

Knowledge About COVID-19, perceived behavior control, subjective norm, and health consciousness on vitamin purchase intention during COVID-19



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ABSTRACT

Introduction: The COVID-19 is an infectious disease that has threatened all countries in the world because its transmission is very easy and fast. This is what causes COVID-19 to become a global pandemic. As a result of the global pandemic, people become anxious, afraid and try to protect themselves and their families by taking vitamins. This research focuses on education about covid-19, perceived behavior control, subjective norm, health consciousness on vitamin purchase intention during the pandemic.

Methods: This study was a quantitative research with a cross sectional design. Collecting data using a questionnaire distributed to all provinces in Indonesia and collected as many as 284 respondents. The research data were analyzed using SmartPLS for confirmatory factor analysis.

Results: The results of this study explain that there is a significant relationship between education about covid-19 and perceived behavior control, subjective norms, health consciousness. Subjective norm and health consciousness also have a significant influence on vitamin purchase intention. Meanwhile, perceived behavior control has no significant effect on vitamin purchase intention during the pandemic.

Conclusion: It is important to raise health consciousness with a good knowledge about health. So that the application of healthy living behavior can become a trend and have a positive impact on realizing health independence.

Keywords: *Perceived Behavior Control, Subjective Norm, Health Consciousness, Vitamin Purchase Intention, pandemic COVID-19.*

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INTRODUCTION

The COVID-19 pandemic has caused changes in people's lifestyle behavior due to cases that have not decreased. Nowadays people are more concerned about the risk of being infected with the COVID-19 virus. This level of concern for health leads to behaviors that can reduce the risk of contracting the COVID-19 virus, people consume more vitamins and adopt a healthier lifestyle. This change in behavior causes the demand for vitamins to increase because vitamins are considered to be able to help in forming and increasing the body's immunity during a pandemic. This is also supported in a statement by the Daily Chair of the Pharmaceutical Traders Association explaining that sales of vitamins C and D increased by 50%. This increase in demand for vitamins has also resulted in an increase in the number of e-commerce transactions in Indonesia, especially in

health products. Based on data quoted from iPrice revealed that online shopping for hand hygiene products, such as hand sanitizer, has increased significantly by 5.585 percent through use (iprice.co.id, 2020). Likewise, Tokopedia also explained that during June 2021 the increase in vitamin and multivitamin sub products increased 2 times. The following are some of the health products that are in demand by the public:

A survey on the impact of COVID-19 conducted by the Central Statistics Agency shows that the majority of the public expressed concern about COVID-19 and were worried about their health during the pandemic. People's concerns are when activities outside the home and meeting many people. According to the previous study, which explains that when individuals or groups of people face life-threatening events, they will tend to carry out preventive and protective activities.¹

In this global pandemic situation, people believe that the COVID-19 virus is more contagious and deadly. Therefore it is important for the government and the media to continue to provide knowledge about the outbreak and how to avoid it. Moreover, Johnson's study in 2017 explains that providing knowledge about health and creating awareness during a pandemic is an effective action to prevent the spread of the virus.² When people begin to understand what COVID-19 is, they will immediately form new norms. Based on the theory of planned behavior, a person's behavior is strongly influenced by the norms of social behavior in society.³ Subjective norms are personal views about actions that are encouraged and influenced by other parties. Subjective norms are a form of normative belief, where one person's belief refers to the views of others. Sometimes it's not just views, but pressure from other parties that can influence a

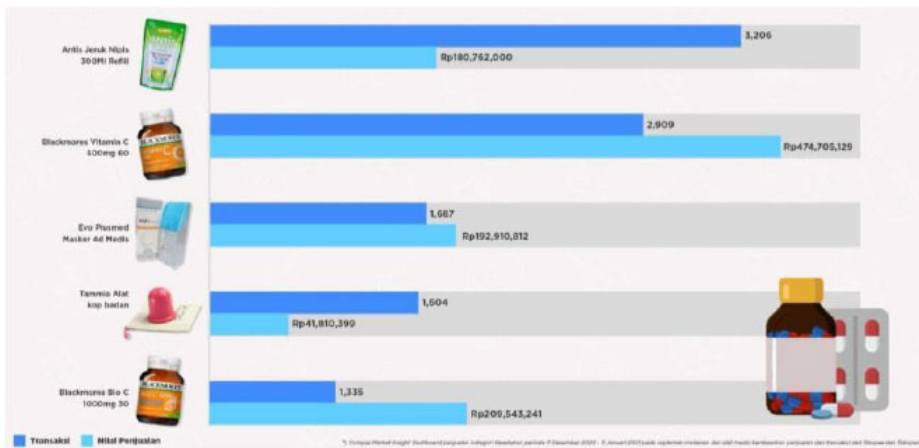


Figure 1. Best Selling Health Products.

person. In the current era, people are forced and pressured to wear masks, wash their hands, and maintain social distance to minimize the spread of the virus.

Not only that, the increasing demand for vitamins during this pandemic indicates that public health awareness is getting better. According to earlier study, it is stated that health awareness is related to the assessment of readiness to perform health. This means that when consumers are aware of the importance of maintaining their health, they will be motivated to improve and maintain their lifestyle. One of the things that can be done to improve health is by consuming vitamins.⁴ By consuming vitamins, it can protect the body from various diseases and increase body resistance.⁵ Another study also mention that health awareness is one of the important factors that can influence consumers' purchase intentions.⁶ This shows how strong consumer perception is to change consumer behavior and the high value of health in the lives of Indonesian people.⁷ This is a situation where people become more sensitive to each other than usual. After all, the health and safety of each other and each other is the current priority.⁸ The latest study conducted by Ben Hassen in 2020 explains that COVID-19 can change consumer behavior in a more sustainable and healthy direction.⁹ When situations and environments change, societal values influence consumer decision-making and purchase goals for certain products.¹⁰ This study uses the Theory of Planned Behavior which provides a potentially useful framework for understanding how people evaluate

COVID-19 prevention measures against the backdrop of the current situation that could be considered complex and severe.¹¹ Various efforts to control COVID-19 have been carried out by several ministries, including the Ministry of villages, the development of disadvantaged regions, and transmigration as a form of attention from the Indonesian government.¹²

METHODS

Study Design

This research utilizes a non-experimental, causal, descriptive and simple cross-sectional design that has been supported by quantitative empirical evidence.

Data Collection

The data were collected via a google form online survey distributed to a convenience sample of Indonesian people over aged 17. After excluding non valid questionnaires, sample consisted of a total of 284 respondents. The data collection procedure is that Participants are informed about the objectives and potential implications of the study, participant needs, and the privacy and confidentiality of each information provided by them. Then participants were asked to complete surveys via google form by assessing their knowledge about COVID-19, perceived behavior control, subjective norm, health consciousness and vitamin purchase intention during COVID-19.

Data Analysis

The SPSS and SmartPLS were used in this study. These applications analyze the personal data and the causal relationship

of the variables. This study also describes the data through the frequency distribution, average number, percentages. Furthermore, it can explore the distribution of the respondents' data (age, income, and vitamin purchased during COVID-19) used the SPSS application.

While the SmartPLS was used for confirmatory factor analysis for explore the correlation between observational variables and potential variables. The loading factor mainly measures the degree correlation between items of scale measurement and potential factor, and factor loading must be greater than lower limit of 0.5. The reliability index in the application, combination reliability (CR) was used to evaluate the reliability index of potential study variabels, leading to measure the internal consistency of index items of potential variables. The value of CR must be higher than 0.6. The CR value is in line with the dimensional consistency so the higher cr value will also have higher dimensional consistency.

The Average Variance Extracted (AVE) percentage of variation that can be considered as an index variable explained by the latent variable, which indicate the percentage that can be described by each dimension, and extracted variation must be greater than 0.5.

RESULTS

In **Table 1**, the majority respondents aged between 17 and 21 years (36%). The sample is spread across 26 provinces in Indonesia. The sample is spread across 26 provinces in Indonesia. Most of the samples bought vitamins during the Covid-19 pandemic (85%). Average monthly income respondents between Rp 3.000.000 and Rp 6.000.000 (31%).

Hypothesis testing

The arrow sign (») showed that the influence between study variables.

DISCUSSION

According to the study, it was found that knowledge about Covid-19 had a significant effect on perceived behavior control ($p=0.000$). It means that the higher knowledge about Covid-19, the higher the perceived behavior control during the

Table 1. Characteristics of Respondents

Items	Category	n	%
Vitamin purchase during the COVID-19 pandemic	Yes	240	85%
	No	44	15%
Average monthly income	Less than one million rupiah	91	32%
	1-3 million rupiah	71	25%
	3-6 million rupiah	89	31%
	More than 6 million rupiah	33	12%
Age	17-21 years	102	36%
	22-26 years	91	32%
	27-31 years	46	16%
	32-36 years	22	8%
	37-41 years	5	2%
Province	> 41 years	18	6%
	Aceh	4	1%
	Bali	25	9%
	Banten	7	2%
	Jakarta	4	1%
	Gorontalo	4	1%
	Jambi	4	1%
	West Java	32	11%
	Central Java	48	17%
	East Java	89	31%
	South Kalimantan	9	3%
	Central Kalimantan	3	1%
	East Kalimantan	2	1%
Maluku	2	1%	
West Muna	1	0%	
NTB	2	1%	
NTT	2	1%	
Palembang	3	1%	
West Papua	1	0%	
Papua	4	1%	
West Sulawesi	3	1%	
South Sulawesi	4	1%	
Southeast Sulawesi	9	3%	
North Sulawesi	8	3%	
West Sumatera	5	2%	
South Sumatera	7	2%	
Riau	2	1%	

Covid-19 pandemic. This is in line with the results of a study conducted by previous study which revealed that someone with better knowledge about their health had a more positive perception of the preventive action that should be taken.¹⁶ Perceived behavior control is a person's belief about the supporting and inhibiting factors to take an action. This behavioral control can also influence intentions and decision making to make efforts to prevent Covid-19. According to earlier study, the behavioral control perception variable does have a significant influence on individual intentions to improve their

health status.¹⁷ This intention comes from the assumption that the behavioral control perceived by the individual will have a motivational impact on the person.³ In addition, this perceived behavior control reflects past experiences and anticipates all existing threats. The high number of Covid-19 cases causes people to feel worried and anxious so they tend to carry out preventive and protective activities to prevent a disease.¹ Someone with good knowledge about Covid-19 will have good perceived behavior control, so this will also affect the intention to prevent Covid-19, including buying vitamins. Vice

versa. This means that the first hypothesis (H1) is accepted.

The table 6 showed that knowledge about Covid-19 has a significant result on subjective norms ($p=0.000$). It means that the higher education about covid, the higher the subjective norm that will develop to prevent the transmission of the Covid-19 virus. Subjective norm is a person's perception of social pressure to perform or not a behavior.¹⁸ Subjective norm can also be said as a person's view of behavior that is influenced by other people. When people begin to know and be educated about the impact of Covid-19,

Convergent Validity**Table 2. Convergent Validity Value**

Variables	Indicator	Outer Loading	Conclusion
<i>Knowledge about COVID-19</i>	EAC 1	0.800	Valid
	EAC 2	0.859	
	EAC 3	0.851	
	EAC 4	0.843	
	EAC 5	0.853	
<i>Perceived behavior Control</i>	“KP 1”	0.795	Valid
	“KP 2”	0.863	
	“KP 3”	0.803	
	“KP 4”	0.878	
	“KP 5”	0.768	
<i>Subjective Norms</i>	“SN 1”	0.768	Valid
	“SN 2”	0.832	
	“SN 3”	0.801	
	“SN 4”	0.806	
	“SN 5”	0.746	
<i>Health Consciousness</i>	HC “1”	0.873	Valid
	HC “2”	0.822	
	HC “3”	0.811	
	HC “4”	0.872	
	HC “5”	0.655	
<i>Purchase Intention</i>	PI “1”	0.768	Valid
	PI “2”	0.832	
	PI “3”	0.801	
	PI “4”	0.806	
	PI “5”	0.746	

Average Variance Extracted (AVE)**Table 3. AVE value**

No	Variables	Average Variance Extracted (AVE)
1	<i>Education About COVID-19</i>	0.708
2	<i>Perceived Behavior Control</i>	0.676
3	<i>Subjective Norms</i>	0.656
4	<i>Health Consciousness</i>	0.657
5	<i>Purchase Intention</i>	0.626

Composite Reliability dan Cronbach's Alpha**Table 4. Composite Reliability dan Cronbach's Alpha**

No	Variables	Cronbach's Alpha	Composite Reliability
1	<i>Education About COVID-19</i>	0.897	0.924
2	<i>Perceived Behavior Control</i>	0.879	0.912
3	<i>Subjective Norms</i>	0.867	0.905
4	<i>Health Consciousness</i>	0.866	0.905
5	<i>Purchase Intention</i>	0.850	0.893

R² Analysis**Table 5. R² Analysis**

No	Variables	R-Square
1	<i>Perceived Behavior Control</i>	0.350
2	<i>Subjective Norms</i>	0.317
3	<i>Health Consciousness</i>	0.270
4	<i>Purchase Intention</i>	0.760

they will automatically apply new norms to reduce the spread of the virus such as wearing masks, maintaining distance, washing hands, avoiding crowds, reducing mobility, to buying and taking supplements such as vitamins. as an immune booster to prevent the transmission of the Covid-19 virus. According to previous study, education about covid affects subjective norms, and subjective norms also directly affect intentions to buy health products during the Covid-19 pandemic, one of which is vitamins.¹⁹ Respondents with good knowledge about Covid-19 will have good subjective norms, so that this will also affect their intention to prevent Covid-19. This means that the second hypothesis (H2) is accepted.

According to the table 6, it was found that knowledge about Covid-19 has a significant effect on health consciousness (p=0.000). It means that the higher knowledge that related to Covid-19, the higher someone's health consciousness. Covid-19 is one type of dangerous and infectious disease that has infected various countries in the world, so this disease is declared a global pandemic. The current Covid-19 pandemic makes people feel anxious, so they are starting to prioritize their health and maintain a healthy lifestyle. This phenomenon has brought about a big change, where health consciousness is increasing in the midst of a world that has been hit hard by the outbreak of the corona virus. Therefore, the need for a healthy and fit life is also increasing, so that people try to make various efforts to take care of themselves and their families by buying and consuming various types of health products, including vitamins.¹⁹ In accordance with the research results of Rizkitania's study in 2022, a person's level of knowledge related to health is directly proportional to health consciousness. A person will increasingly realize the importance of maintaining health if he knows and understands the health risks that may occur, especially in the era of the Covid-19 pandemic which has a broad impact on public health.²⁰ In addition, awareness of the health benefits of vitamins can also influence a person's decision to buy vitamins. The better the respondent's education about covid, the more the respondent's health

consciousness will grow, so that it has an impact on respondents' interest in buying health products including vitamins to prevent the transmission of Covid-19. This means that the third hypothesis (H3) is accepted.

Based on table 6, it showed that perceived behavior control has no significant effect on purchase intention (p=0.328). In this study, perceived behavioral control was found to have no significant effect on vitamin purchase intention during the Covid-19 pandemic. These results are in line with the previous studies. Purchase intention is an indication of an individual's willingness to take an action or behavior, and is a direct link to behavior which in this case is related to purchasing vitamins during the Covid-19 pandemic. An individual sometimes has difficulty in predicting the means and opportunities and the level of self-control related to future behavior.²¹⁻²³ Especially for consumers who are not yet financially independent, and still live with

their families, the decision to purchase a product is often not taken by the consumer, so that consumers have very little control. If the decision to purchase vitamins is not in the hands of the consumer himself, then the purchase intention that comes from control over the decision is relatively low.²⁴ This is what makes the perceived behavior control variable not significantly affect purchase intention, so the fourth hypothesis (H4) is rejected.

According to table 6, subjective norms have a significant direct influence on purchase intention. These results are indicated by the p-values of $0.002 < 0.05$. This means that the higher the subjective norm that develops in the community, the higher the purchase intention of vitamins during the Covid-19 pandemic. According to Purwantini & Tripalupi's study in 2021, consumer interest is not only related to the consumer's own attitude, but is also influenced by subjective norms that consider the perceptions of others in taking an action.²⁵ The existence of the Covid-19

pandemic has further strengthened subjective norms in the community, including those related to efforts to prevent virus transmission, such as implementing health protocols and practicing clean and healthy lifestyles. One of the phenomena that also arises from the effects of this pandemic is the consumption of vitamins to increase the body's immunity. This causes Indonesian people to start consuming vitamins in droves because they are influenced by subjective norms circulating in the community. Earlier study explains that subjective norms can influence individual interest in buying vitamins.²⁶ This is in accordance with the research by Anggelina & Japariato's study in 2014 which explains that there is a significant positive relationship between subjective norms and purchase intention. The better a person's subjective norm, it will encourage that person to also have a stronger purchase intention to take preventive measures against COVID-19, one of which is buying vitamins to increase endurance. This means that the fifth hypothesis (H5) is accepted.

According to the study, health conscientiousness has a significant direct influence on purchase intention (P=0.000). This means that the higher the health conscientiousness, the higher the purchase intention of vitamins during the Covid-19 pandemic. Health awareness is an action taken by a person to live a healthy life. The current Covid-19 pandemic has raised public awareness about the importance of maintaining health. One of the ways that people do to maintain their health during this pandemic is by consuming vitamins. The growth of health conscientiousness has proven to be one of the variables that has a significant effect on growing consumer buying interest, especially health products such as vitamins as part of promotive and preventive efforts from the Covid-19 virus attack. Limsuwan's study in 2021 also

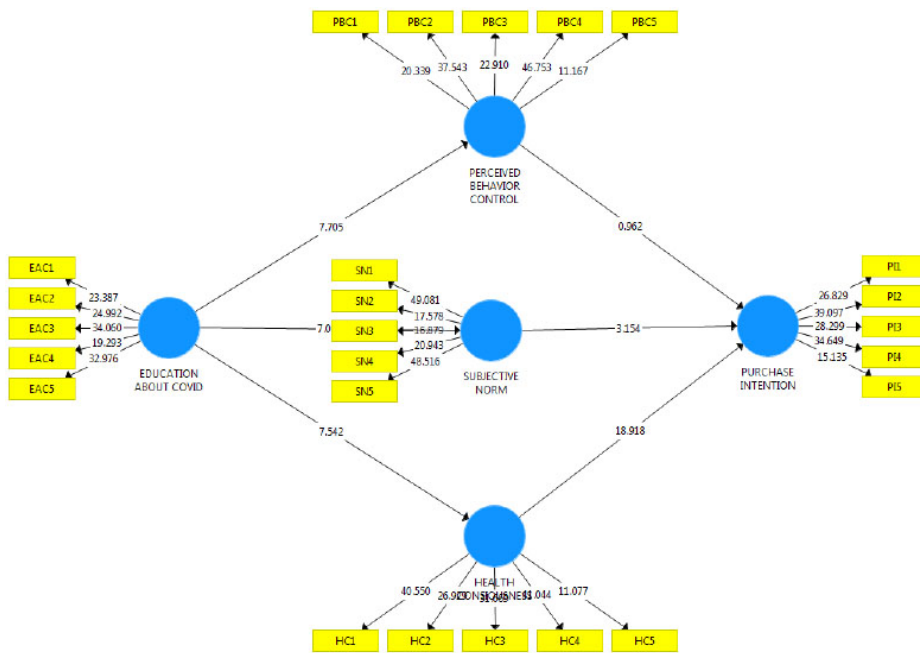


Figure 2. Inner Model.

Table 6. Hypotesis Testing

No	Variabel	Original Sample (O)	T Statistics	p-value
1	Knowledge About Covid » Perceived Behavior Control	0.592	7.639	0.000
2	Knowledge About Covid » Subjective Norm	0.563	6.834	0.000
3	Knowledge About Covid » Health Consciousness	0.520	7.239	0.000
4	Perceived Behavior Control » Purchase Intention	0.050	0.980	0.328
5	Subjective Norm » Purchase Intention	0.173	3.137	0.002
6	Health Consciousness » Purchase Intention	0.718	19.369	0.000

stated that one of the consumer trends in the modern era is a great interest in holistic health aspects because of the increasing public health consciousness, especially driven by the pandemic which actually increases the opportunities for the production of health products.²⁷ This is supported by previous study which state that there is a significant positive relationship between health consciousness and purchase intention.²⁸ This means that the sixth hypothesis (H6) is accepted.

CONCLUSION

The results indicated that the knowledge about COVID-19 positively and directly influenced the perceived behavior control, subjective norms and health consciousness. And the subjective norms and health consciousness indirectly influenced the purchase intention of vitamin. But in this study the perceived behavior control did not influence the purchase intention of vitamin. An individual sometimes often has difficulty in predicting the means and opportunities and the level of self-control related to future behavior. Especially for consumers who are not yet financially independent, and still live with their families, the decision to purchase a product is often not taken by the consumer, so that consumers have very little control. It is important to raise knowledge and health consciousness not only during the COVID-19 pandemic. So that the application of healthy living behavior can become a trend and have a positive impact on realizing health independence.

DISCLOSURE

Author Contribution

All authors have contributed to this research process, including conception and design, analysis and interpretation of the data, drafting of the article, critical revision of the article for important intellectual content, final approval of the article, collection and assembly of data.

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Conflict of Interest

There is no conflict of interest for this manuscript.

Ethical Consideration

This research was approved by the Health Research Ethics Committee of Nahdlatul Ulama Surabaya University. Letter of exemption No. 215/EC/KEPK/UNUSA.2022

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