

# sicph 21 windi2

*by* Fatma Febry

---

**Submission date:** 24-Apr-2023 11:59AM (UTC+0700)

**Submission ID:** 2073652252

**File name:** PROCEEDING\_SICPH\_2021\_windi.pdf (7.11M)

**Word count:** 3711

**Character count:** 20276



**Universitas Sriwijaya**  
Faculty of Public Health

## **PROCEEDING BOOK**

**THE 3<sup>rd</sup> SRIWIJAYA INTERNATIONAL  
CONFERENCE OF PUBLIC HEALTH**

**Theme :**  
**“ The workplace Initiative : Health, Safety and  
Wellbeing Regarding COVID - 19 ”**

ISBN 978-623-399-020-2



9 786233 990202

**GRAND ATYASA PALEMBANG**  
**21<sup>st</sup> - 22<sup>nd</sup> OCTOBER 2021**

**PROCEEDING**  
**THE 3<sup>rd</sup> SRIWIJAYA INTERNATIONAL**  
**CONFERENCE ON PUBLIC HEALTH**

*The Work Place Initiative: Health, Safety and Wellbeing  
Regarding COVID-19*

© 2021 FKM UNSRI

Grand Atyasa Palembang, 21<sup>st</sup> – 22<sup>nd</sup> October 2021

This proceeding is published by:  
Public Health Faculty Universitas Sriwijaya  
Kampus FKM Unsri Indralaya, Jl. Raya Palembang-  
Prabumulih KM.32 Indralaya, Ogan Ilir, Sumatera Selatan, 30662  
Hotline : +62711580068  
Fax : +62711580089

Copyright © 2021 by FKM Universitas Sriwijaya  
ISBN : 978-623-399-020-2

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical including photocopy, without permission in writing form the publisher

# ORGANIZING COMMITTEE

<b>Board of Adviser</b>	: Prof. Dr. I <sup>2</sup> Anis Saggaff, MSCE (Rector of Universitas Sriwijaya)
<b>Coach</b>	: Dr. Misnaniarti, S.KM, M.KM (Dean of Public Health Faculty)
<b>Person in charge</b>	: 1. Asmaripa Ainy, S.Si, M.Kes (Vice Dean 1) 2. Prof.Dr.Yuanita Windusari, S.Si.(Vice Dean 2) 3. Dr. Nur Alam Fajar, S.Sos, M.Kes (Vice Dean 3) 4. Dr. Novrikasari, S.KM.,M.Kes.
<b>Chair</b>	: Anita Camelia, S.KM.,M.KKK
<b>Secretary</b>	: Nurmalia Ermi, S.ST., M.KM
<b>Div. of Secretariat</b>	: Drs. H. Fathul Hartama, M.Si
<b>Div. of Registration &amp; PR</b>	: Widya Lionita, S.KM., M.PH
<b>Div. of Scientific</b>	: Dr. Rico J. Sitorus, S.KM, M.Kes(Epid)
<b>Div. of Event</b>	: Dini Arista Putri, S.Si., M.PH
<b>Div. of Accomodation</b>	: Waluyanto
<b>Div. of Documentation &amp; Publication</b>	: Najmah, S.KM., M.PH, Ph.D
<b>Div. of Consumption</b>	: Muslimaini, S.E
<b>Moderator</b>	: 1. Poppy Fujianti, S.K.M, M.Sc 2. Desheila Andarini, S.K.M, M.Sc

## STEERING COMMITTEE

1. Prof. Retneswari Masilamani (Universiti Tunku Abdul Rahman, Malaysia)
2. Prof. dr. Tan Malaka, MOH, Ph.D, HIU (Universitas Sriwijaya, Indonesia)
3. Prof. Dr. Joselito Gapas, MD, MPH (University of the Philippines Manila, Philippines)
4. Prof. dr. Tjandra Yoga Aditama, SpP(K) (Director of Postgraduate in University of YARSI, Professor in Medical Faculty University of Indonesia, Professor Griffith University Australia)

## REVIEWERS

Prof. Dr. Yuanita Windusari, S.Si, M. Si

Dr. Novrikasari, S.K.M, M.Kes

Dr. Nur Alam Fajar, S.Sos, M.Kes

Dr. rer. Med. H. Hamzah Hasyim, SKM, MKM

Dr. Rostika Flora, S.Kep., M.Kes

Najmah, SKM, M.PH, Ph.D

## EDITOR

Dr. Rico Januar Sitorus, S.KM, M.Kes (Epid)

13

Dr. Haerawati Idris S.KM, M.Kes

Indah Purnama Sari, S.KM, M.KM

Inoy Trisnainy, S.KM, M.KL

Feranita Utama, S.KM., M.Kes

Fenny Etrawati, S.KM., M.KM

Ima Fransiska, S.Sos

9  
**ONLINE NUTRITION EDUCATION CLASS TO IMPROVE KNOWLEDGE AND WELLNESS OF WELL-BEING**

**Windi Indah Fajar Ningsih\*, Fatmalina Febry, Indah Purnama Sari**  
Public Health Faculty, Sriwijaya University, South Aumatera, Indonesia  
\* Correspondence Email: windi@fkm.unsri.ac.id

2  
**ABSTRACT**

World Health Organization (WHO) has declared the COVID-19 outbreak as a global pandemic on March 11, 2020. This has become the world's concern to reduce the risk of transmission and death due to COVID-19. Therefore, a strong immune system is the key to individual in preventing COVID-19 infection. This immunity can be formed through a balanced nutritional diet and physical activity. Knowledge is able to become the basis for the community to form a positive attitude in improving health and immunity during the COVID-19 pandemic. The purpose of this activity is to provide education related to diet and physical activity practices that can strengthen the immune system during the COVID-19 pandemic. The activity was carried out via Zoom Cloud Meeting which was attended by 88 participants who voluntarily registered to take part in the activity. Participants were given pre and post tests as to evaluate their knowledge regarding the material. The results of the paired T-test on the mean pre-test and post-test scores showed a significant increase in the knowledge of respondents in increasing endurance through balanced nutritional intake and physical activity ( $p < 0.0001$ .)

**Keywords:** COVID-19, Education, Nutrition, Physical Activity, Immunity.

**ABSTRAK**

16  
Organisasi Kesehatan Dunia (WHO) telah mengumumkan wabah COVID-19 sebagai pandemi global pada 11 Maret 2020. Hal ini menjadi perhatian dunia untuk menekan risiko penularan dan kematian akibat COVID-19. Oleh karena itu, sistem imunitas tubuh yang kuat menjadi kunci pertahanan individu dalam mencegah infeksi COVID-19. Imunitas tersebut dapat terbentuk melalui pola makan gizi seimbang dan aktivitas fisik. Oleh sebab itu, pemberian edukasi untuk menjaga kebugaran selama pandemi COVID-19 menjadi penting untuk dilakukan. Hal ini dikarenakan para peserta memperoleh pengetahuan terkait pola makan dan aktivitas fisik yang mampu memperkuat sistem imunitas tubuh. Pengetahuan ini mampu menjadi dasar bagi masyarakat untuk membentuk sikap positif dalam meningkatkan kebugaran dan imunitas selama pandemi COVID-19. Kegiatan edukasi dilaksanakan secara daring via Zoom Cloud Meeting. Evaluasi pengetahuan peserta terkait materi yang disampaikan diukur melalui uji statistik *paired T-test* pada rerata skor *pre-test* dan *post test*. Berdasarkan hal tersebut, terdapat perbedaan yang signifikan pada pengetahuan peserta sebelum dan sesudah diberikan edukasi.

**Kata Kunci:** COVID-19, Edukasi, Gizi, Aktivitas Fisik, Imunitas



## Introduction

The existence of cluster pneumonia and novel coronavirus cases in Wuhan, China at the end of December 2019 marked the beginning of the spread of COVID-19. Positive cases of COVID-19 continue to appear accompanied by increasing in several other countries. <sup>12</sup> in Indonesia the first positive case of COVID-19 was confirmed on March 2, 2020 with a total of two cases. The increasing number of cases in various countries has caused the WHO to declare the COVID-19 outbreak as global pandemic. The announcement was accompanied by the release of various health guidelines by WHO and health institutions in various countries to reduce the risk of transmission and death from COVID-19. <sup>10</sup>

COVID-19 is a disease caused by the SARS-CoV-2 (Severe Acute Respiratory Syndrome-Coronavirus-2) virus. <sup>14</sup> Transmission of this virus to the human body is through droplets that enter the mucous membranes in the mouth, eyes, and nose. Before infecting the body, This virus binds to the ACE-2 (Angiotensin Converting Enzyme-2) receptor. These receptors are mainly located in the lungs but also in other organs such as the kidneys and heart (1). Therefore, SARS-CoV-2 infection is able to cause various organ damage such as pulmonary edema, acute kidney disorders, to heart muscle atrophy (2). The incubation period of this virus lasts for 3-7 days (3). <sup>6</sup>

There is a relationship between the body's immune system and the incidence of COVID-19. A strong immune system can reduce the risk of individuals being infected with COVID-19. Meanwhile, a dysfunctional immune system is more susceptible to infection with various pathogens including SARS-CoV-2. Impaired immune system contributes to the pathogenic mechanism of SARS-CoV-2 (4). <sup>15</sup> A retrospective study in Wuhan, China also stated that SARS-CoV-2 infection increased ferritin and IL-6 levels resulting in hyperinflammation that was associated with mortality in COVID-19 patients (5). <sup>15</sup>

The description above shows that a strong immune system is important to prevent COVID-19. Therefore, several efforts can be made, including implementing a balanced nutritional diet and physical activity. A balanced nutritional diet needs to be done because the immune system requires several nutrients such as amino acids, vitamins, and minerals to work. These nutrients play a role in the proliferation, differentiation, and maturation of immune cells (6). Meanwhile, physical activity is anti-pathogenic by increasing the recirculation of immune components, namely immunoglobulins, neutrophils, and anti-inflammatory cytokines (7).

Besides increasing immunity, a balanced nutritional diet and physical activity play a role in improving health during the COVID-19 pandemic. This is caused by the description of consumption <sup>4</sup>

patterns <sup>5</sup> and physical activity during the COVID-19 pandemic in Indonesia. The food intake of the young age group increases but there is a decrease in physical activity which can cause the risk of obesity (8). Physical activity is dominated by cardio exercise in the afternoon (9). Even so, deteriorating economic conditions have resulted in disruption of the fulfillment of a balanced nutritional diet, especially if family members as well as workers are laid off (10). This condition makes the affected people more vulnerable to contracting COVID-19.

Based on the discussion above, it can be concluded that the body's immune system is the main factor in preventing COVID-19. A strong immune system can be formed by implementing a balanced nutritional diet and physical activity. The application of these two is not only useful for increasing immunity, but also maintaining overall <sup>6</sup> body health. Therefore, it is important to educate the public regarding improving immunity and health during the COVID-19 pandemic.

## Method

This activity was carried out as part of community service by FKM Sriwijaya University. The activity is opened to the public by disseminating information through social media. There were 88 participants who joined this activity. This activity was carried out via Zoom Cloud Meeting. Activities carried out in the form of counseling, video screening of “Isi Piringku”, and physical activities. The material on balanced nutrition diet was delivered by a lecturer in the nutrition study program at the Faculty of Public Health, Sriwijaya University and material of physical activity was delivered by a personal trainer. Evaluation of participants' knowledge is carried out in the form of pre-test and post-test.

## Results

This community service activity was attended by 88 participants, which were dominated by groups of students with the highest average between the age of 18-22 years. Most of the participants in the activity were women. The data on the characteristics of the participants are presented in table 1.

**Table 1. Characteristics of Respondents**

Characteristic	Frequency	Percent (%)
<b>Job</b>		
Worker	12	13,63
Student	76	86,36
<b>Age</b>		
18-22 Years old	77	87,5
>23 Years old	11	12,5
<b>Gender</b>		
Man	7	79,54
Woman	81	92,04

Source : Primary Data, 2020.

Before starting the educational activity, the participants took a pre-test. This aims to determine the participants' knowledge regarding the application of a balanced nutrition diet and physical activity. Furthermore, the first session of this activity began with the presentation about balanced nutrition by the community service team.

Evaluation of participants' knowledge is carried out in the form of pre-test and post-test. The results of the evaluation were statistically processed using the paired T-test method with the results presented in table 2.

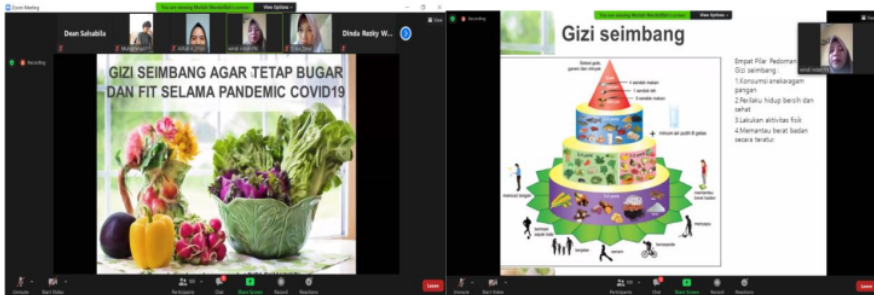
**Tabel 2: Differences in Average Knowledge Scores of Pre-test and Post-Test**

Knowledge	Mean	$\Delta\bar{x} \pm SD$	P-value*	Description
Pretest	5,76			
Posttest	7,03	-1,302 ± 2,648	<0,0001	Signifikan

Source: SPSS Application, 2020

## Discussion

This community service was started by delivery of material related to balanced nutrition diet. It purposed to improve participant's knowledge. it began with the definition of the concept of balanced nutrition according to the Indonesian Ministry of Health which is described in the form of a cone. The presenters further elaborated on the composition of balanced nutrition that can be applied to the daily diet. Furthermore, the speaker explained the role of a balanced nutritional diet in maintaining fitness during the COVID-19 pandemic.



**Picture 1. Presentation of Materials About Balanced Nutrition**  
**Source: (World Bank, 2017)**

The presentation of the material for the first session was accompanied by a video explanation about the concept of “Isi Piringku”. It aims to introduce participants to the application of balanced nutrition that has been prepared by the Indonesian Ministry of Health in the form of “Isi Piringku”. The video contains various groups of macro and micro nutrients with the examples of their various sources. At the same time, this video shows the distribution of the portion of nutritional sources in one meal in accordance with the “Isi Piringku” guideline.



**Picture 2 : My Plate Contents Video Play**  
**Source : Documentation, 2020**

A balanced nutritional diet needs to be applied in daily life to prevent COVID-19 infection. Balanced nutrition is a daily food composition that contains nutrients in the type and amount according to the needs by implementing the principle of food diversity (12). Various macro and micro nutrients have been shown that have an effect on immunity. Carbohydrates prevent a decrease in immune cells

<sup>1</sup>  
 The 3<sup>d</sup> Sriwijaya International Conference on Public Health (SICPH)  
 Palembang, Oktober 21<sup>st</sup>, 2021

undergoing apoptosis (13). Protein is an immunomodulator by increasing the response of T lymphocytes (14). On the other hand, low protein intake deregulates immune cells so it can increase lung inflammation (13). Meanwhile, fat in the form of SCFA (Short Chain Fatty Acids) plays a role in signaling a number of receptors to control the body's immune function (15). Several micronutrients in the form of vitamins A, C, and E enhance the function of the epithelial tissue/skin barrier as a non-specific immune system (16). Beside that, vitamins B complex and E increase T lymphocyte proliferation and neutrophil phagocytosis (17).

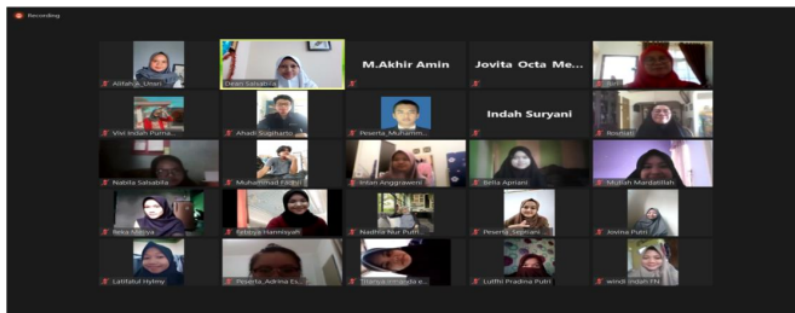
The second session was the delivery of material on physical activity during the COVID-19 pandemic. The material for the second session was delivered by a personal trainer. The speaker explained that physical activity is beneficial for improving body health and feelings of happiness because it increases endorphins hormone. Furthermore, the speaker demonstrated cardio and weightlifting movements that can be applied daily with simple tools at home such as a bottle of mineral water and a chair. Water bottles are used as weights that must be moved by a number of muscles termed as repetitions.

Physical activity is an important thing to do especially <sup>5</sup> during the COVID-19 pandemic. Lack of physical activity is associated with a decrease in individual psychosocial conditions during the COVID-19 pandemic (18). In addition, physical activity is related to the immune system which during the pandemic is the key to defense from COVID-19 infection. Muscle contraction increases the release of cytokines, neutrophils, and leukocytes which are influenced by the contractile unit, duration, and intensity of physical activity (19). Muscles also play a role in signaling messages through myokine intermediaries in forms such as IL-7 and IL-15 to modulate the immune system (20). However, myokine levels are inversely proportional to the age of the individual (21). Another effect of physical activity was experienced by the 55-79 year old (non-athlete) age group who cycled at high levels in adulthood where they experienced only a few signs of immunosenescence when compared to the same but inactive age group (22). However, experimental studies in Wistar rats showed that 5 weeks of intensive exercise led to a decrease in the proportion of splenic NK cells (Natural Killer) accompanied by higher cytotoxic activity (23). Therefore, regular and measurable physical activity is important so that individuals gain health benefits, especially during the COVID-19 pandemic.



**Picture 3: Physical Activity Virtually**  
**Source: Documentation, 2020**

The second session was continued with aerobic exercise using contemporary song movements. Before ending his explanation, the speaker gave a message to the participants to carry out regular physical activities to maintain health during the COVID-19 pandemic. In addition, the speaker advised the participants to do physical activities according to the condition and ability of the body to avoid injury. After the second session ended, the participants worked on a number of post-test questions. This aims to see changes in the knowledge of education participants regarding the application of a balanced nutritional diet and physical activity. After the participants did the post-test, this community service activity ended with a group photo session.



**Picture 4: Group Photo Session Source : Documentation, 2020**

Based on the table 2 above, it is known that the average knowledge score before and after the intervention is 5.76 and 7.03. The paired T-test statistic that was performed on the data resulted in a P-value <0.0001. This means that there is a significant difference in participants' knowledge before and after the intervention. This result can also be influenced by the majority of participants, namely students as an educated group. Higher levels of education are associated with internet engagement where the individual tends to want to obtain better health information and provide feedback on the information received (24).

Health education delivered online is a common thing nowadays as an effort to break the chain of the spread of COVID-19. This educational method can be effective in providing improved knowledge to the health behavior of the audience. According to Adam et al., the effectiveness of the education method can be measured by how well the audience identifies the message conveyed where in the identification process the health message delivered is able to provide the information needed and desired by the audience (25). In other words, this online class education activity when viewed from the statistical data above is able to provide the audience's needs in the form of information about a balanced nutritional diet and physical activity to stay fit during the COVID-19 pandemic.

## Conclusion

Online class education activities can be a solution in conducting education during the COVID-19 pandemic. There was an increase in participants' knowledge after attending two counseling sessions related to the application of a balanced nutritional diet and physical activity in order to get fit during the COVID-19 pandemic. This activity is the first activity so it is recommended that further similar activities can be carried out by spreading information more widely, especially to reach older people.

## Acknowledgement


Thank you to the Faculty of Public Health, Sriwijaya University for funding this community service activity.

## Reference

1. Zou X, Chen K, Zou J, Han P, Hao J, Han Z. Single-cell RNA-seq data analysis on the receptor ACE2 expression reveals the potential risk of different human organs vulnerable to 2019-nCoV infection. *Frontiers of Medicine*. 2020 Apr 1;14(2):185–92.
2. Ni W, Yang X, Yang D, Bao J, Li R, Xiao Y, et al. Role of angiotensin-converting enzyme 2 (ACE2) in COVID-19. Vol. 24, *Critical Care*. BioMed Central; 2020.
3. Li Q, Guan X, Wu P, Wang X, Zhou L, Tong Y, et al. Early Transmission Dynamics in Wuhan, China, of Novel Coronavirus-Infected Pneumonia. *New England Journal of Medicine*. 2020 Mar 26;382(13):1199–207.
4. Yang Y, Xiao Z, Ye K, He X, Sun B, Qin Z, et al. SARS-CoV-2: characteristics and current advances in research. Vol. 17, *Virology Journal*. BioMed Central; 2020.
5. Chowdhury MA, Hossain N, Kashem MA, Shahid MA, Alam A. Immune response in COVID-19: A review. Vol. 13, *Journal of Infection and Public Health*. Elsevier Ltd; 2020. p. 1619–29.
6. Calder PC. Nutrition, immunity and COVID-19. *BMJ Nutrition, Prevention & Health*. 2020 Jun;3(1):74–92.
7. Nieman DC, Wentz LM. The compelling link between physical activity and the body's defense system. Vol. 8, *Journal of Sport and Health Science*. Elsevier B.V.; 2019. p. 201–17.
8. Yılmaz HÖ, Aslan R, Unal C. Effect of the COVID-19 pandemic on eating habits and food purchasing behaviors of university students. *Kesmas: Jurnal Kesehatan Masyarakat Nasional (National Public Health Journal)*. 2020 Aug 1;15(3):154–9.
9. Nugraha PD, Utama MBR, S A, Sulaiman A. Survey Of Students Sport Activity During Covid-19 Pandemic. *Jp.jok (Jurnal Pendidikan Jasmani, Olahraga dan Kesehatan)*. 2020 Nov 12;4(1):11–24.
10. Sina PG. Ekonomi Rumah Tangga di Era Pandemi COVID-19. *Journal of Management - Small and Medium Enterprises (SME's)*. 2020;12(2):239–54.
11. World Bank. *World Development Indicators 2018*. World Bank. 2017. p. 1.
12. Kementerian Kesehatan Republik Indonesia. PMK No. 41 Tentang Pedoman Gizi Seimbang. 2014.
13. Chaari A, Bendriss G, Zakaria D, McVeigh C. Importance of Dietary Changes During the Coronavirus Pandemic: How to Upgrade Your Immune Response. Vol. 8, *Frontiers in Public Health*. Frontiers Media S.A.; 2020.



14. Ibrahim, El-Sayed. Potential role of nutrients on immunity. Vol. 23, International Food Research Journal. 2016.
15. Venegas DP, Fuente MK de, Landskron G, Gonzalez MJ, Quera R, Dijkstra G, et al. Short Chain Fatty Acids ( SCFAs ) -Mediated Gut Epithelial and Immune Regulation and Its Relevance for Inflammatory Bowel Diseases. Front Immunol. 2019;10(277):1–16.
16. Farhan Aslam M, Majeed S, Aslam S, Irfan JA. Vitamins: Key Role Players in Boosting Up Immune Response-A Mini Review. Vitamins & Minerals. 2017;06(01).
17. Chowdhury AI. Role and Effects of Micronutrients Supplementation in Immune System and SARS-Cov-2(COVID-19). Asian Journal of Immunology [Internet]. 2020;4(2):47–55. Available from: <http://www.sdiarticle4.com/review-history/58128>
18. Maugeri G, Castrogiovanni P, Battaglia G, Pippi R, D'Agata V, Palma A, et al. The impact of physical activity on psychological health during Covid-19 pandemic in Italy. Heliyon. 2020 Jun 1;6(6).
19. da Silveira MP, da Silva Fagundes KK, Bizuti MR, Starck É, Rossi RC, de Resende e Silva DT. Physical exercise as a tool to help the immune system against COVID-19: an integrative review of the current literature. Vol. 21, Clinical and Experimental Medicine. Springer Science and Business Media Deutschland GmbH; 2021. p. 15–28.
20. Nelke C, Dziewas R, Minnerup J, Meuth SG, Ruck T. Skeletal muscle as potential central link between sarcopenia and immune senescence. Vol. 49, EBioMedicine. Elsevier B.V.; 2019. p. 381–8.
21. Duggal NA, Pollock RD, Lazarus NR, Harridge S, Lord JM. Major features of immunosenescence, including reduced thymic output, are ameliorated by high levels of physical activity in adulthood. Aging Cell. 2018 Apr 1;17(2).
22. Weyh C, Krüger K, Strasser B. Physical activity and diet shape the immune system during aging. Vol. 12, Nutrients. MDPI AG; 2020.
23. Estruel-Amades S, Camps-Bossacoma M, Massot-Cladera M, Pérez-Cano FJ, Castell M. Alterations in the innate immune system due to exhausting exercise in intensively trained rats. Scientific Reports. 2020 Dec 1;10(1).
24. Lee CJ. The role of Internet engagement in the health-knowledge gap. Journal of Broadcasting and Electronic Media. 2009 Jul;53(3):365–82.

- 
25. Adam M, McMahon SA, Prober C, Bärnighausen T. Human-centered design of video-based health education: An iterative, collaborative, community-based approach. *Journal of Medical Internet Research*. 2019 Jan 1;21(1).



**Universitas Sriwijaya**  
**Faculty of Public Health**

ISBN 978-623-399-020-2



9 786233 990202

## ORIGINALITY REPORT

15%

SIMILARITY INDEX

14%

INTERNET SOURCES

6%

PUBLICATIONS

6%

STUDENT PAPERS

## PRIMARY SOURCES

1	<a href="http://unsri.ac.id">unsri.ac.id</a> Internet Source	3%
2	<a href="http://repository.poltekkes-denpasar.ac.id">repository.poltekkes-denpasar.ac.id</a> Internet Source	2%
3	<a href="http://docplayer.net">docplayer.net</a> Internet Source	1%
4	<a href="http://jgp.poltekkes-mataram.ac.id">jgp.poltekkes-mataram.ac.id</a> Internet Source	1%
5	Hassan Pourrazi, Shagayeg Modaberi, Raheleh Kabiri. "Disordered Eating Attitudes During the COVID-19 Pandemic: The Predictive Role of Physical Activity, Body Mass Index, and Gender", Archives of Hygiene Sciences, 2021 Publication	1%
6	<a href="http://nopren.ucsf.edu">nopren.ucsf.edu</a> Internet Source	1%
7	Fidyah Aminin, Jusuf Kristianto, Dewi Puspa Rianda, Haryadi Haryadi, Jeni Cesi Cintiani. "Development of "No Anemia No Stunting" (Si	1%

NaNing) Modules and Application in Efforts to Prevent Stunting in Archipelago Regions", *Jurnal Ilmu dan Teknologi Kesehatan*, 2022  
Publication

---

8 [www.herminahospitals.com](http://www.herminahospitals.com) 1 %  
Internet Source

---

9 [fkm.unsri.ac.id](http://fkm.unsri.ac.id) 1 %  
Internet Source

---

10 Denny Jean Cross Sihombing, Desi Christine Othernima, Ariya Kieputra, Tamaria H. Artpinkkan. "Application of Artificial Neural Network (ANN) and Support Vector Machine (SVM) for Government Policy Recommendations to Allow People to Do Activities Without Masks", 2021 IEEE 5th International Conference on Information Technology, Information Systems and Electrical Engineering (ICITISEE), 2021  
Publication

---

11 [ejournal.poltekkes-smg.ac.id](http://ejournal.poltekkes-smg.ac.id) 1 %  
Internet Source

---

12 [jse.rezkimedia.org](http://jse.rezkimedia.org) 1 %  
Internet Source

---

13 Submitted to Badan PPSDM Kesehatan Kementerian Kesehatan 1 %  
Student Paper

---

14 Nissa Noor Annashr, Andi Eka Yuniyanto, Andy Muharry, Asep Suryana Abdurrahmat et al. "Lifestyle Changes Before and During the COVID-19 Pandemic in West Java Province, Indonesia", Open Access Macedonian Journal of Medical Sciences, 2022  
Publication 1 %

---

15 [www.wjgnet.com](http://www.wjgnet.com)  
Internet Source 1 %

---

16 [www.coursehero.com](http://www.coursehero.com)  
Internet Source 1 %

---

Exclude quotes  On

Exclude matches  < 1%

Exclude bibliography  On