THE EFFECT OF EDUCATION ON THE RATIONALITY OF USE OF HEALTH SUPPLEMENTS DURING THE COVID-19 PANDEMIC

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ABSTRACT

Irrational use of health supplements carries the risk of unwanted side effects. Many people consume supplements in large doses only because of personal intuition and surrounding influences rather than based on scientific understanding of the advantages and disadvantages of using these supplements. One of the efforts to increase the rationality of using supplements is by providing education, educational media that can be used are videos. The purpose of this study was to analyze the effect of providing education on the use of supplements on the rationality of using health supplements during the COVID-19 pandemic. True experimental research method with pretest and posttest group design approach. Sampling was done by stratified random sampling. The research sample amounted to 96 respondents. The data was obtained by using a questionnaire which was distributed using google form media. The rationale for the use of health supplements in Pemurus Luar Village seen from the results of the pretest, only 50% of the people were rational in their use of the 96 respondents who used supplements. After providing education in the form of videos in the intervention group, there was an increase in rationality of use by 16.7% from the initial results. The results of the SPSS analysis with logistic regression test showed a p-value of 0.000 <0.05 which indicated there was a significant effect with the provision of education and the Nagelkerke R Square value of 0.185 which indicated that the ability of the independent variable (education) in explaining the dependent (rationality of use) was 0.185 or 18.5%.

Keywords: Covid-19, Education, Rationality, video

1. Introduction

Covid-19 infection is a contagious disease and causes many deaths and morbidity. During the pandemic there is a lot of information about various efforts to prevent transmission of the Covid-19 virus infection. One of them by taking supplements. People at the beginning of the pandemic had experienced panic buying or panic based on the fear that they would not be able to get a supply of food or supplements or products so that they bought excessively which resulted in the scarcity of certain supplements or products. The panic buying phenomenon that has hit the community since the beginning of the pandemic has also occurred in one of the immune-enhancing supplements(Ancient, 2020).

Based on the theory, the right effort to prevent transmission is to maintain cleanliness, use personal protective equipment (PPE), and increase body resistance. The advantage of a good immune system is that it can avoid infection and even though it is infected, it can minimize clinical symptoms. Efforts to increase endurance are not only by taking supplements, there are several efforts, namely a regular healthy diet, drinking at least 6 glasses of water per day, exercising, maintaining overall body hygiene, namely bathing every day, washing hands with soap or hand sanitizer. every time going to eat / drink and get out of the bathroom and get enough rest (Hairunisa & Amalia, 2020). According to the World Health Organization (WHO), measures to prevent the spread of COVID-19 include hand hygiene, social distancing, wearing masks, and boosting the immune system. Many things can be done to improve the immune system, one of which is a nutritious and balanced diet, exercise, avoiding stress, improving the digestive system or including hormones and taking health supplements.(Izazi & Kusuma, 2020). Based on research (Pariang et al., 2020) supplements are needed to increase endurance.

Immunity or immunity is a system of mechanisms in organisms that protects the body against external biological influences by identifying and killing pathogens. Health supplements are products that are intended to complement the nutritional needs of foods or improve health functions and increase endurance, have nutritional value and physiological effects, contain one or more ingredients in the form of vitamins, minerals, amino acids or other non-plant ingredients that can be combined with plant(BPOM RI, 2019).

Irrational use of health supplements carries the risk of unwanted side effects. Many people consume supplements in large doses only because of personal intuition and surrounding influences rather than based on scientific understanding of the advantages and disadvantages of using these supplements. Consuming health supplements is not wrong, but what needs to be considered is that its use must be adjusted to the needs of the body because excessive

consumption will not cause the effect to be more beneficial, but actually endanger health. In addition to taking health supplements, efforts to increase the body's defense system by consuming a variety of foods, vegetables and fruits. Vegetables and fruits are sources of vitamins, so that adequate intake of vitamins with good doses can increase body resistance (Agung, 2020). With a strong immune system, it will help prevent the transmission of Covid-19 (Ministry of Health, 2020).

The irrational use of supplements can be caused by several factors, one of which is knowledge about the use of health supplements. Knowledge is very important in continuing aspects of attitude and behavior because if someone does not know then no real action will be taken. Efforts that can be made to provide knowledge in the use of health supplements to the wider community regarding measures to prevent the spread of COVID-19, one of which is through education in the form of videos. Video education distributed through WhatsApp groups can support the learning process as a formal thing by using technology (Bower, 2019). Educational media using this video is very easily accepted by the wider community, not only certain circles, During this covid-19 pandemic, online education using videos distributed in WhatsApp groups is very useful because the government is currently calling for physical distancing in order to reduce and break the chain of spreading the corona virus (Ririn Purba, 2020). Distance learning processes and methods have become a new habit that is able to provide summaries via a computer screen or smartphone (Maheasy et al., 2020). Based on the results of the 2013 full moon study, the video media provided better changes compared to leaflet media and others, the absorption of information was more effective by using the senses of sight and hearing in the form of video than using only the sense of sight, namely in the form of leaflets.

Education aims to increase public knowledge and awareness to maintain and improve their own health, Making health as something of value in society. Education is very necessary for efforts in providing and delivering information to change, grow or develop positive behavior. In conducting education, it is necessary to have tools that can assist in activities such as the use of media or teaching aids for example videos, leaflets, booklets, etc.

Based on the results of a preliminary study of 20 respondents, 50% of them did not know about health supplements and did not understand how to use them, side effects and could be categorized as not knowing information about the use of health supplements and there were also some respondents just because they followed trends. Therefore, researchers are interested in conducting research based on this, it is still important to provide education to the community in

Pemurus Luar Village because there are still people who do not use health supplements correctly, so education is still needed.

2. Materials and Method

Quantitative research using a true experimental method with a pretest and posttest control group design aims to obtain an explanation of the effect of rationality of use before and after providing education with the help of video media to respondents in the intervention group and the control group who were not given any education. Sampling was followed by a stratified random sampling technique by providing opportunities for people who were willing to become respondents to fill out the distributed questionnaires. The measurement of the effect of rationality of use is carried out using research instruments, namely questionnaires and checklists.

3. Results and Discussion

Based on the research that has been done, the results of the demographic characteristics of respondents are as follows:

Table 1 Frequency Distribution of Descriptive Analysis of Respondents Characteristics

Characteristics of Respondents	Intervention		Control	
	n	%	n	%
Gender				
Woman	28	30.2%	30	62.5%
Man	19	19.8%	18	37.5%
Total	**48**	**50%**	**48**	**50%**
Age (Years)				
12-16 Years	1	1.0%	0	0.0%
17-25 Years	22	22.9%	27	56.3%
26-35 Years	4	4.2%	11	22.9%
36-45 Years	11	11.5%	6	12.5%
46-55 Years	10	10.4%	4	8.3%
Total	**48**	**50%**	**48%**	**50%**
Last education				
junior high school	2	2.1%	3	6.3%
senior High School	30	31.3%	30	62.5%

D3	5	5.2%	2	4.2%
S1	11	11.5%	13	27.1%
Total	**48**	**50%**	**48**	**50%**

Source: Primary Data, 2021

Based on table 1 shows that the majority of respondents are female as many as 28 respondents (30.2%) in the intervention group and 30 respondents (62.5%) in the control group. (22.9%) in the intervention group, 27 respondents (56.3%) in the control group, and the majority of the most recent educational characteristics of most respondents were high school education, amounting to 30 respondents (31.3%) in the intervention group and 30 respondents (62.5%) in the control group.

Table *2 Frequency Distribution of Supplements Ever Used by Society (n=96)*

No	Supplement Name	Intervention (n)	%	Control (n)	%
1.	Vitamin C	22	45.8%	22	45.8%
2.	Herbs/Phytopharmaceuticals	14	29.2%	15	31.3%
3.	B vitamins	2	4.2%	0	0%
4.	Combination	10	20.8%	11	22.9%
Total		**48**	**100%**	**48**	**100%**

Based on table 2, the distribution of supplements based on their content that the respondents have used shows that the majority of respondents use supplements containing Vitamin C, as many as 22 respondents (45.8%).

Table 3. The results of the test of the effect on the rationality of the use of supplements

	Pretest		*Posttest*		
	Rational	Irrational	Rational	Irrational	*Sig.*
Education (Intervention Group)	24	24	40	8	0.000
Uneducated (control group)	24	24	23	25	

In table 3, the significant value is p (0.000) which means it is smaller than the significant value a (0.05) so that it rejects H0, and accepts Ha so that education affects the rationality of using health supplements.

Figure 1 Graph of influence test results

In Figure 1, the majority of rational values are found in the intervention group, after being given education it increases from irrational use, meaning that the provision of education in the form of video has an influence on rationality of use.

Table 4 Distribution of the frequency of assessment status for each rational criteria

Criteria	Status	Frequency (n)							
		Intervention Group				Control Group			
		Pretest	*%*	*Posttest*	*%*	*Pretest*	*%*	*Posttest*	*%*
Accuracy of usage information	Rational	41	85.4 %	44	91.7 %	43	89.6 %	43	89.6 %
	Irrational	7	14.6 %	4	8.3%	5	10.4 %	5	10.4 %
Dosage Accuracy and interval of use	Rational	39	81.3 %	46	95.8 %	40	83.3 %	42	80.0 %
	Irrational	9	18.8 %	2	4.2%	8	16.7 %	6	20.0 %
Accuracy How to use	Rational	46	95.8 %	47	97.9 %	42	84.0 %	42	87.5 %
	Irrational	2	4.2%	1	2.1%	8	16.0 %	8	12.5 %
Side effects of use	Rational	42	87.5 %	48	100%	45	93.8 %	47	97.9 %
	Irrational	6	12.5 %	0	0%	3	6.3%	1	2.1%

Contraindicated or not in the use of supplements	Rational	48	100%	48	100%	47	97.9 %	48	100%
	Irrational	0	0%	0	0%	1	2.1%	0	0%
Drug selection accuracy	Rational	37	77.2 %	46	95.8 %	34	70.8 %	32	66.7 %
	Irrational	11	22.9 %	2	4.2%	14	29.2 %	16	33.3 %

Based on table 4, the majority experienced an increase in rational results, namely in the intervention group after being given education in the form of videos, it was seen that there was a change in the rational value of the criteria for accuracy of drug selection with an increase of 9%.

Based on the research conducted this study used 96 respondents. In this study using a google form questionnaire and the media used in this study is an educational video on the use of health supplements during the covid-19 pandemic, in the video it contains material about the use of good and correct health supplements during the covid-19 pandemic.

The highest majority in the intervention group were female respondents as many as 28 respondents (30.2%) and in the control group also the highest majority were women as many as 30 respondents (62.5%). These results are also in accordance with BPS data from Pemurus Luar Village based on the recapitulation of population reports, the most dominant being women with a total of 4,104 people from the population taken. so that in this study women are more dominant who fill out and are willing to be respondents (secondary data, 2020). According to (Mustaqimah et al, 2021) the majority of respondents are mostly women, because the majority of respondents who come for treatment are women. The results of this study are in line with Wijaya et al (2014),

The majority of the age characteristics that became respondents in the intervention group were those aged 17-25 years, namely 22 respondents (22.9%) and in the control group the same, namely in the age range 17-25 years, as many as 27 respondents (56.3%). According to the Ministry of Health of the Republic of Indonesia in 2009 the age range of 17-25 years, including late adolescence. This is not in accordance with the theory which states that the age range of 36-45 years is late adulthood where a person is in good or bad life so that it can influence a person to act maturely to solve problems (Ministry of Health, 2009). Because the researchers took random samples because age also affects a person's mindset and grasping power, The older you get, the more your mindset and comprehension will develop, so that the knowledge you get is getting better (Notoatmodjo 2010). According to research (Mustaqimah et al, 2021) The older you get, the higher your risk of developing hypertension. Likewise with Pratiwi's research, 2016

that of the 31 respondents the most were productive age 40 years as many as 23 respondents (74%).

The majority were mostly on the characteristics of the last education being the respondents, namely the level of high school education around (62.5%) from the other last education levels. The level of education can increase knowledge about health. The higher the education, the more developed the mindset and grasping power, so that the knowledge gained is getting better (Rina in Mustaqimah, 2021). The results obtained are the same as the population data in the Pemurus Luar Village area where the majority of the people have the latest high school education (Secondary data, 2020).

Based on the results of the distribution of the posttest questionnaire, which saw the rationality of the use of health supplements in Pemurus Luar Village, it was assessed based on the results obtained on the rationality of use on the criteria for the accuracy of information on the use of supplements in the intervention group, there was an increase in the rationality of use after being given education by 6.3%. This is in accordance with the research of Putu et al., 2021 that the accuracy of information regarding the use of supplements aims to increase endurance and when sick.

On the criteria of dose and interval or duration of use in rationality of use, the results obtained in the intervention group were an increase in change of 14.5% which was rational after being given education in the form of videos, this is in line with the research of Putu et al., 2021. Based on the results of 100 respondents who used vitamins rationally during the COVID-19 pandemic from the criteria for intervals or duration of use of respondents who chose "Yes" took vitamins when sick by 93% and chose "No" took vitamins when sick by 7%. this is in accordance with the claim that vitamin C can help a person's healing process when sick. So that the research results obtained for the rationality of use in the interval accuracy criteria are appropriate.

According to Putu et al., 2021, the exact dose of 98% consists of using vitamins 1 time a day and 2 times a day. while for respondents who do not use vitamins irrationally by 2%, namely the use of 3 times a day. The results of the study the majority of respondents consume vitamin C of 1000 mg per day. Based on the literature the prophylactic use of Vitamin C per day is recommended 250 mg-1000 mg per day (BPOM, 2020). The limit for the use of vitamins as a health supplement is 1000 mg, Vitamin C 500-1000 mg can help maintain body resistance (BPOM, 2020).

The results obtained after being given education on the criteria for the accuracy of how to use the intervention group after being given education in the form of videos increased by 2.1%. According to the research of Putu et al., 2021 it can be said that the rationality of the proper use of vitamins is 98% after eating. Vitamin consumption time is in the morning which is consumed 2 hours after eating, so that the food in the body is digested first because when taking vitamins on an empty stomach it can cause nausea in some people and even diarrhea, for example when taking vitamin C on an empty stomach, especially if the dose of vitamins high consumption.

The results obtained on the criteria for side effects of use in the intervention group resulted in a rational increase in side effects of use of 12.5% after being given education in the form of videos. This is in line with the research of Putu et al., 2021 from the results of 100 respondents who experienced gastric irritation after consuming vitamin C by 17% and who did not experience gastric irritation after consuming vitamin C as much as 83% so that it could be interpreted as rational use without adverse side effects. Massey LK et al., 2005). Drugs can cause side effects, namely unwanted effects that arise when administering drugs with therapeutic doses, such as nausea, vomiting, and so on (Ministry of Health, 2017).

The results obtained in the contraindication criteria for the intervention group obtained the same rationality results from the results before being given education which was 100%, Contraindications are instructions for using drugs that are not allowed, because they are contrary to the condition of our bodies, Contraindications are related to adverse side effects, although information about contraindications from drugs are easy to obtain, but not directly contraindication cases can certainly not occur (Prasetya, 2011).

The results obtained on the criteria for the accuracy of drug selection in the education group are appropriate because they get the results of changes in rationality in the criteria for accuracy of drug selection by 18.6% after being given education. in patients with complaints of pain and flu, with the use of two types of cold medicines or pain relievers at the same time, the incidence of polypharmacy occurs because public awareness to read labels on drug packaging is still minimal and public knowledge about medicines is still lacking.

In this study, there were still some respondents who did not experience an increase in rationality due to factors that affected not only education, but also other factors, one of which was knowledge. Knowledge is the result of human sensing or the result of someone knowing about an object through the five senses it has. A person's knowledge is mostly obtained through the sense of hearing and the sense of sight (Notoatmodjo, 2014). According to research by Abay and Amelo, 2010 the majority of respondents did self-medication because their knowledge was

based on their previous drug use experience. All drug consumers hope that the drugs used will benefit as soon as possible. Drugs that are felt to be slow or have no effect will encourage them to no longer take these drugs (Muharni et al.

This test is conducted to test whether the independent variables have a simultaneous effect on the independent variables. This ordinal regression method is used to see the relationship between the dependent and independent variables, if the results of the significance value show less than <0.05 then the independent variable in the form of education will have an effect on the dependent variable, on the contrary if the results of the significance value show greater than >0.05 then the variable independent has no significant effect on the dependent variable (Shown et al., 2017).

This research is in line with Insan et al., 2020 , Giving educational videos said the use of educational videos has increased significantly. In line with researchSari et al., 2019 shows a change in respondents' knowledge before and after being given education about pneumonia in toddlers using video media.

The results of research that have been carried out are not all rational respondents in the use of health supplements. There are several reasons, one of which is the use of supplements with different brands but the same content. Rational use of drugs is very important in order to achieve a better quality of life and community welfare (Cippole et al., 2012).

Print or electronic media also play an important role in health communication, so that the media is the fastest spreader because of technological sophistication that makes it easier to access information, especially regarding information about health, medicines and others, so that information about health supplements is more widely known to the public. quickly (Suryawati, 2011).Through the video media, it is hoped that it can make it easier for people to understand the information conveyed, what is received through video media will be longer and better to stay in mind and make it easier for people to convey and receive information (Wahyudi, 2018). This is in line with research conducted by Nurbaety (2021) which states that the educational method is very effective to use to understand that not all of these supplements must be consumed together. People can choose one of the supplements that will be consumed with the rules of use and in the right conditions so as to prevent unwanted effects.

Based on the discussion that has been described above, in giving there is a significant influence on the rationality of using health supplements.

4. Conclusion

Based on research conducted in Pemurus Luar Village, it can be concluded that the rationality of the use of supplements is evidenced by the significant value being smaller than p value <0.05. The rationale for the use of health supplements in the Kelurahan Pemurus Luar during the COVID-19 pandemic showed an irrational 50% result from 96 respondents, after providing education in the form of videos in the intervention group there was an increase in the rationality of using supplements with a significant value of 0.000, which can be interpreted as giving education experienced an increase in rationality of use after being given a video.

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Statements of Interest

Author's statement that they have no conflict of interest

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