The Effectiveness of Health Supplement Consumption Handbook during The Covid-19 Pandemic In Sleman District

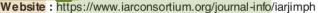
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Abstract: With the COVID - 19 outbreak, people are looking for ways to protect themselves from the virus. One way to prevent COVID-19 transmission is by increasing the body's immune system. The rapid flow of information media can sometimes provide inappropriate information, which is causing errors in using health supplements during the Covid-19 pandemic, therefore stakeholders must provide appropriate information. The purpose of this study is to design electronic pocketbook health promotion products that can be applied to increase public knowledge and attitudes in consuming health supplements during the Covid-19 pandemic and measures the effectiveness. The type of research this research is using the R & D model, due to limited resources, the 10 steps of the R&D method are simplified into 8 steps and limited to the product trial stage, after prior validation by material experts and media experts. The pocketbook effectiveness test was carried out by respondents representing the Sleman Regency. The sampling technique was done by using the purposive sampling method. The population is all adult population in 4 puskesmas areas in Kab. Sleman with inclusion criteria are adult age (20-59 years), willing to fill out a questionnaire, and can use a smartphone. The exclusion criteria were the questionnaire that was not filled in completely and did not follow the complete process (pretest and posttest). Paired t-test is used for data analysis. The result of the validation from the material expert was "Very Appropriate" with a value of 85%, while the result of the validation from the media expert was "Very Appropriate" with a value of 83%. There is a difference between people's knowledge with a p-value of 0.000. There is a difference between people's attitudes about health supplements with a p-value of 0.027.

Keywords: health promotion, health supplements, COVID – 19, knowledge, behavior.

INTRODUCTION

With the 2019 coronavirus novel (2019-nCoV) outbreak currently spreading around the world, people are looking for ways to protect themselves from the Covid-19 virus (Pariang et al., 2020). The search for

good health informa? In during a pandemic can indirectly reduce the spread of disease and can ease public anxiety (Zhao et al., 2020). The internet, especially social media, has also been identified as a significant source of information searching and decision making (Miller et al., 2016). Up-to-date information on the necessary precautions, current information on the threat, and the necessary precautions needed to reduce public deprivation, reduce 2 probidity and mortality, and contribute to mentioning the negative mental effects (Barry, 2009) (Kumar et al., 2012). Studies in the United States and Europe have reported more than 70% of internet users have looked online for health information (Andreassen et al., 2007). One way to prevent the transmission of COVID-19 is by boosting the immune system (Pariang et al., 2020). The rapid flow of data media can sometimes provide inappropriate information or dis information, and this needs attention so that people get appropriate information sources (Multi, 2020). In the current pandemic, social media has the potential to provide effective and rapid information on health promotion, if respons bly and appropriately used (Ketikidis et al., 2012). Based on research, that the dissemination of information from non-peer-reviewed material 5d disseminated through social media can pose risks and in the current COVID-19 pandemic. The previous study shows that social media culture in Indonesia can act as teachers who can educate the public and stimulate the latest research related to COVID-19, as public health service education (Sampurno et al., 2020).

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An android-based electronic handbook is a collection of material on the consumption of health supplements during the Covid-19 pandemic which is summarized and clarified in a more practical form to be used as a media for health promotion for the public (Chan *et al.*, 2020). Furthermore, the previous research result on the consumption of health supplements found that the level of knowledge and behavior of the people was categorized as having good results and a positive attitude in taking multivitamins/ health supplements during the Covid-19 pandemic (Mukti, 2020; Sampurno *et al.*, 2020; Yuliawati & Djannah, 2020). Therefore, this study aims to develop an electronic handbook health promotion media product that will be designed

and can be applied as a suitable medium for increasing public knowledge and attitudes in consuming health supplements during the COVID-19 pandemic.

Метнор

Research 9d development (R & D) design was 4 opted. The R & D method is a research method used to produce certain products and to test the effectiveness of these products (Sugiyono, 2019), The R & D research has 10 research steps due to the limited time, so it is simplified into 8 steps, this research is limited to only product trials 1 (figure 1).

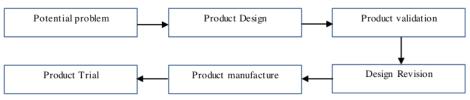


Figure 1. R&D Research Design

Product validation is 12 ried out by material experts and media experts. A questionnaire with open and closed questions is used to test the product eligibility as a basis for revision. The material and media eligibility assessment sheet was adapted from Aji Santoso (Santoso, 2018). The data were analyzed then the percentage of eligibility was assessed based on the score obtained divide maximum score. The data obtained from open-ended questions are used to improve product design. The next test is the p sluct effectiveness test. The technique used is one-group pretest-posttest design. The population is the people of Sleman District and the samples are taken using purposive sampling, paired t-test is used for data analysis.

The scopes of this study are: 1) Adult in Sleman district and can use smartphone, 2) knowledge was measured at the time of data collection using a questionnaire consisting of 15 questions to assess the public's knowledge about the consumption of health supplements during the Covid-19 pandemic, 3) Attitude is the respondent's 14 ponse, thoughts or feelings about consuming health supplements during the COVID-19 pandemic and were assessed based on a 5 questions, 4) Electronic pocket book is a pocket book containing material about novel coronavirus and its symptoms, understanding of health supplements, the purpose of using supplements, supplements that can be used during the Covid-19 pandemic, and tips on getting safe vitamins, 5) Health supplements are vitamins and minerals in the form of a single or a combination used by the public which are obtained at pharmacies or drugstores excluding Multi Level Marketing (MLM) products. Data Researchers used Ethical Clearance in this study, with the number: 012012086.

RESULTS AND DISCUSSION

Results

At the stage of potential problems and initial data collection, researchers 11 ve conducted a preliminary study which states that the value of the level of public knowledge and behavior regarding the consumption of multivitamins/supplements during the Covid-19 pandemic in DIY, Central Java, and West Kalimantan are categorized as good, whereas from the assessment of public attitudes about the consumption of multivitamins/supplements during the Covid-19 pandemic showed a positive and behavior but there was no relationship between and behavior (p-value = 0.720> 0.05; PR = 1.129), knowledge (p-value = 0.085 > 0.05; PR = 7,883) with people's and behavior regarding the consumption of multivitamins/supplements during the Covid-19 pandemic. In addition, potential problems were also explored through the information available in electronic media. Based on data searches through google trends, it was found that the topic of the COVID-19 pandemic ranks number 1 in the search list in Indonesia via the google search engine. The topic of the pandemic is then compared with the keyword for health supplements and the result is that the keyword for immune enhancement is in the top 5 of the search list, while the topic of immune-boosting vitamins is in the 4th highest search via the Google search engine.

At the stage of product design, it is carried out by assembling all the components into a Handbook for Multivitamin Consumption during COVID-19 Pandemic. The material contained in the handbook are the background of the handbook, general understanding of COVID-19, clinical symptoms of infected people, understanding of multivitamins, the purpose of using multivitamins, types of multivitamins, and safe use of

vitamins. Products are designed following previously designed materials. Researchers work with third parties in making products with materials such as images and materials that have been determined by the researcher.

From the validation results by media experts and material experts, it was found that the handbook was in the "very feasible" category with a value of 83% and 85% respectively, however, there are several things that need to be improved such as 1) Providing examples of supplements without mentioning the brand, 2) inconsistency of the terms used "Food Supplement" and "Health Supplement", 3) ensure the correct terms between multivitamins and health supplements based on

the prevailing laws and regulations, 4) confirmation appropriate supplement use must consult a doctor.

The next step is product trials were conducted on respondents with a population of 400 people conducted in 4 regions with a 90 respondents total of samples. From the filling out the questionnaire results, it was found that 90 samples filled the pretest and only 83 samples filled in both the pretest and posttest, so data that met the requirements and could be processed were 83 samples. The characteristics of the respondents involved in the study were grouped into several groups which can be seen in the following table:

Table 1. Respondent Characteristics

Characteristics	Demographic Characteristics	f	%
	Cangkringan	12	14.5
Sub-district	Seyegan	19	22.9
Sub-district	Sleman	26	31.3
	Kalasan	26	31.3
Gender	Male	18	21,7
Gender	Female	65	78,3
A	20-40	64	77.1
Age	41-59	19	22.9
	SMA/sederajat	27	32,5
Education	D3	12	14,5
	S1	41	49,4
Occupation	PNS	13	15,7%
Occupation	NON PNS	70	84,3%

1 The analysis was carried out on pretest and posttest to determine the level of knowledge and attitudes of the

community towards multivitamins during the COVID-19 pandemic can be seen in the following table:

Table 2. Data Analysis

Variable		N	Min	Max	Mean	S-D	Z	p-value
V	Pre	83	7	14	10.169	1.63662	-3,928	0.000
Knowledge	Post	83	8	15	11.169	2.23508		
Attitude	Pre	83	14	20	17.277	1.90195	-2.210	0.027
	Post	83	14	20	17.542	2.09704	-2.210	0.027

Based on the table above, it known that because the p-value (sig) $(0.000) \le 0.05$, ha is accepted so that it can be concluded that there is a difference in knowledge between the posttest and the pretest while in the respondent's attitude 4 iable because the p-value $(0.027) \le 0$, 05 then ha is accepted, so it can be concluded that there is a difference in attitude between posttest and pretest.

DISCUSSION

Based on Regulation of the Food and Drug Supervisory Agency Number 17, 2019 "Health Supplement Quality Requirements", the term multivitamin is part of health supplements, therefore the term in the handbook uses health supplements, besides that the difference between supplements, multivitamins, and vitamins also explained in the handbook so that the public does not get confused by the term. Presentation

of images and narration is carried out in simple, concise and clear language, as well as a systematic sequence accompanied by attractive images, to attract public interest (Meikahani & Kriswanto, 2015). Good promotional media must be able to invite readers to interact through adding images, choosing colors and sentences (Ahmad et al., 2017), this is because media can display images and language that are easy for respondents to understand (Susanti, 2011). Approximately up to 87% of human knowledge is obtained and transmitted through the eyes (Notoatmodjo, 2010). Social media is very effective in disseminating information and as a tool in promoting the handbook, social media makes it easier to receive health messages (Jatmika et al., 2019). Based on research, to transmit knowledge the most influential senses is eyes, as much as approximately 75% - 87% while the rest is channeled through other senses

(Notoatmodjo, 2010). Good promotional media must meet the criteria of access, cost, technology, interactivity, organization, and novelty (Kholid, 2015). Health promotion media must be able to provide health information or messages to the target acceptance level so that the target can change behavior by the message conveyed (Komala *et al.*, 2014).

From the results of the effectiveness test, it was found that there were differences in people's knowledge and attitudes after reading the Hand Book for Consuming Health Supplements during the COVID-19 Pandemic, the handbook was effective in increasing public knowledge about health supplements that must be consumed during a pandemic. Several previous studies have also stated that print media can increase respondents' knowledge (Haryani & Sahar, 2016; Kusuma, 2013; Lutfia, 13 C.E.; Nurhiday at et al., 2012; Zuliyani, 2016). The average post-test score for both knowledge and attitude variables is higher than the pretest score. Is good if the respondents can answer 76% - 100% of the questions presented (Lutfia, 13 C.E.), the respondent can recall the knowledge gained as evidenced by the increase in the average pretest and posttest scores.

Previous research has shown that online information-seeking activities such as posting, commenting, and sharing information about 7OVID-19 are very high (Zhao et al. 2020). Social media is a fundamental component of many health promotion strategies designed to change health risk behaviors and is often used for education [15;16]. Social media has become one of the media for education (Miller et al., 2016), furthermore, research shows that 60% of physicians view social media as a way to provide better healthcare services to patients (Hanson et al., 2011). Health information that is produced and evaluated by stakeholders has shown to be more effective in knowledge and health-seeking behaviors (van de Maat et al., 2018). Although many factors influence healthrelated behavior, awareness of the risks of making changes in people's behavior is a key element in improving individual health and public health status to avoid COVID-19.

The obstacle experienced by researchers is that during the pandemic activities were reduced, therefore the questionnaire was distributed to respondents via Google Form. In the implementation, not all respondents did the posttest. Another obstacle is the absence of an evaluation of the handbook from the respondent because there are no open questions, so the input from respondents regarding the design and clarity of the material cannot be evaluated.

CONCLUSION

The validation result from the material expert is "Very Feasible" (85%) meanwhile, the validation result from the media expert is "Very feasible" (83%). The questionnaire validity results were valid with the lowest r count was 0.386 and the highest r count was 0.777. The Cronbach's Alpha values were 0.726 and 0.743 so it can be concluded that the questionnaire is reliable. Hypothesis test results state that the p-value is 0.000, which means that Ha is accepted, then there is a difference in knowledge between the post group and the pre-group. The average difference in people's knowledge before using handbooks was 10,169 and after using handbooks was 11,169. There was a difference in attitude between the post-group and the pre-group with a p-value of 0.027. The difference in the average attitude of the community before using handbooks was 17,277 and after using handbooks was 17,542. It can be concluded that the Handbook for Consuming Health Supplements during the COVID-19 Pandemic can increase public knowledge and attitudes towards the consumption of appropriate and safe health supplements.

SUGGESTION

For public, expected to seek health information from a credible source, and for the government can enrich health promotion media materials about COVID 19.

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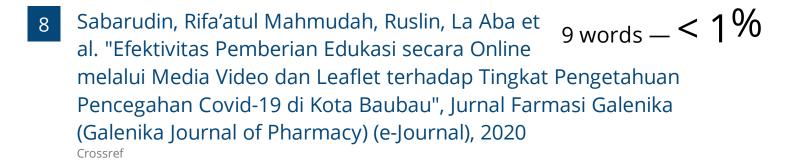
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