectional study. *Enfermeria Clinica*, 31 (5), 5704-5708.
- Tufaidah, F., Purwaningsih, P., & Trimawati. (2019). Gambaran perilaku gaya hidup sehat pada remaja di ungaran kabupaten semarang. *Indonesian Journal of Nursing Research*, 2 (2), 75-83.
- U.S. Department of Agriculture. (2020). *Dietary Guidelines for Americans 2020-2025*. Amerika: DietaryGuidelines.gov.
- World Health Organization. (2015). *Healthy Lifestyle*. Retrieved from <https://www.who.int/>.
- World Health Organization. (2020). *Teenager*. Retrieved from <https://www.who.int/>.
-



## APPENDIX



Figure 2. Community service team



Figure 3. Community service activities