Healthy Living Community Movement (GERMAS) Through Aerobic Gymnastics And Healthy Walks In Commemorating The 106th Milad Muhammadiyah

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Abstract.

The Healthy Living Community Movement (GERMAS) is a systematic and planned action carried out jointly by all components of the nation with awareness, willingness and ability to behave in a healthy manner to improve the quality of life. One of GERMAS activities is Improving Physical Activity, therefore on the 106th Milad Muhammadiyah with the theme Ta'awun for the Country, the North Maluku Muhammadiyah Regional Leadership (PWM Malut) held Aerobic Gymnastics and Healthy Walks as an effort to prevent disease (heart, lung, stroke, diabetes, etc.) and as an effort to improve public health. Aerobic Gymnastics was held on October 26, 2018 at the UMM campus, while the Healthy Walk was also held on November 24, 2018 with a meeting point at the Landmark (Muhajirin Village) and a healthy walk at the Sultan Mosque. Ternate (Soa Sio Village) as well as the finishing place at the Ternate Al-Munawwar Grand Mosque. With this GERMAS activity, it is hoped that a healthy lifestyle will be formed, especially for North Maluku Muhammadiyah residents and society in general. Therefore, in this community service journal, the author also includes the Yutube link for aerobic exercise (Low Impact & High Impact, Tobelo Gymnastics and Diabetes Gymnastics) so that readers can immediately practice aerobic exercise as an effort to prevent disease and improve health from various diseases.

Keywords: GERMAS, Aerobic Gymnastics, Healthy Walk, Muhammadiyah Anniversary

I. INTRODUCTION

The Muhammadiyah Central Leadership held the 106th Milad event at Pura Mangkunegaran Solo, Sunday Night 18 November 2018. In the anniversary event, Muhammadiyah called for the importance of Ta'awun (helping) to solve problems in this country through the theme Ta'awun for the Country. General Chairman of Muhammadiyah Central Executive Prof. Dr. KH. Haedar Nasir, M.Si said that the Ta'awun movement for the Country can be actualized in the movement to build togetherness with a sincere soul solely to advance the nation. Among Muslims, this togetherness is called Ukhuwah, while in the general idiom, this togetherness is commonly referred to as mutual cooperation, "This movement must continue to be disseminated so that it becomes a practice of life and not mere rhetoric". In the Milad event, Muhammadiyah also gave an award to Dr. (H.C.) Drs. H. Muhammad Jususf Kalla (10th and 12th Vice President of the Republic of Indonesia). He is seen as one of the figures who take part in the world of peace and humanity[1]

The Healthy Living Community Movement (GERMAS) is a systematic and planned action carried out jointly by all components of the nation with awareness,

willingness and ability to behave in a healthy manner to improve the quality of life. Healthy Living Community Movement activities include 6 points, namely: 1) Increasing Physical Activity; 2) Improving Healthy Living Behavior; 3) Provision of Healthy Food and Acceleration of Nutrition Improvement; 4) Improved Disease Prevention and Early Detection; 5) Environmental Quality Improvement; and 6) Improved Healthy Life Education. During this period, GERMAS focused on 3 activities, namely: (1) Doing Physical Activities, (2) Consumption of Vegetables and Fruits, and (3) Periodic Health Checks [2]

Based on the explanation above, in 2018 in order to commemorate the Milad of Muhammadiyah, the Committee for the 106th Milad Muhammadiyah North Maluku Regional Leader (PWM Malut). Holding GERMAS (Healthy Living Community Movement) which is to carry out Physical Activities, namely Aerobic Gymnastics and Healthy Walks, which are one of the main elements in realizing Indonesian people who have the awareness, willingness and ability to behave in a healthy manner to improve the quality of life of many people. Health efforts are every activity to maintain and improve health carried out by the government and/or the community. This means that in order to realize this level of health, both individual, group or community health must be pursued. Efforts to realize this health are carried out by individuals, groups, communities, either institutionally by the government or non-governmental organizations (NGOs). Judging from the nature, efforts to realize health can be seen from two aspects, namely health maintenance and health improvement. Health Maintenance includes two aspects, namely: Curative (treatment of disease), Rehabilitative (recovery of health after recovering from illness or disability). Meanwhile, Health Improvement includes two aspects, namely preventive (disease prevention) and promotive (health improvement) itself [3]

An expert Becker (1979) classifies there are 3 points of health behavior, namely: 1) healthy living behavior, 2) sick behavior, and 3) sick role behavior. Healthy living behaviors are behaviors related to a person's efforts or activities to maintain and improve their health. One example is regular exercise, which also includes quality (movement), and quantitative in terms of the frequency and time spent exercising. By itself these two aspects will depend on the age and health status of the person concerned [4] According to Baldew at al (2015), physical activity plays an important role in preventing non-communicable diseases (NCDs) such as cardiovascular disease, overweight, and musculoskeletal disorders [5]. Aerobic gymnastics and a healthy walk are health efforts carried out by Muhammadiyah residents of North Maluku Province in an effort to achieve health, namely improving health through two aspects, namely: (1) carrying out preventive or disease prevention efforts, by exercising can prevent lung and heart disorders, prevent diabetes mellitus and stroke, prevent back pain, maintain obesity and reduce the risk of osteoporosis. (2) make efforts to promote or improve health, where by exercising will stimulate heart activity, keep the body healthy and increase endurance from various diseases. Through Germas' efforts, Muhammadiyah

residents in particular and society in general will always behave in a healthy way, so that they can realize a healthy Indonesia.

II. METHODS

The implementation of the GERMAS (Healthy Living Community Movement) activities, namely Aerobic Gymnastics and Healthy Walks in commemoration of the 2018 Muhammadiyah Anniversary (106th), these two activities were carried out at different times and locations, namely:

1. Aerobics

The Germas Aerobic Gymnastics activities were held on October 26 2018, at 07.00-08.00 WIT and located at the University of Muhammadiyah Maluku Utara (UMMU) Campus, which is located at Sasa Village, South Ternate District. And the participants of aerobic exercise are students, lecturers and employees of UMMU, the Muhammadiyah Malut Anniversary Committee, and the Campus Environment Community. The purpose of this activity is to commemorate the 16th anniversary of the birth of Muhammdiyah. Another goal is to realize the Healthy Living Community Movement (GERMAS) which was launched by the Ministry of Health of the Republic of Indonesia, as an effort to prevent disease and improve public health.

2. Healthy Walk

The Healthy Walk activity or also known as the ta'aruf parade, was held on November 24, 2018, at; 07.00 WIT-Finished, and the gathering point for the healthy walk participants was at LADMARK, which is located at Jl. Revolutionary Hero, Muhajirin Village, Central Ternate City, North Maluku Province. And the participants who attended the GERMAS activity were: Employees, Lecturers and Students of the North Maluku Muhammadiyah University (UMMU), Muhammadiyah Malut Milad Committee, North Maluku Muhammadiyah Regional Leadership Members (PWM Malut), Nasyia'tul Aisyiyah Regional Leaders (PWNA Malut), RSI PKU Muhammadiyah North Maluku, Poltekkes Kemenkes Ternate, all ORTOM and all Muhammadiyah Charities (AUM) throughout Ternate City and North Maluku Province, and also invited the Drumband Team of SMP Islam 1 Ternate City. After the participants gathered at the Landmark (START place) Next - The start of the walk through Jl. Sultan M. Djabir Sjah - Go to the North - Until the front of Hypemart turn right (Ex. Soa Sio) - Go to the Sultan Mosque of Ternate - Then turn back towards the South - Follow Jl. Sultan Babullah - Towards Kampung Makassar - Towards Gamalama Market - Jl. Heroes of the Revolution - Keep going straight - Then turn right - Towards the Al-Munawwar Ternate Mosque (where FINIS is).

III. RESULT AND DISCUSSION

Health development is essentially an effort carried out by all components of the Indonesian nation. The goal is to increase awareness and ability to live healthy for everyone in order to realize the highest degree of public health (Kemenkes RI, 2017).

Therefore, to realize the highest degree of public health, through the 106th Anniversary of Muhammadiyah, the North Maluku Muhammadiyah Regional Leadership Committee (PWM Malut) carried out the Healthy Living Community Movement (GERMAS) activities, namely Aerobic Gymnastics and Healthy Walks.

1. Aerobics

Aerobic gymnastics is a combination of energetic and creative movements, rhythmic fast according to the function of aerobic exercise itself. According to Kristono in Jonni (2003) "aerobic is an exercise that aims to improve the ability of the lungs, heart and blood circulation, where oxygen is the main factor in generating energy in the body's cells". Jamil (1998) gives the term "aerobic to live with air", which means various physical exercises that stimulate heart and lung activity in a long enough period of time to cause beneficial changes to the body [6] Aerobic Gymnastics will be held on Friday, October 26 2018, at 07.00-08.00 WIT, and the Gymnastics Instructors are; Masohi Joyo Sukarno, SH., MH. The gymnasium is held in front of the Rectorate of the North Maluku Muhammadiyah University, which is located at Sasa Village. And the participants who attended the gymnastics activities were students, lecturers and employees of UMMU, the Muhammadiyah Malut Anniversary Committee and the Community. As shown in the image below:



Fig 1. (Aerobic Gymnastics in front of the UMMU Rectorate Building)

Lack of activity is closely related to the risk of non-communicable diseases and degenerative diseases, one of the most popular physical activities is aerobic exercise. Cardiopulmonary endurance and flexibility are very important for productivity of life and reduced risk of degenerative diseases in the future. Several studies have proven the effect of aerobic exercise on cardiopulmonary endurance and flexibility, but research on aerobic exercise as a form of aerobic exercise has not been widely carried out.

Therefore, Susiana Candrawati et al (2013) conducted a study entitled: "Aerobic Gymnastics Increases Cardiac Lung Endurance Flexibility". This study aims to determine the effect of aerobic exercise on flexibility and cardiopulmonary endurance. A total of 33 individuals aged 15-25 years were examined for cardiopulmonary



Fig 2. (Aerobic Gymnastics Morning Atmosphere, Commemorating the 106th Milad Muhammadiyah)

flexibility and endurance at the Unsoed Medical Physiology Laboratory before and after carrying out a 12-week aerobic exercise program at the Sisca Gymnastics Studio, Purwakerto. The results showed that there was a significant effect of aerobic exercise on flexibility (p=0.002) and cardiopulmonary endurance (p=<0.001), namely increasing flexibility (33.78 cm to 36.45 cm) and increasing cardiopulmonary endurance (18, 48 becomes 22.8). With the results of this study, it can be seen that aerobic exercise has an effect on flexibility and cardiopulmonary endurance.[7]Aerobic Gymnastics according to Marta Dinata (2005), is "a series of movements that are deliberately chosen by following the rhythm of music that is also chosen so that it gives birth to certain rhythmic, continuity and duration provisions".

Aerobic exercise is also a physical activity that aims to train the heart muscle so that it can work for a long time and continuously. Aerobic gymnastics is a physical activity that is systematically arranged, which requires oxygen to support one's body activities in order to achieve certain goals. The purpose of aerobic exercise will be achieved if aerobic exercise is carried out regularly, continuously and programmed, so that it will support the development of elements of physical fitness [8]Based on the explanation above, aerobic exercise activities are not only carried out at the 106th Anniversary of Muhammadiyah, but aerobic exercise has become a routine and programmed activity carried out by the University of Muhammadiyah North Malaku (UMMU. Aerobic gymnastics activities are often coupled with other Germas activities). , namely Clean Friday and POSBINDU (Health Counseling and Examination) activities organized by the UMMU Faculty of Health Sciences in collaboration with the Gambesi Health Center of Ternate City. However, since the Covid-19 Pandemic, the Germas activities were temporarily suspended at the UMMU Campus. 4 below is an aerobic exercise that has been carried out or programmed at the University of Muhammadiyah North Maluku, and the Rector of UMMU, Prof. Dr. Saiful Deni, S.Ag., M.Si.



Fig 3. (Aerobic Gymnastics Routines for Lecturers and Employees of the University of Muhammadiyah North Maluku)

And the types of Aerobic Gymnastics that we always do on the UMMU campus are Low Impact & High Impact Gymnastics, Tobelo Gymnastics and Diabetes Gymnastics. Because Germas activities, namely aerobic exercise and healthy walking, can be done at home or anywhere. Whether it is done individually, as a family or in a group/community. If it is done in groups or many people, it is necessary to follow health protocols such as keeping a distance and maintaining cleanliness during the Covid-19 pandemic, as well as dressing in Islamic sports (covering the genitals) for

Muslims. Because exercising regularly and regularly can increase immunity/immunity, thus avoiding Corona (Covid-19) and exercising can also prevent various diseases such as; lung disease, heart disease, diabetes, stroke and so on.Based on the explanation above, through this paper, the author includes 3 links/URLYoutube aerobic exercise, namely; Low Impact & High Impact, Tobelo Gymnastics and Diabetes Gymnastics. So that the residents of North Maluku Muhammadiyah in particular and readers in general, can immediately practice aerobics at home, at the fitness center, in the office/workplace or anywhere. There are several options for aerobic exercise YouTube links, which can be seen below:

- Low Impact & High Impact Gymnastics : https://www.youtube.com/watch?v=93XjUIDSjK4 [9]
- 2. Gymnastics Tobelo: https://www.youtube.com/watch?v=qvbbJz8bcOY [10]
- 3. Diabetes Exercise: https://www.youtube.com/watch?v=MNEXe-PwxGg [11]

2. Healthy Walk

According to the Indonesian Ministry of Health (2019), the benefits of walking are: (1) on average, walking every 1.5 to 2 minutes can prolong life, (2) walking longer every day for 40 minutes is the best way to lose weight, (3) brisk walking 20-25 minutes will provide good conditions for the heart and lungs, (4) improve the effectiveness of the heart and lungs, burn fat in the body, (5) increase metabolism so that the body burns calories faster, (6) helps reduce stress, (7) slows aging, (8) lowers blood cholesterol levels, (9) helps lower blood pressure, (10) helps control and prevent diabetes, and (11) strengthens the muscles of the legs, thighs, and bones.[12]

In commemoration of the 106th anniversary of Muahammadiyah, the North Maluku Muhammadiyah Regional Leadership (PWM Malut) held a Healthy Walk or also known as the Ta'aruf Parade on foot. This activity is part of the Healthy Living Community Movement (GERMAS) activities. This activity will be held on Saturday/November 24 2018, at; 07.00-10.00 WIT. And the meeting point for healthy walking participants is LADMARK, which is located at Jl. Hero of the Revolution, Muhajirin Village, Central Ternate City, North Maluku Province.

Masjid SULTAN

Masjid SULTAN Ternate
Batas Jalan Sehat

Masjid RAYA Ternate
Tempat FINIS

Taman Nukila ternate
Tempat START

Ternate Landmark

Fig 4. (Healthy Pathway, Starting Place, Boundary, and Finishing Place - 106th Anniversary of Muhammadiyah)

After the participants gathered at the Landmark (START place) Next - Started walking to Nukila Park - Jatiland Mall - Hygienic Market - headed north (Kel. Soa Sio) via Jl. Sultan M. Djabir Sjah - until in front of Hypemart turn right - towards the Sultan Mosque of Ternate (healthy road limit) - Then turn back towards the South (Kampung Makassar) - Follow Jl. Sultan Babullah - Fort Oranje Park - Gamalama Market - Jl. Heroes of the Revolution - from Toko Garuda Elok, then turn right towards Masjid Raya Al-Munawwar Ternate (place of FINIS), As shown in Figure 4 above.



Fig 5. (Healthy Walk Team of PW Nasya'tul Aisyiyah Malut & UMMU Faculty of Health Sciences Team)

Participants who attended this GERMAS activity were: Employees, Lecturers and Students of North Maluku Muhammadiyah University (UMMU), Milad Muhammadiyah Malut Committee, North Maluku Muhammadiyah Regional Leader (PWM Malut), Nasyia'tul Aisyiyah Regional Leader (PWNA Malut), RSI PKU Muhammadiyah North Maluku, Poltekkes Ministry of Health Ternate, all ORTOM and all Muhammadiyah Charities (AUM) throughout Ternate city and North Maluku Province. And this healthy walk was also enlivened by the Drum Band Team from SMP Islam 1 Ternate City. As seen in Figure 6 below:



Fig 6. (The Islamic Junior High School 1 Ternate City Drum Band Team, UMMU FIP Team and other Ortoms)

According to Rina T.A (2007), walking is an easy and inexpensive physical activity, walking can be done by anyone regardless of age and can be done anytime regardless of the weather. Walking is a cheap sport but healthy and safe because the risk of injury is very small. A study conducted by Duke University Medical Center found that walking 30 minutes a day can reduce metabolic syndrome, which is one of the causes of the high risk of heart disease, diabetes and stroke [13]. This is in accordance with the results of research conducted by Yurida and ZHuzaifah (2019), showing that the average blood sugar of respondents before walking was 238.3 mg/dl while the average blood sugar level of respondents after walking was 203. ,4 mg/dl. Test analysis results Statistical test results obtained value of p = 0.000 then below the

value of = 0.05 (p <0.05) thus statistically at the 95% confidence level there is an effect of walking on blood sugar levels in type II diabetes patients.[14]



Fig 7. (Healthy Walk of the PWNA Malut Team, UMMU FIKes and others) Recent research has found that walking has more benefits than just physical activity. The reason is, this one activity can also improve your mental and spiritual health. Benefits of healthy walking for mental health:

1. Make Happier

According to Jeff Miller, Ph.D a psychologist from Saint Xavier University, walking has a positive impact like an energy. Walking can control feelings of being flowery, high enthusiasm, joy, excitement, and sensitivity. The reason is that walking can increase endorphins in the brain, which makes us feel good. Endorphins are natural pain relievers from the body. It also stimulates a sense of happiness in the brain, which will make you more relaxed and able to control your emotions.

2. Helps Fight Depression

Prolonged stress, whether it's because of work, romance, family, or other things, makes a person prone to depression. The good news is that walking can actually help in fighting depression. Walking gives time to think and get away from stress. Therefore, take a break from your busy activities, try to get up from your chair and go outside for a while. Spend time outdoors enjoying the sun, the breeze, meeting people, and anything else that keeps you warm. Especially if a healthy walk is done together with a partner or friend, guaranteed! Surely you will be more relaxed.

3. Increase Vitamin D Levels

Another benefit of walking regularly, especially outdoors, is the intake of free vitamin D. You may think that the intake of vitamin D only from vegetables and fruits. In fact, the greatest intake of vitamins is from the sun. By walking regularly, your vitamin D intake will also increase, so your risk of depression is lower [15]

IV. CONCLUSION

Health development is essentially an effort carried out by all components of the Indonesian nation. The goal is to increase awareness and ability to live healthy for everyone in order to realize the highest degree of public health[16]. Therefore, through the 106th Anniversary of Muhammadiyah (2018), the North Maluku Muhammadiyah Regional Leadership (PWM Malut) carried out the Healthy Living Community

Movement (GERMAS), namely Aerobic Gymnastics and Healthy Walks. Aerobic Gymnastics was held on Friday, October 26 2018, at 07:00-08:00 WIT, and the gym was held in front of the Rectorate of the University of Muhammadiyah North Maluku, which is located at Kelurahan Sasa Jl. KH. Ahmad Dahlan No. 100. The participants who attended the gymnastics activities were students, lecturers and employees of UMMU, the Muhammadiyah Malut Anniversary Committee and the Community. And in commemoration of the 106th anniversary of Muhammadiyah.

The North Maluku Muhammadiyah Regional Leadership has also organized a Healthy Walk or also known as the Ta'aruf Parade on foot. This activity is part of the Healthy Living Community Movement (GERMAS) activities. And this activity will be held on Saturday/November 24 2018, at; 07.00-10.00 WIT. The gathering point for the healthy walking participants is LADMARK, which is located at Jl. Hero of the Revolution, Muhajirin Village, Central Ternate City, North Maluku Province. And the participants who attended the healthy walk activities were: Employees, Lecturers and Students of North Maluku Muhammadiyah University (UMMU), Muhammadiyah Malut Milad Committee, North Maluku Muhammadiyah Regional Leader (PWM Malut), Nasyia'tul Aisyiyah Regional Leader (PWNA Malut), North Maluku PKU Muhammadiyah Hospital, Ternate Ministry of Health Poltekkes, all ORTOM and all Muhammadiyah Charities (AUM) throughout Ternate city and North Maluku province, and healthy walks were enlivened by the presence of a Drum Band Team from Islamic Junior High School 1 Ternate City.

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REFERENCES

[1] A. Rafiq, "Milad ke-106 Muhammadiyah Serukan Ta'awun untuk Negeri.," [diunduh 16 April 2021]. Tersedia pada https://nasional.tempo.co/read/1147580/milad-ke-106-

- muhammadiyah-serukan-taawun-untuk-negeri, 2018.
- [2] Kemenkes, "GERMAS (Gerakan Masyarakat Hidup Sehat).," War. Kesmas, 1(1), 27 halaman. http://www.kesmas.kemkes.go.id/assets/upload/dir_519d41d8cd98f00/files/Warta-Kesmas-Edisi-01-2017 752.pdf, 2017.
- [3] S. Notoadmodjo, *Promosi Kesehatan Teori dan Aplikasi*. PT. Rineka Cipta. Jakarta., 2010.
- [4] A. Kholid, *Promosi Kesehatan dengan Pendekatan Teori Perilaku, Media dan Aplikasinya.* PT. RajaGrafindo Persada. Jakarta., 2015.
- [5] et al. Omoniyi, M..M., "Health Implications of Physical Activity Participation of Second Cycle School Students.," *J. Phys. Educ. Sport. Heal. Recereation*, vol. 7, no. 3, pp. 146–151, 2018.
- [6] H. Darsi., "Pengaruh Senam Aerobic Low Impact terhadap Peningkatan V02Max. Gelanggang Olahraga:," J. Pendidik. Jasm. dan Olahraga., vol. 1, no. 2, pp. 42–51, 2018.
- [7] dkk. Susiana Candrawati, "Senam Aerobik Meningkatkan Daya Tahan Jantung Paru Fleksibilitas.," *J. Kedokt. Brawijaya*, vol. 29, no. 1, pp. 69–73, 2013.
- [8] R. Dwijayanti, K., &Ferbrianti, "Menjaga Daya Tahan Tubuh di Masa Pandemik Covid-19 dengan Senam Aerobik.," https://doi.org/10.31949/jb.v2i1.760, vol. 2, no. 1, pp. 392–395, 2021.
- [9] I. Larasati, "Senam Aerobik Pemanasan, Inti, Pendinginan (Low Impact & High Impact) Singkat.," [diunduh 19April2021]. https://www.youtube.com/watch?v=93XjUIDSjK4, 2019.
- [10] L. Merah, "Senam Tobelo Persit Kodim 1402/Polmas.," [diunduh 19Juni2021]. Tersedia pada https://www.youtube.com/watch?v=qvbbJz8bcOY, 2017.
- [11] S. G. Healt, "Senam Diabetes.," [diunduh 17Juni2021]. Tersedia pada https://www.youtube.com/watch?v=MNEXe-PwxGg, 2013.
- [12] Kemenkes RI, "Manfaat Berjalan Kaki.," [diunduh 18Juni2021]. Tersedia pada http://www.p2ptm.kemkes.go.id/infographic-p2ptm/obesitas/apa-saja-manfaat-berjalan-kaki, 2019.
- [13] A. S. Wahyuningsih, "Membudayakan Jalan Kaki di Kampus Konservasi.," *J. Media Keolahragaan Indones.*, vol. 5, no. 2, pp. 51–56, 2015.
- [14] Y. dan Z. Huzaifah, "Pengaruh Jalan Kaki terhadap Kadar Gula Darah pada Pasien Diabetes Mellitus Tipe II.," *Din. Kesehat. J. Kebidanan dan Keperawatan https://ojs.dinamikakesehatan.unism.ac.id/index.php/dksm/article/download/468/432*, vol. 10, no. 2, pp. 911–915, 2019.
- [15] Risky Candra Swari, "Jalan Kaki Tak Hanya Bermanfaat untuk Fisik, Tapi Juga Mental," .[diunduh 18Juni2021]. Tersedia pada https://hellosehat.com/mental/mental-lainnya/manfaat-jalan-kaki-kesehatan-mood/, 2017.
- [16] Kemenkes RI, "GERMAS (Gerakan Masyarakat Hidup Sehat).," War. Kesmas, 1(1), 27 halaman. http://www.kesmas.kemkes.go.id/assets/upload/dir 519d41d8cd98f00/files/Warta-

Kesmas-Edisi-01-2017_752.pdf, 2017.