

Research Report

Improving the Quality of Life towards Healing Long Haul Symptoms of COVID-19 Survivors through Online Video Booklets and Gymnastics and Education

Titiek Berniyanti,¹ Marhazlinda,² Retno Palupi,¹ Dini Setyowati,¹ Aulia Ramadhani,¹ Saphira Firdausi Evany³

¹Department of Dental Public Health, Faculty of Dental Medicine, Universitas Airlangga, Indonesia.

²Department of Community Oral & Clinical Prevention, Faculty of Dentistry in University of Malaya, Malaysia

³Undergraduate Student of Dental Medicine, Faculty of Dental Medicine, Universitas Airlangga, Indonesia

ABSTRACT

Background: COVID-19 is a global pandemic health problem that is getting a lot of attention around the world today. It is a serious illness that can significantly affect the daily lives of patients and their families in terms of mental health problems, such as post-traumatic stress, depression, anxiety, and insomnia, as well as negatively impacting the quality of patients. **Purpose:** This study aims to determine the impact of long haulers on the quality of life of COVID-19 survivors in East Java, Indonesia. **Methods:** Researchers conduct detailed the solution to overcome the problem by using educational videos and sports or routine gymnastics to change the attitude of COVID-19 survivors towards long haul healing is done through the distribution of the two facilities via the google drive link. The drafting team has 2 program plans as a solution to the problems carried out. **Results:** The prevalence of COVID-19 survivors with long haulers was slightly higher than that of non-long haulers. The results of the knowledge and attitude scores on the pre-test and post-test after viewing the media booklet and educational video showed a significant difference and improvement of quality of life in the result. **Conclusion:** The level of knowledge, attitudes, and quality of life including the physical health of long haul COVID-19 survivors in East Java experienced a significant increase after being given counseling through online booklets and educational videos.

Keyword: Long Haul; COVID-19; Good health; Quality of Life; Booklet COVID-19

Correspondence: Titiek Berniyanti, Department of Dental Public Health, Faculty of Dental Medicine, Universitas Airlangga, Jl. Mayjend Prof. Dr. Moestopo No. 47, Surabaya 60132, Indonesia, Email: titiek-b@fkg.unair.ac.id

INTRODUCTION

Corona virus disease 2019 (COVID-19) is a global pandemic with unprecedented medical, economic and social consequences. Currently, more and more people are infected, and the death toll continues to increase.¹ Even after recovering, COVID-19 patients may not necessarily be able to return to normal conditions.² Long COVID-19 syndrome can occur in patients of all ages, according to the analysis of researchers from King's College London. They have the potential to continue to experience some symptoms of illness for a long time or called Long COVID-19.

A person who has COVID-19 after recovering may not return to normal for at least 6 months. When tired, often experience coughing and shortness of breath. Another effect that occurs is a reduced sense of taste, making his appetite decrease. Among the most common unusual signs and symptoms are fatigue, worsening of signs and symptoms after physical or intellectual activity, shortness of breath, sleep problems, and "brain fog or difficulty thinking clearly".

Those with persistent signs and symptoms of COVID-19 for more than six months were diagnosed with an average of around 14 signs and symptoms. Most said they had relapsed signs and symptoms, supposedly caused by exercise, intellectual activity, or ordinary stress. A majority of 88 percent said they were coping with some form of cognitive dysfunction or memory loss that to some degree affects their daily life. That includes the ability to make decisions, have conversations, follow instructions, and drive.³

COVID-19 is a serious illness that can significantly affect the daily lives of recovering patients and their families in terms of mental health problems such as post-traumatic stress⁴, depression⁵, anxiety⁶, and insomnia⁷, as well as a negative impact on the patient's quality of life (QoL).⁸ Since the patient is not immune to future infections⁹, it can lead to a more negative impact on the patient's quality of life. Health-related quality of life (HRQoL) is an important measure used to assess the impact of illness, disorder, or disability on the physical, mental, and social domains of a patient's health.^{10,11} Without effective control of the spread of

COVID-19, hospitals will have a double burden of positive patients and Long COVID-19 sufferers.

Knowing the prevalence of long haulers, knowing the quality of life of COVID-19 survivors who experience long haulers and analyzing the impact of long haulers on the quality of life of COVID-19 survivors, will help health care providers identify factors that affect quality of life and recognize aspects of COVID management. -19 to improve the patient's quality of life.

The solution to overcome the problem by using educational videos and sports or routine gymnastics as a means to change the attitude of COVID-19 survivors towards long haul healing is done through the distribution of the two facilities via the google drive link. The drafting team has 2 program plans as a solution to the problems carried out. Educational videos and routine sports will be distributed via a google drive link that is easily accessible by anyone. To determine the priority of the program to be carried out, researchers used the USG (Urgency, Seriousness, Growth) method. Quality of life has an important role in identifying and predicting health problems in patients, evaluating the results of patient care or treatment, and as an indicator in improving the quality of care or efforts to prevent other health problems.

Exercise videos along with education disseminated on social media to achieve the intended target. The output target of this program is that exercise and education videos can be redistributed by respondents to various forums through other social media or directly and can be implemented properly by COVID-19 survivors with long haul.

MATERIALS AND METHODS

The community empowerment program in the form of online booklet educational media and educational videos is expected to increase knowledge about the understanding, types of symptoms, causes, risk factors and handling of the Long Haul COVID-19 problem which will be disseminated via the google drive link.

This program has targets and targets, namely COVID-19 survivors who experience Long Haul COVID who use social media. The stages of implementing activities in the empowerment program design include:

The empowerment program is designed based on the results of epidemiological research that has been carried out. After observing and identifying problems regarding the behavior and quality of life of COVID-19 survivors who experienced Long Haul COVID, the intervention was based on the values of knowledge, attitudes and quality of life. Then schedule activities for empowerment and health promotion programs. The media designed are in the form of online booklets and educational videos that will be uploaded via Google Drive and Youtube links.

Prepare the necessary instruments for health promotion and empowerment programs, namely in the form of online booklets which will later contain uploaded topics in the form of:

COVID-19 material and types of COVID-19 tests, understanding Long Haul COVID-19, kinds of, Long Haul Covid symptoms, causes of long haul Covid, long Haul Covid risk factors, handling Long Haul Covid, Normal pulse rate, and how to measure it, Normal oxygen saturation values, and measuring devices

Prepare the necessary instruments for health promotion and empowerment programs, namely in the form of an illustrated video which will later contain upload topics in the form of: Understanding Long Haul Covid, Kinds of Long Haul Covid symptoms, Handling Long Haul Covid, Illustration of light exercise, Illustration of light breathing exercises, Illustration of how to measure pulse correctly, Illustration of how to measure oxygen saturation correctly.

Empowerment Program 1 uses an online booklet (available access on <https://youtu.be/d-5TFYUH8zQ>) containing the long haul and how to overcome it. The online booklet is distributed via the google drive link. Empowerment program 2 uses video media of gymnastics and breathing exercises (available access on https://youtu.be/xx_sYbxn7HU). The video is distributed via Google Drive and Youtube links. The sequence stage for distributing questionnaires and media includes pre-test first, then media in the form of online booklets and videos of breathing exercises, then continued to fill out the post-test after three days of the exercise program being practiced by the respondents.

The type of program evaluation used is the result evaluation type. Evaluation of the results is carried out when the program has been completed which aims to measure whether there are changes in knowledge, attitudes, physical health, and quality of life related to long haul COVID in COVID-19 survivors with long haul after being given counseling and training in the form of online booklets and exercise videos and breathing exercises distributed via google drive link. Increased knowledge in terms of the results of the pre-test and post-test.

RESULTS

Data shown in Table 1 found that the average value of the pre-test and post-test of knowledge with Delta is 8.90, while the Standard Deviation is smaller, with a difference of 1.64 between the pre-test and post-test of knowledge. In Attitudes the average difference between the pre-test and post-test scores is Delta 3.25, while the Standard Deviation is smaller, with a difference of 1.76 between the pre-test and post-test attitudes.

Table 1. Comparative test Knowledge and Attitude before and after application of Booklet Online on the Long Hauler group survival

Variable (Range Score)	Mean ± SD		Sig.
	Pre-test	Post-test	
Knowledge	114.20±9.08	123.10±7.44	0
Attitude	44.95±4.12	48.20±2.36	0

Table 2. Average and Standart Deviation Pulse Rate Before and After Exercise

	Average	Standard Deviation	Significance
Pulse Before Gymnastics	76.82	9.49	0.000
Pulse After Gymnastics	92.865	9.17	

Table 3. Average and Standart Deviation of Oximeter value Before and After Exercise

	Means
Oximeter Value Before	97.3
Oximeter Value After	98.0

Table 4. The Quality of life of COVID-19 Survivors After implementation of the health promotion program in the form of online booklets and educational videos

Domain	Wilcoxon (Asymp. Sig)
Health	0.014
Physicology	0.020
Sosial Relationship	0.012
Environment	0.025

In the Wilcoxon test, a value ($p < 0.05$) was obtained between the pretest and posttest on the Knowledge variable which showed a significant difference. This means that there is a significant influence from health promotion programs in the form of online video booklets and gymnastics on COVID-19 survivors in East Java. In the Wilcoxon test, a value of $p < 0.05$ was obtained which indicated a significant difference in the pre-test and post-test attitude values. This means that there is a significant influence from health promotion programs in the form of online booklet educational videos and exercise on COVID-19 survivors in East Java.

In Table 2, it is found that the average pulse rate before and after running gymnastics for three days has increased, while the SD is smaller, meaning the curve is getting better. The average value of oxygen saturation before and after undergoing exercise for three days has increased can be seen in Table 3.

Table 4 show the significance value of the Wilcoxon test is $p < 0.05$ which indicates a significant difference between the initial and final variables. This means that there is a significant influence from health promotion programs in the form of online booklets and educational videos on the quality of life of COVID-19 survivors in East Java.

DISCUSSION

This empowerment was attended by 40 respondents, providing material on healing long haul symptoms of COVID in the form of online booklets and educational

videos to COVID-19 survivors in East Java. At the time of giving the material, previously given a pretest first, then instructed to see and understand the online booklet and educational video, then an evaluation was carried out by answering the post test questions three days later.

The results of the knowledge and attitude scores on the pre-test and post-test after viewing the media booklet and educational video showed a significant difference and improvement in the final result. With these results, it is hoped that the program can improve the behavior of the long haul COVID community in dealing with the long haul in the form of continuing to comply with the COVID-19 health protocol, doing routine light sports such as gymnastics, light breathing exercises, living a healthy lifestyle, and wanting to go to the hospital if you want to go to the hospital. feel symptoms or abnormal oxygen or pulse measurement results. These results are also expected to improve behavior from the aspect of knowledge about COVID-19 in general, COVID-19 examination procedures, knowledge of long haul COVID (understanding, types of symptoms, causes, treatment), knowledge of how to measure pulse and use an oximeter correctly.

The analysis test carried out was a different test on the values of attitudes and knowledge during the pre-test and post-test, obtained a p-value or significance of 0.000 ($p < 0.05$), so there was a significant (significant) difference between the knowledge value and the attitude value. during pre-test and post-test. This means that there is a significant influence from health promotion programs in the form of online booklets and educational videos on COVID-19 survivors in East Java. These results are in accordance with the research by Rizqiea *et al*¹² that the provision of material through booklets can significantly increase knowledge and skills attitudes because written media is a medium that is very often used in everyday life in our environment, moreover the packaging of material on booklets is very easy. to understand and not boring. This result is also in accordance with the research of Prawesti, *et al*¹³ that health education with audio-visual media can significantly improve health literacy in the community. Simple health education provides an easy way to explain health problems for material providers, namely health workers. The use of audio-visual media can shorten the time and effort in providing health materials.

The average value of responder's oxygen saturation before and after doing exercise has increased. This is consistent with previous research that physical exercise can be beneficial for the body, regardless of its effect on other risk factors. Someone who is diligent in physical exercise can do a muscle job more efficiently than someone who rarely does physical exercise. A person with regular

physical exercise can improve cardiovascular ability. Regular physical exercise can also increase the vital capacity of the lungs and increase oxygen uptake by the lungs and the oxygen used by the body will be quickly replaced. By doing regular physical exercise, the oxygen saturation value will increase or remain after completing physical exercise. This can help the body for longer and optimal physical exercise, because if the oxygen supply to the muscles is sufficient, the energy needs will be more easily met. The results of the quality of life in the pre-test and post-test also have significant differences, which means that there is an increase in the knowledge and attitudes of respondents after reading the media booklet, applying light physical exercise regularly and a healthy lifestyle in accordance with the recommendations of this video for COVID-19 survivors. long haul feel that their quality of life is getting better. Survivors who undergo the program feel more physically fit, where physical health can affect their psychological, social and environmental lives. These results are consistent with the theory that behavior modification, including knowledge and attitude factors, can affect a person's quality of life.¹⁴ Based on the analysis above, we can conclude that the level of knowledge, attitudes, and quality of life including the physical health of long haul COVID-19 survivors in East Java experienced a significant increase after being given counseling through online booklets and educational videos. Empowerment media also influences improving the quality of life, it can be seen with a significance value of $p < 0.05$.

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