



# CERTIFICATE

No : 43456/UN38.9/DL.01.02/2020

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Feasibility Of Media For Healthy Living Patterns For Elderly Through Herbal  
Beverages To Prevent Covid-19 Transmission

on International Conference on Research and Academic Community Services  
**"Strengthening Innovation to Enhance Revenue for the Better Future"**  
hosted by Institute for Research and Community Services Universitas Negeri Surabaya

Head of Institute for Research and  
Community Services



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On October, 3<sup>rd</sup> - 4<sup>th</sup> 2020



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# Feasibility of Media for Healthy Living Patterns for Elderly Through Herbal Beverages to Prevent Covid-19 Transmission

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## ABSTRACT

Corona Virus Disease 2019 (Covid-19) has become widespread as a global pandemic. One of the most vulnerable to contracting is the elderly. Educational media is needed to provide education for the elderly to avoid the Covid-19 outbreak. The purpose of this study was to determine the feasibility of a healthy lifestyle education media for the elderly through herbal beverages to deal with Covid-19. The method in this research is the development of educational media according to Fenrich which consists of analysis, planning, design, development, and implementation. Educational media developed in the form of video and e-flyers. The instrument was in the form of a validation sheet and a user response questionnaire. The results of the feasibility study of educational media showed that the educational media developed were very feasible based on the results of expert validation and user responses. Education media products for healthy lifestyles for the elderly through herbal beverages to deal with Covid-19 that have been developed are video and e-flyers.

**Keywords:** Educational Media, Elderly, Covid-19

## 1. INTRODUCTION

Coronavirus is defined by experts as a collection of viruses that attack or infect the human respiratory system. In many cases, this virus only causes mild respiratory infections, such as flu. However, this virus can also cause severe respiratory infections, such as lung infections (pneumonia). Apart from the SARS-CoV-2 virus or the Corona virus, viruses that are also included in this group are the viruses that cause Severe Acute Respiratory Syndrome (SARS) and the viruses that cause Middle-East Respiratory Syndrome (MERS). Although caused by a virus from the same group, namely the coronavirus, COVID-19 has several differences with SARS and MERS, including in terms of the speed of spread and the severity of symptoms.

Transmission of Covid-19 to Indonesia has occurred since January 2020 and then spread to other regions quickly. The epicentum of the spread of this virus was initially in Jakarta, but along with the mobility of the Indonesian population it spread to East Java and other provinces. One of the districts included in the monitoring of its distribution (February 2020) is Gresik Regency. The distribution characteristic is similar to Jakarta, namely the center pattern

of the capital city of East Java is in Surabaya surrounded by Sidoarjo and Gresik.

Based on data from Chinese Center for Disease Control and Prevention (CCDC) on February 2020 shows that more than 80% of cases are classified as mild, while the elderly and sick people are most at risk of being exposed to Covid-19 [1]. This condition needs attention in preventing contracting Covid-19 to residents, especially the elderly. One of the elements that needs to be involved is the Surabaya State University (Unesa) as a higher education institution. Unesa has a new unit with the Unesa Crisis Center (UCC) and the Institute for Research and Community Service are expected to contribute to preventing the spread of Covid-19 for the elderly.

Education from higher education is believed to have a significant social impact compared to education by the general public. Cooperation between the government and Unesa is very much needed in the educational needs of the elderly. Educational materials can be in the form of a healthy lifestyle to face the Covid-19 outbreak and providing assistance to the consumption of herbs (especially herbal beverages) for the elderly. Herbal beverages were chosen because it is proven that herbal

beverages are reported to provide antioxidant benefits in fighting viruses [2], for example in Curcuma [3, 4]. Medicinal plant species was identified belonging to 11 botanical families used during the Covid-19 pandemic, one of the main ingredients used is *Curcuma zanthorrhiza* [5].

The use of herbal beverages is important to be socialized to the elderly using the right media so that the goal is achieved properly. The role of social media which contains videos and flyers plays an important role to improve the quality of Covid-19 information shared online, including will be a source of misinformation related to COVID-19 [6], otherwise the control is exercised by the user. The purpose of this study was to determine the feasibility of a healthy lifestyle education media for the elderly through herbal beverages to deal with Covid-19.

## 2. RESEARCH METHODS

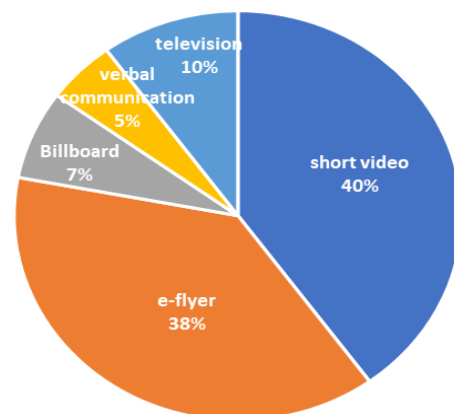
This research is a research on the development of educational media for a healthy lifestyle for the elderly through herbal beverages. The research model refers to the instructional development model [7]. Fenrich's instructional model consists of six stages, namely the analysis, planning, design, development, implementation, evaluation and revision stages at each stage. Determination of the need for the type of educational media based on structured interviews about the needs of the community which is distributed online. The feasibility of the resulting media is based on validation from media experts and responses from the elderly as subjects in media development. The assessment of the feasibility of the expert uses a Likert scale with very valid, valid, less valid, and invalid categories. Interpretation of the results is  $81\% \leq P \leq 100\%$  (very feasible),  $61\% \leq P \leq 80\%$  (feasible),  $41\% \leq P \leq 60\%$  (quite feasible),  $21\% \leq P \leq 40\%$  (less feasible), and  $0\% \leq P \leq 20\%$  (not feasible).

## 3. RESULT AND DISCUSSION

Educational media for healthy lifestyles are developed based on an analysis of the needs of the elderly in carrying out the protocol for preventing the transmission of Covid-19 followed by planning and designing educational content as outlined in the media. The determination of educational media was explored based on the results of community interviews and the ease of conveying educational messages. The results of the analysis of the needs for educational media based on interviews in the community show that short videos and e-flyers are more desirable as a medium for educating a healthy lifestyle through the consumption of herbal beverages (Figure 1). Respondents suggest that a

combination of electronic and printed media be used to help remember the message to be conveyed.

Social media as a suggestion for the dissemination of educational messages on a healthy lifestyle during the Covid-19 pandemic is considered very effective in sending short video messages and e-flyers to provide education, although there is still a downside if it is not strictly controlled [8] especially by users and government regulations. The effectiveness of using social media has turned many complex things into easy without barriers and distances between users.



**Figure 1** Media for education on healthy lifestyles for the elderly

Design and development of educational media are arranged according to the content and appearance of the educational media. The video was developed with the contents: comply with the protocol for preventing transmission of Covid-19, exercise, and consumption of food and herbal beverages from nearby. The video was played by the video compilation team. The results of the video products get suggestions for improvement in the form of educational message content. The content is described in more detail, including managing patience, maintaining distance between individuals, washing hands, wearing masks, exercising, maintaining a minimum sleep time, and consuming local herbal beverages. The video improvement was continued by validating the video product to media experts. The validation results are shown in Table 1.

**Table 1 Result of educational video validation**

Aspect	Score	Feasibility
Presentation	83	very feasible
Content	100	very feasible
Language	83	very feasible
Average	89	very feasible

The results of the validation of educational video products for healthy living patterns based on aspects of presentation, content, and language. The description of the presentation aspects: profile, video quality, video and text suitability, and layout. Content aspects include: completeness, meaningfulness, clarity of messages, continuous flow, and suitability of targets. Aspects of language include: the use of standard spoken and written language. These three aspects get a very decent score so that this video media is suitable for use.

Content of e-flyer educational media is similar to educational videos. The message conveyed is converted from an audiovisual message to a visual message. This media distribution is sent via social media with the aim of simplifying and accelerating the delivery of messages in e-flyers. The results of the e-flyer validation are shown in Table 2. The three aspects (progress, content, and language) are very feasible (score 83) to be used as a media for educating the healthy lifestyle for the elderly to prevent Covid-19 transmission.

**Table 2 Result of educational e-flyer validation**

Aspect	Score	Feasibility
Presentation	83	very feasible
Content	83	very feasible
Language	83	very feasible
Average	83	very feasible

Educational materials for healthy living patterns in the face of Covid-19 are packaged in the form of videos and flyers (Figure 2-3). The video contains messages on a healthy lifestyle and adhering to the Covid-19 prevention protocol. Detail of messages in the video are: 1) be willing to be patient with the Covid-19 outbreak, 2) keep your distance and avoid the crowd, 3) wash your hands frequently, 4) wear a mask when traveling / leave the house, 5) do sports, especially at 06.00-09.00 AM, 6) maintaining adequate sleep patterns, 7) regularly consuming spicy beverages to prevent Covid-19 in maintaining the body's immune system. Unesa recommends a beverage that can help maintain the immune system, especially for the elderly. The main compositions used are ginger, ginger, turmeric,

cinnamon, cloves, lemongrass, and Javanese sugar, and 8) pray and tawakkal (surrender to god) for the maximum physical and mental efforts that have been made to prevent Covid-19. The results of the video are uploaded on YouTube with the link [https://youtu.be/NJ\\_nQHNhwzU](https://youtu.be/NJ_nQHNhwzU).

The second educational material is in the form of a flyer on a healthy lifestyle. The flyer contains messages that are substantially the same as the messages in educational videos to the community / partners, namely 1) avoid crowds and keep your distance, 2) wash your hands frequently, 3) wear masks, 4) get adequate rest, 5) exercise and sunbathe underneath. hot sun especially at 06.00-09.00 WIB, 6) consumption of nutritious food and beverages, for example herbal products to increase body antibodies, and 7) being patient, praying and *tawakkal* (surrender to god) for the maximum effort done.



**Figure 2** Educational video on healthy lifestyle for the elderly (left: actor 1, right: actor 2)



**Figure 3** Educational Flyer healthy lifestyle for the elderly



Elderly response as the subject of education is needed in the feasibility of a particular message conveying medium. Good media will be more valuable if it is accepted by the target and is able to change bad habits for the better. The challenge in implementing this media is the elderly who need assistance in filling out media responses. Based on the responses that have been filled in, there are 20 elderly who have filled in and sent response instruments.

Data on the responses of the elderly in receiving educational media are shown in Table 3. The aspects of the response that were followed up by the elderly included the quality of media appearance, the quality of message content, the usefulness of the media, the influence of the media on behavior change, and the willingness to forward messages to others. The elderly responded to all positive aspects with a percentage of 94%, the elderly gave very appropriate responses to both educational media.

**Table 3 Results of elderly responses to educational media**

Aspect	Response (%)	
	Yes	No
Quality media display	100	0
Message content according to purpose	100	0
Usefulness of the media	90	10
Media influence on behavior change	90	10
Willingness to forward messages to others	90	10
Average	94	6

One of the important messages in educational media is the consumption of herbal beverages from local products. Plants that are reported to provide benefits and to prevent the transmission of Covid-19 are plants from the zingiberaceae family [9], including *Curcuma zanthorrhiza* [10-12], *Curcuma longa* [12], *Zingiber officinale* [13-15], Citrus fruit of *Citrus sinensis* [16], and several other plant parts. The use of local plants provides benefits and benefits for the elderly to consume them. The positive effect of these plants is due to the potential for metabolite compounds contained in certain organs.

The results of the feasibility test for educational media (videos and flyers) by means of media expert validation and elderly response show that "very feasible" as a media for Covid-19 education. This feasibility includes being feasible in terms of presentation (design), content, and language or ease of acceptance by the community, especially the elderly

who are the subject of community service activity partners. Suggestions from the validator to maximize the target of distributing educational media both print and online through social media.

Context of using videos and e-flyers in education and handling Covid-19 was also reported as a solution during a pandemic [17]. Virtual education models like this also play an important role in the implementation of medical education during a pandemic [18], aiming to reduce the risk of Covid-19 transmission. The main goal is to save humans from being attacked by Covid-19 by still implementing health protocols.

#### 4. CONCLUSION

The feasibility of educational media showed that the educational media developed were very feasible based on the results of expert validation and user (elderly) responses. Educational media products for healthy lifestyles for the elderly through herbal beverages to prevent transmission with Covid-19 that have been developed are video and e-flyers.

#### ACKNOWLEDGMENT

The authors would like to thank to Research and Community Service Institute of Universitas Negeri Surabaya that has funded this socialization media development program.

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