



Contents lists available at [Journal IICET](https://journal.iicet.org)  
**JPPi (Jurnal Penelitian Pendidikan Indonesia)**  
ISSN: 2502-8103 (Print) ISSN: 2477-8524 (Electronic)  
Journal homepage: <https://jurnal.iicet.org/index.php/jppi>



## The effectiveness of pocket book of healthy lifestyle for the elderly during covid-19 pandemic at the Ambon city health center

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### Article Info

#### Article history:

Received Nov 25<sup>th</sup>, 2022  
Revised Mar 29<sup>th</sup>, 2023  
Accepted Jan 21<sup>st</sup>, 2024

#### Keyword:

Knowledge,  
Elderly,  
Pocket book older lifestyle

### ABSTRACT

During the Covid-19 pandemic that occurred from March 2020 until now, the elderly is very vulnerable to transmission of the Covid-19 virus because their immune system has begun to decrease. This study aims to determine changes in the knowledge of the elderly before and after being given the elderly healthy pocket book. The research method uses a one group pre-posttest design. The product produced from this research is a healthy pocket book for the elderly that can be used as a guide for the elderly in maintaining health to avoid transmission of Covid-19. To find out the effectiveness of the pocket book to be produced, measurements were made of the knowledge of the elderly before and after being given the pocket book to 50 respondents using incidental sampling, namely the elderly who were found when the elderly visited the Rumah Tiga Health Center. The results showed that that pocket books for healthy lifestyles for the elderly during the Covid-19 pandemic were quite effective. It is hoped that the results of this study can be useful for the elderly and can also play a role in controlling the transmission of the Covid-19 virus in Maluku.



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## Introduction

Indonesia is a developing country with a very large population that requires a large number of health workers. According to data from the Ministry of Health for 2008, 13,958 doctors were needed for 8,234 puskesmas in 33 provinces, but only 11,865 doctors were available. The government has also only been able to provide 10,963 doctors out of the 13,338 doctors needed to fill 546 government hospitals or is still 18 percent short of the requirement. The number of specialist doctors available is only 7,846 people, while the need for specialist doctors is 12,007 people. The need for other strategic health workers such as nutritionists, sanitarians and pharmacists has also not been met. The distribution of existing health workers is not evenly distributed in all regions, they are still concentrated in urban areas (Romadhona & Siregar, 2018). Indonesia, which is an archipelagic country, has remote areas that have not been reached by adequate medical services. It is estimated that 1,600 puskesmas, especially in remote areas, do not have doctors on duty and WHO places Indonesia in 57 countries that have problems with the distribution of health workers. Most of the new doctors tend to choose to work in big cities because it is more profitable economically (Nuryadi & Pramudwiatmoko, 2017).

Age, lifestyle and eating patterns that are not controlled as well as the many pollutants around us can cause degenerative diseases. Degenerative disease is a disease caused by decreased function/ability of human organs such as hypertension, diabetes and so on. This disease cannot be cured, but the effects of the disease can be minimized by changing lifestyle and diet and if necessary taking medication regularly to maintain the balance

of the body's organ systems. Medical services for degenerative diseases are more aimed at assisting patients to adopt a lifestyle and regular drug consumption, so that the disease is under control. Until now, conventional medicine still requires the presence of a doctor directly in front of the patient. Doctors listen to complaints, examine, provide diagnoses, and provide medical treatment to patients. On the other hand, the limited number of doctors, the uneven distribution of doctors, and long distances make conventional medical services less efficient. For example, cases of diabetes mellitus (DM) or high blood pressure (hypertension) are often suffered by the elderly (Setiyorini et al., 2018). Sometimes an elderly person has difficulty getting to a hospital that is far away, while in practice the examination itself is very short and simple. Actually the procedure can be simplified. For example, checking blood sugar is done alone with tools that are widely available in the market as well as checking blood pressure (Nugroho et al., 2021). The doctor simply accepts the results, diagnoses and gives advice. Currently this is very possible to do remotely (Nuryadi & Pramudwiatmoko, 2017).

In the medical world, this is called telemedicine. In telemedicine, a doctor is represented virtually and interacts with patients. Information and communication technology (Information & Communication Technology, ICT) has developed rapidly. Computers, cell phones, and the internet are forms of ICT that are commonplace and widely known by the public (Anshori, 2018). ICT allows supporting medical data, namely patient medical records, to be sent remotely on-line (Kuntardjo, 2020). Elderly citizens (elderly) are very vulnerable to the potential for transmission of Covid-19 (Peters, 2020). The Minister of Women's Empowerment and Child Protection (PPPA) I Gusti Ayu Bintang Puspayoga said, "the health of the elderly should not be ruled out even though they are no longer categorized as of productive age". Based on data from the World Health Organization (WHO), the elderly and people with comorbidities are the most vulnerable to contracting Covid-19. The elderly must receive special attention to stay healthy in the face of the new normal era or new normal during the Covid-19 pandemic (Pudyastuti et al., 2023). Things that must be paid attention to by the elderly include keeping them healthy and fit (Baga et al., 2017). So researchers feel the need to find out whether there is a difference in knowledge before and after being given a pocket book on a healthy lifestyle for the elderly during the Covid-19 pandemic in the working area of the Rumah Tiga Health Center?. This study aims to determine the effectiveness of the pocket book on a healthy lifestyle for the elderly during the Covid-19 pandemic in the working area of the Rumah Tiga Health Center.

## Method

The design of this research is an analytic study using a cross-sectional study design, where data relating to independent variables and dependent variables will be collected at the same time to see the effectiveness of the healthy pocket book for the elderly during the Covid-19 pandemic. The study used a one group pre-post test design with the following design:

### PRETEST TREATMENT POSTTEST

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O1 X O2

Information:

O1 : knowledge before treatment

X : Treatment (Healthy Elderly pocket book)

O2 : knowledge after treatment

## Population and Sample

The population of this study were all elderly who were visiting the Rumah Tiga Ambon health center. Based on data obtained from Rumah Tiga Ambon Health Center, the average number of elderly patient visits in the elderly is 60 people per month. The sample is part of the population taken using the sampling technique. The sampling technique in this study was *incidental sampling*, namely people in the elderly who were accidentally obtained during the research until 50 respondents were obtained. who met the inclusion criteria, namely lives in the working area of the Rumah Tiga Ambon Health Center and willing to be a respondent

## Results and Discussions

This research uses a one group pre-posttest approach. This means that in one group of respondents, a knowledge test was carried out 2 times, namely before and after being given the Elderly Health pocket book. The research was conducted by waiting for the elderly to visit the public health center. After being given informed consent, a test was then carried out by giving a questionnaire to be filled out and answered by the respondent. The test results are used as the results of the pre-test. Furthermore, after the questionnaire was believed to be complete,

the respondents were given an Elderly Health Pocket Book to read and study at their respective homes as a guide for daily behavior. On this occasion a contract was held with the respondent for a second meeting with the respondent. Various situations in this second meeting according to the request of the respondent. Some agreed to meet at the Puskesmas because there was a schedule for a return visit that had to be carried out next week. Partly because there was no schedule for a repeat visit, the second meeting was held by visiting the house where the respondent was located. In the second meeting, another test was carried out with the same questions as the first test. The process of answering questions is sought without interference from anyone so that the results of the second test are the result of the knowledge possessed by the respondent. The full results can be explained as follows:

### Characteristics of respondents

Respondents in this study were the elderly who were in the working area of the Rumah Tiga Health Center. In total, all respondents obtained as many as 50 respondents. In detail, the characteristics of the respondents are presented in table 1 below:

**Table 1.** Characteristics of Respondents based on age, gender and marital status

Characteristics	Amount	Percentage (%)
Age		
Middle <i>age</i>	27	54
Early Elderly ( <i>Elderly</i> )		
Old Elderly ( <i>Old</i> )	22	44
Very Old ( <i>Very old</i> )	1	2
Gender		
Man	-	-
Woman		
Marital status		
Marry	27	54
Widower	23	46
Widow		
	49	98
	-	-
	1	2
Amount	50	100

Source: Primary data 2021

Based on table 1 above, most of the respondents were in middle age and early elderly respectively 54% and 44%, while based on gender, there was almost a balance between men and women. Meanwhile, based on marital status, the majority (98%) still have a partner.

### Knowledge of Respondents Before being given the Elderly Health Pocket Book

Respondents' knowledge of healthy lifestyles during the Covid-19 pandemic was tested before intervention was given. The time of testing was carried out when the respondent made a visit to the health center. The full results are shown in table 2 below:

**Table 2.** Respondents' Knowledge Before Being Given The Elderly Healthy Pocket Book

Parameter	Score
Lower limit value	15.80
Upper limit value	17,42
Average value	16.52

Source: primary data 2021

Based on table 2, it is known that the knowledge of respondents before being given a healthy pocket book for the elderly was in the range of 15.8 to 17.42 with an average value of 16.52.

### Knowledge of Respondents After being given the Elderly Healthy Pocket Book

After being given the healthy pocket book for the elderly, the respondents' knowledge was measured again with the same questionnaire when measuring knowledge before the intervention. Respondents were given the opportunity to read and understand the contents of the elderly health pocket book for approximately 1 week.

Then a second or second knowledge measurement was carried out to find out the level of understanding of the contents of the elderly healthy pocket book. The results of knowledge measurement can be seen in table 3 below:

**Table 3.** Respondents' knowledge before being given the Elderly Healthy Pocket Book

Parameter	Score
Lower limit value	17.90
Upper limit value	18.94
Average value	18,42

Source: primary data 2021

Based on table 3 it is known that the knowledge of respondents before being given a healthy pocket book for the elderly was in the range of 17.9 to 18.94 with an average value of 18.42.

#### **Differences in Knowledge before and after being given the elderly healthy pocket book**

To find out the difference in knowledge before and after being given a healthy pocket book for the elderly, an independent t-test was carried out. The full results can be seen in table 4 below:

**Table 4.** The Results of The Different Test of Respondents' Knowledge Before and After Being Given The Elderly Healthy Pocket Book

	Mean Differences	95% CI		Sig.
		Lower	Upper	
KnowledgeBefore intervention	16.52	15,8	17,24	,000
Knowledge after intervention	18,42	17,9	18.94	,000

Source: 2021 primary data

Based on table 4 above, it seems that there is a significant increase in the average value of knowledge before and after being given the elderly healthy pocket book of .000. This means that there is a significant difference before and after the intervention is given. The magnitude of the increase in the average knowledge of respondents after being given a healthy pocket book for the elderly was 11.5%.

#### **Knowledge of Respondents Before being given the Elderly Health Pocket Book**

Knowledge is the result of human sensing, or the result of knowing someone about an object through the senses they have (eyes, nose, ears, and so on). By itself, at the time of sensing to produce this knowledge is greatly influenced by the intensity of attention and perception of objects. Most of a person's knowledge is obtained through the sense of hearing (ears) and the sense of sight (eyes) (Notoatmodjo, 2014). Based on the results of the research shown in table 2, it shows that the knowledge of the elderly about understanding pocket books from 20 questions in general obtained an average value of 16.52 . If converted in percentage to 82.6%. or high knowledge category . This is possible because most of the respondents are in the status of middle elderly (54%) and early elderly (44%). The elderly who are relatively young or in their early stages still have the ability to understand all the information they receive easily to understand. Information about the prevention of Covid-19 can be obtained from the mass media, both electronic and print media.

#### **Knowledge of Respondents After being given the Elderly Healthy Pocket Book**

Increasing one's knowledge through one's five senses, both the sense of hearing and the sense of sight, (Notoatmodjo, 2014) . In this study, the increase in respondents' knowledge was obtained through the sense of sight, namely by looking at the pocket book that was given to be read and understood. The results of the study of respondents after being given a pocket book on a healthy lifestyle for the elderly obtained an average result with the lowest score of 17.9 or 89.5% and the highest score of 18.94 or 94.7%. This shows that the information provided through a pocket book on a healthy lifestyle for the elderly is very well received, because the percentage obtained is very high. The achievement of this value is also supported by previous knowledge as basic knowledge that was already owned before being exposed to the pocket book on a healthy lifestyle for the elderly. With basic knowledge, it will be easier to digest and understand the latest information provided. These results are in line with Laila et al. (2022) which showed that there was an effect of nutritional counseling before and after using the hypertension pocket book on changes in knowledge and dietary adherence in pre-elderly people with hypertension at the Lembah Binuang Health Center. In line with Murtiyarini et al. (2019) which showed that there was an effect of giving pocket books on respondents' knowledge, there was an effect of giving leaflets on respondents' knowledge, and pocket book media was more effective than leaflet media on respondents' knowledge.

#### **Effectiveness of the Elderly Healthy Pocket Book**

Increased knowledge can be identified by comparing initial and final knowledge with the same intervention. As was the case in this study, the intervention was given by providing a module about the health of the elderly.

Knowledge was measured twice, before and after being given a healthy lifestyle pocket book for the elderly. Based on the results of the knowledge measurement described in table 4, it is known that the average value obtained increased from 16.52 to 18.42 or from 82.6% to 92.1%. The results of the statistical test increased knowledge quite significantly with a p value of 0.000. So it can be concluded that the healthy module for the elderly during the Covid-19 pandemic was quite effective. The increase in the knowledge of the respondents indicated that the pocket book on healthy patterns for the elderly that was given was easily understood and understood by the respondents, besides that it was still supported by the basic knowledge that the respondents had in the high category. The healthy module for the elderly is packaged in a simple but attractive way using everyday language so that it is easy for respondents to understand. In addition, the use of images in each explanation will add to the sharpness of understanding. It is hoped that the results of this study can be useful for the elderly, especially in the working area of the Rumah Tiga Health Center and can also play a role in controlling the transmission of the Covid-19 virus in Maluku.

## Conclusions

Based on the results and discussion in the previous chapter, it can be concluded that the average knowledge of the elderly before being given a pocket book on a healthy lifestyle during the Covid-19 pandemic was 16.52 to 18.42. So it can be concluded that the healthy module for the elderly during the Covid-19 pandemic was quite effective. The increase in the knowledge of the respondents indicated that the pocket book on healthy patterns for the elderly that was given was easily understood and understood by the respondents, besides that it was still supported by the basic knowledge that the respondents had in the high category. The healthy module for the elderly is packaged in a simple but attractive way using everyday language so that it is easy for respondents to understand. In addition, the use of images in each explanation will add to the sharpness of understanding.

## References

- Anshori, S. (2018). Pemanfaatan teknologi informasi dan komunikasi sebagai media pembelajaran. *Civic-Culture: Jurnal Ilmu Pendidikan PKn Dan Sosial Budaya*, 2(1).
- Baga, H. D. S., Sujana, T., & Triwibowo, A. (2017). Perspektif lansia terhadap aktivitas fisik dan kesejahteraan jasmani di Desa Margosari Salatiga. *Jurnal Ilmu Keperawatan Dan Kebidanan*, 8(2), 89–99. <http://eprints.mercubuana-yogya.ac.id/id/eprint/8933/>
- Boraschi D. (2013). The Gracefully Aging Immune System. *Science Translational Medicine*. Vol 5.
- Gatimu, SM, Milimo, BW & San Sebasti, M. (2016). Prevalence and determinants of diabetes among older adults in Ghana. *BMC Public Health*, Volume 16, pp. 1174.
- Hukmiyah. A.N, Bachtiar. F, Leksonowati. SS 2019. "Giving Brain Gym Exercise Can Improve Cognitive Function in the Elderly." *JurnalVokasiIndonesia*7:1118.<http://www.jvi.ui.ac.id/index.php/jvi/article/view/148>.
- Istifada, Rizkiyani., Sukihananto., Laagu, Muh Asnoer,. 2017. Use of Telehealth Technology in Nurses in Homecare Services. *Journal of Nursing Current* . Volume 5. Number 2
- Jakarta Smart City.(2020). Covid-19 Monitoring Data. Available at <https://corona.jakarta.go.id/id/data-monitoring>. Accessed: July 20, 2020.
- Kardi, IS, Widarti. R., Nasri. 2020. "Application of Elderly Exercise to Control Cholesterol Levels at Posyandu Marsudi Waras RW 12, Surakarta City". 59–63. <http://repository.urecol.org/index.php/proceeding/article/view/898/869>.
- Kuntardjo, C. (2020). Dimensions of ethics and telemedicine in Indonesia: Enough of Permenkes Number 20 year 2019 as a frame of telemedicine practices in Indonesia? *Soepra*, 6(1), 1–14. <http://journal.unika.ac.id/index.php/shk/article/view/2606>
- Laila, W., Nurhamidah, N., & Angelia, R. (2022). Konseling Gizi Dengan Media Buku Saku Hipertensi Terhadap Pengetahuan Dan Kepatuhan Diet Pada Pra Lansia Penderita Hipertensi. *Prosiding Seminar Kesehatan Perintis*, 5(2), 50–59. <https://www.jurnal.upertis.ac.id/index.php/PSKP/article/view/922>
- Law No. 13 (1998). Law of the Republic of Indonesia Number 13 of 1998 concerning Elderly Welfare.
- Ministry of Health. (2020). Available at <https://covid19.kemkes.go.id/category/situasi-infectionemerging/info-corona-virus/> . Accessed: July 20, 2020.
- Murtiyarini, I., Nurti, T., & Sari, L. A. (2019). Efektivitas media promosi kesehatan terhadap pengetahuan remaja tentang pendewasaan usia perkawinan di SMA N 9 Kota Jambi. *Journal Health & Science: Gorontalo Journal Health and Science Community*, 3(2), 71–78. <https://ejurnal.ung.ac.id/index.php/gojhes/article/view/2734>
- Notoatmodjo. (2014). *Public Health: Science and Art*. Rineka Cipta.

- Nugroho, A. B., Rintyarna, B. S., & Athoillah, D. K. (2021). Analisis spektrum tegangan pada alat pendeteksi kadar gula darah menggunakan near. *Jurnal Teknik Elektro Dan Komputasi (ELKOM)*, 3(1), 1–13. <http://jurnal.unmuhjember.ac.id/index.php/ELKOM/article/view/3802>
- Nuryadi, S., & Pramudwiatmoko, A. (2017). Sistem Pemeriksaan Penyakit Degeneratif Secara Jarak Jauh. *Jurnal PROtek Vol*, 4(2).
- PDPI. 2020. Covid-19 Pneumonia: Diagnosis and Management in Indonesia . Association of Indonesian Pulmonary Doctors. Jakarta.
- Peters, D. J. (2020). Community susceptibility and resiliency to COVID-19 across the rural-urban continuum in the United States. *The Journal of Rural Health*, 36(3), 446–456. <https://doi.org/https://doi.org/10.1111/jrh.12477>
- Pudyastuti, R. R., Kariyadi, K., Martiningsih, M. A., Horhoruw, A., & Rahmawati, U. (2023). Refocusing Senam Hipertensi Bagi Lansia Untuk Mengaktifkan Kembali Kagiatan Posyandu Lansia Pada Masa New Normal. *EJOIN: Jurnal Pengabdian Masyarakat*, 1(3), 78–89. <https://doi.org/https://doi.org/10.55681/ejoin.v1i3.614>
- Republic of Indonesia Ministry of Health. 2014. Elderly Situation and Analysis. Data and Information Center of the Indonesian Ministry of Health . Jakarta.
- Republic of Indonesia Ministry of Health. 2019. Strategic Plan (Renstra) of the Moluccas Ministry of Health Polytechnic for 2015-2019 . Jakarta
- Republic of Indonesia Ministry of Health. (2020, MAY 23). Avoid Elderly From Covid 19. Quoted JULY 26, 2020, from <http://www.padk.kemkes.go.id/article/read/2020/04/23/21/dindingi-lansia-daricovid-19.html> .
- Republic of Indonesia Ministry of Health. (2020). Guidelines for Prevention and Control of Coronavirus (COVID-19) Revision 5. Available at [https://infinemerging.kemkes.go.id/download/REV05\\_Pedoman\\_P2\\_COVID-19\\_13\\_Juli\\_2020\\_1.pdf](https://infinemerging.kemkes.go.id/download/REV05_Pedoman_P2_COVID-19_13_Juli_2020_1.pdf). Accessed: July 20, 2020.
- Richmond, R., L. (2013). A Guide to Psychology and It's Practice : Progressive muscle relaxation, (Online), (<http://www.guidetopsychology.com/pmr.html>, accessed 26 July 2020).
- Romadhona, Y. S., & Siregar, K. N. (2018). Analisis sebaran tenaga kesehatan puskesmas di indonesia berdasarkan peraturan menteri kesehatan nomor 75 Tahun 2014 tentang Puskesmas. *Jurnal Kesehatan Manarang*, 4(2), 114–121. <https://doi.org/https://doi.org/10.33490/jkm.v4i2.99>
- Sari, PH. (2020). Update: The Number of Covid-19 Cases in Indonesia Now. .TV Compass. Available at <https://nasional.kompas.com/read/2020/04/13/16023701/update-nomor-kases-covid19-di-indonesia-kini-4557-berplus-316>. April 13, 2020; Accessed: July 20, 2020.
- Setiyorini, E., Wulandari, N. A., & Efyuwinta, A. (2018). Hubungan kadar gula darah dengan tekanan darah pada lansia penderita Diabetes Tipe 2. *Jurnal Ners Dan Kebidanan (Journal of Ners and Midwifery)*, 5(2), 163–171. <http://jnk.phb.ac.id/index.php/jnk/article/view/287>
- Suryanto. (2010). The Importance of Sport for the Elderly . *MIDIKOBI Vol. VI*, No. 1. Taken from <https://journal.uny.ac.id>
- Susilo, Adityo., et al . (2020). Coronavirus Disease 2019: A Review of Current Literature. *Indonesian Journal of Internal Medicine* . Volume 7. Number 1.
- Task Force for the Acceleration of Handling Covid-19. (2020). Map of Distribution of Cases per Province. Available at <https://covid19.go.id/peta-sebaran>. May 27, 2020; Accessed: July 20, 2020.
- Yuliana. (2020). Corona Virus Disease (Covid-19). *Wellness and Healthy Magazine* . Volume 2. Number 1. ISSN2