

Knowledge of COVID-19 and online purchase intention: the role of health protocol and fulfilment

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Abstract

Purpose – This study analyses the relationship between knowledge of COVID-19 and the application of health protocols, fulfilment in the pandemic era and online purchase intention. This study also analyses the effect of health protocol and fulfilment on online purchase intention.

Design/methodology/approach – This study is a quantitative study with a student population in Yogyakarta. From the total population, 170 respondents were taken by random sampling method. The data in this study are primary data obtained through the distribution of questionnaires. From the data obtained, analysis was carried out using the Structural Equation Model method using Partial Least Square with Smart-PLS software.

Findings – The results of the analysis in this study indicate that knowledge of COVID-19 is able to have a significant influence on the implementation of health protocols and fulfilment, but knowledge of COVID-19 is not able to significantly influence online purchase intention. The results of the analysis also state that the health protocol is not able to have a significant effect on online purchase intention in students, while fulfilment is able to provide a significant influence on online purchase intention.

Research limitations/implications – For further research, it is expected to be able to examine more deeply online purchase intentions across generations and compare them. Further research is also expected to include several other variables that have a role in online shopping behaviour.

Practical implications – The results of the analysis in this study also provide recommendations for business people in this pandemic era to emphasize online buying and selling services. Online marketing is also more recommended because the more people understand about COVID-19, the less they do activities outside the home, so the most effective marketing is through social media which is accessed by the public every day.

Originality/Value – In contrast to previous studies, this study proposes a model of people's behaviour in shopping online. The analysis in this study formulates the relationship between knowledge of COVID-19, health protocol, fulfilment and online purchase intention.

Keywords: Knowledge of COVID-19, health protocol, fulfilment, online purchase intention

Introduction

The COVID-19 outbreak has had an impact on various aspects of life, including in the business and economic fields. Donthu & Gustafsson (2020) outlines that the COVID-19 Outbreak is a stern warning, this outbreak has severe economic consequences worldwide. All aspects of people's lives are affected by it, this situation has caused tremendous changes to consumer behavior and changes

in the way of doing business covering various industrial sectors (such as tourism, retail, higher education). The COVID-19 pandemic has affected businesses in their business, retailers have reacted to the COVID-19 emergency, presenting a plethora of different types of interventions in managing business.

The prohibition of crowds as an effort to stop the spread of COVID-19 has become a big problem for business people, from the limited time for opening a business, limited number of visitors and the closure of retail to be an obstacle in marketing business products. Likewise, for consumers who shop every day to meet their daily needs, they experience problems with the prohibition of mass crowds being feared as intermediaries for the spread of COVID-19. The crowd ban applies to anyone as long as conditions are unsafe. Therefore, health protocols wherever and whenever must be followed by every citizen.

Some literature examines conditions in this pandemic era and emphasizes the importance of knowledge of COVID-19 (Yilmaz et al. 2020; Ali, 2020; Gao et al. 2021). The basis of positive behavior possessed by the community such as complying with health protocols (Widayat & Arifin, 2020; Ozturk, 2020), efficient fulfillment of needs (Beaunoyer et al. 2020) and purchasing goods or services safely (Sebby, 2021) is knowledge. against COVID-19.

Research by Widayat & Arifin (2020) shows that attitudes towards COVID-19 have a correlation with daily food buying behavior. It has become a trend for young people and students who struggle with the internet every day, they shop online. This pattern of shopping behavior not only saves time, but also reduces crowds and becomes a very appropriate pattern of behavior in an effort to stop the spread of COVID-19.

Ali (2020) analyzed consumer behavior in Iraq during the COVID-19 pandemic. The results show that with the health protocol, online shopping behavior is increasing. Koch et al. (2020) found several consumer motives for making purchases online in this pandemic era, the first motive being media reports. The emergence of many media reporting on health protocol recommendations and the dangers of going out of the house resulted in increased online buying behavior, on the other hand, hedonic motivation was also found in some consumers who did have an interest in online shopping.

The research findings of Bauboniene et al. (2015) show that the main factors that influence consumers to shop online are convenience, simplicity and better prices. Men shop online more often because of lower prices. Respondents in the 25–35-year age group more often choose online shopping for reasons of time constraints and product variations. The most beneficial factor of online shopping was identified as the possibility to compare prices and buy at a lower price.

This study analyzes more deeply the important role of knowledge about COVID-19 in shaping healthy and safe behavior for the community, especially youth during a pandemic. The behavior in question is the application of health protocols, behavior to fulfill safe needs in the pandemic era and online shopping behavior. In contrast to previous studies, this study proposes a model of people's behavior in shopping online. The analysis in this study formulates the relationship between knowledge of COVID-19, health protocol, fulfillment and online purchase intention.

Literature Review and Hypotheses

Knowledge of COVID-19 and Health Protocol

Wang et al. (2020) states that the Coronavirus Disease 2019 (COVID-19) is affecting global mental health, there have been many changes in the level of psychological impact, stress, anxiety and depression during this pandemic. Sher (2020; Wu et al. 2020) stated that the COVID-19 outbreak had profound psychological and social effects. With the emergence of restlessness, anxiety, fear of transmission of the virus lead to depression in the general public and among health care professionals. Social isolation as an effort to stop the spread of the virus causes anxiety, fear, chronic stress, and economic difficulties that can cause other psychological disorders

Suggested by Wang et al. (2020) to prevent the transmission of COVID-19 so that protective factors are maintained, including a high level of trust in doctors, must be followed. If this is met, the chances of survival are very high and the risk of contracting COVID-19 is very low.

For this reason, the dissemination of health information must be carried out, personal precautions must be increased. The government should focus on effective methods to spread COVID-19 knowledge, teaching self-containment methods properly.

The spread of the virus has been evenly distributed throughout the world, without exception including developed countries and underdeveloped countries, conditions continue to worry. The number of exposed populations continues to grow. According to Quayumi & Alimansur (2020), there is a relationship between knowledge of prevention efforts and compliance in preventing COVID-19. Lack of knowledge about efforts to prevent transmission of COVID-19 will have an impact on decreasing compliance in preventing transmission of COVID-19. So it is necessary to have education, rules and the provision of personal protective equipment for COVID-19 volunteers in preventing the transmission of COVID-19.

To avoid transmission of the COVID-19 virus and to stop the spread of the virus, the World Health Organization (WHO) recommends a series of actions including (1) isolation of all people infected with COVID-19 with appropriate facilities and avoiding close contact with infected people, (2) using cloth masks in certain situations, (3) maintaining physical distance, (4) hand hygiene as often as possible. In addition to preventing the spread of the virus, it is necessary to maintain the body's immune system by exercising, getting enough rest, maintaining food and being ready to drink vitamin C supplements. Guitton (2020) suggests that wider access to healthy food should be a top priority and individuals should pay attention to healthy eating habits. to reduce susceptibility and long-term complications from COVID19.

The Government of the Republic of Indonesia is making efforts to reduce the spread of COVID-19 and its prevention efforts, through Decree of the Minister of Health of the Republic of Indonesia (2020) with various programs, one of which is the prevention program with the program wearing masks, washing hands, keeping distance and so on as an effort to stop the spread of COVID-19, including socializing at home, working from home, schooling at home, worshipping at home, of course the hope is to shop from home. Therefore, the following hypothesis is formulated:
H1: Knowledge of COVID-19 has significant effect on health protocol.

Knowledge of COVID-19 and Online Purchase Intention

Online shopping is a demand for consumer activities during this COVID-19 outbreak in the hope that needs can be met, the spread of COVID-19 can be controlled because physical contact is limited to grocery couriers. With online shopping, consumer needs can be met without having to leave the house, even for those who have a busy agenda, can complete other work tasks, needs can be met through online shopping. According to Sheth (2020) the COVID-19 pandemic and the mandate of lockdown and social distancing have disrupted consumer habits in shopping for their daily necessities. Consumers are currently learning to improvise and learn new ways of living, consumers should not shop at the store, so online shopping is the solution.

Donthu & Gustafsson (2020) stated that COVID-19 is currently having severe economic consequences worldwide that have caused dramatic changes in the way businesses act and consumer behavior. Krishnamurthy (2020) explained that the COVI-19 pandemic has disrupted business schools around the world, the teaching situation has changed from classical face-to-face teaching to emergency remote teaching. Efforts to reduce crowds include limiting working hours, limiting crowds, events and performances including tours. This crowd reduction according to Donthu & Gustafsson (2020) has economic consequences around the world, covering various sectors of tourism, retail, higher education and happening, changes in consumer behavior.

In line with the impact on the economy, Bao (2020; Beaunoyer et al. 2020) shows that online technology has become a special channel for the community, the impact of the COVID-19 pandemic is the emergence of various new activities that become people's routines such as online shopping and telework to distance learning, online technology has also become a key tool in trying to deal with the economic consequences of the crisis.

Efforts to meet the needs of life by shopping must be done by every family, shopping that reduces the spread of COVID-19 meets with fellow citizens to be avoided or reduced. So shopping is done online. Online shopping is still a traffic of citizens, because the delivery of goods cannot

be done by machine, but at least it reduces crowds and reduces face-to-face life (Bao, 2020; Li et al. 2020). Therefore, the following hypothesis is formulated:

H2: Knowledge of COVID-19 has significant effect on online purchase intention

Knowledge of COVID-19 and Fulfilment

The needs of human life can be grouped into two, namely daily needs which are continuous every day and non-daily needs which are occasional (Ali et al. 2010). Daily needs can be in the form of basic food needs that must be available every day, in contrast to the needs for clothing, housing needs, vehicles, these needs are used daily, but the procurement of shopping can be done in the long term.

Chaudhury (2010) states that there are several factors in the purchase of needs, namely sensory appeal, comfort, mood and price. Onay et al. (2011) added that when viewed from a gender perspective, women pay more attention to prevention when buying food compared to men, while in terms of age, young consumers pay more attention to preventive measures than older ones.

Meeting daily non-food needs is slightly different, according to Diana-Rose et al. (2016), consumers prefer to buy established brand products at large supermarkets than at MSMEs, shopping products have different characteristics from convenience products. positive attitude followed by perceived behavioral control and then subjective norms on the intention construct. On the other hand, Anjana (2018) classifies the existence of five factors in purchasing, namely product quality, product price, brand name, product packaging and advertisements that encourage consumers to meet the needs of beauty ingredients. Consumers when it comes to beauty products, it is even more intense that these five factors play a major role in consumers' purchasing decisions

In contrast to the situation after the COVID-19 pandemic, consumers shop for more varied considerations, research Yilmaz et al. (2020) shows that COVID-19 has caused changes in students' eating habits and food buying behavior, they now pay more attention to hygiene when buying food, and have improved the quality of their consumption compared to before. Research by Widayat & Arifin (2020) shows that attitudes towards COVID-19 have a correlation with daily food buying behavior. Consumers tend to be more careful in choosing, paying attention to food manufacturers, and where the food comes from. Consumers prefer to use E-money and avoid paper money as an effort to avoid physical contact with sellers or suppliers.

Efforts to meet the needs of life have an impact on causing mass crowds, product processes, product marketing processes, goods transaction processes, causing contacts and crowds. Likewise, in transportation activities, watching exhibitions, visiting tours, enjoying arts and sports, all provide the potential for the spread of COVID-19. The situation is very dangerous to health when left unchecked. Donthu & Gustafsson (2020) recognizes that the COVID-19 Outbreak is a stark warning that the pandemic has severe economic consequences worldwide, which has caused dramatic changes in the way businesses act and consumer behavior. Therefore, the following hypothesis is formulated: H3: Knowledge of COVID-19 has significant effect on fulfillment

Health Protocol on Online Purchase Intention

The development of the spread of the COVID-19 virus has endangered the lives of people around the world, Shiau et al. (2020) show that the emergence of COVID-19 has created a health burden and is a very high risk to physical health. Restubog et al. (2020) confirms that the COVID-19 pandemic has created a global health crisis that continues to threaten public health and safety. The government and medical personnel have taken steps to reduce the spread of the virus in the form of a policy of prohibiting physical contact and prohibiting gatherings.

The government recommends that people comply with health protocols, the government requires people to use personal protective equipment in the form of masks that cover the nose and mouth to the chin, if they have to leave the house or interact with other people, clean their hands regularly by washing their hands with soap and running water or using alcohol-based antiseptic liquid/handsanitizer, maintain a distance of at least one meter from other people to avoid getting droplets from people who are talking, coughing, or sneezing, as well as avoiding crowds, crowds, and crowds. If it is not possible to maintain a distance, various other administrative and technical engineering can be carried out.

Efforts made to reduce the spread of COVID-19 are known as health protocols. Some literature finds the effect of health protocols in changing people's lifestyles, one of which is the increasing interest in online shopping (Ali, 2020; Koch et al. 2020; Ozturk, 2020; Tarigan et al. 2020; Nguyen et al. 2020; Brewer & Sebbby, 2021; Gao et al. 2021). This condition requires business actors to change their sales strategy. Businesses that initially focused on offline sales, now have to meet market demands by providing online services.

Ali (2020) analyzed consumer behavior in Iraq during the COVID-19 pandemic. The results show that with the health protocol, online shopping behavior is increasing. Koch et al. (2020) found several consumer motives for making purchases online in this pandemic era, the first motive being media reports. The emergence of many media reporting on health protocol recommendations and the dangers of going out of the house resulted in increased online buying behavior, on the other hand, hedonic motivation was also found in some consumers who did have an interest in online shopping. Therefore, the following hypothesis is formulated:

H4: Health protocol has significant effect on Online purchase intention

Fulfillment on Online Purchase Intention

With the necessity of banning crowds as a breaker for the transmission of COVID-19, Beaunoyer et al. (2020) suggest the main ways to access information and services for social interaction all require access to the network optimally. Pantano et al. (2020) recommends that retailers can use emergencies to get closer to consumers, be more socially responsible or by adding new technology, or adopt unique ways of shopping. According to Katawetawarak & Wang (2011) there are four factors that encourage online shopping, namely convenience, information, available products and services, and cost and time efficiency.

Hao et al. (2020) stated that COVID-19 significantly affected aspects of the hotel, multi-business and multi-channel industry, due to crowds between various parties. Sigala (2020) quotes from WHO that COVID-19 has had a significant impact on the global economic, political, socio-cultural system. Health communication strategies and measures (eg social distancing, travel and mobility restrictions, community lockdowns, stay-at-home campaigns, crowd-restriction self-quarantine) have put a stop to global travel, tourism and recreation. This policy of the World Health Organization (WHO) is the most likely strategy to prevent the spread of a dangerous virus.

The need for shopping to meet daily needs has become a community activity and has an impact on crowds of people. Crowds of people who are not controlled according to health protocols during the COVID-19 outbreak have become media for the spread of dangerous viruses, the policy of the government of the Republic of Indonesia through the ministry of health in accordance with WHO recommendations, has taken a policy through (Permenkes RI KMK No. HK.01.07/MENKES/382 /2020) recommends that people apply health protocols by wearing masks, washing hands and keeping a distance, and recommends reducing crowds, so they don't leave their homes if they don't have to have urgent needs.

With the development of online communication technology and driven by concerns about the negative impact of the crowd, it can lead to new changes in consumer behavior in shopping. Shopping is more using online, the store goes to the consumer, not the consumer goes to the store. Papadopoulos et al. (2020) recommends using online technology in business to deal with the impact of COVID-19 and secure business continuity.

With online shopping, consumers just order goods from home, and stores that process the delivery of goods, goods can reach consumers' homes. Morosan & Bowen (2018) conducted a study from 2006 to 2016, the results show that there has been a lot of increase in hotel consumers ordering online, as well as many tourists shopping for tours through online has increased a lot. Therefore, the following hypothesis is formulated:

H5: Fulfillment has significant effect on online purchase intention

Research Methods

This study is a quantitative study with a student population in Yogyakarta. The determination of students as a population is based on the lifestyle of youth, especially related to shopping behavior

in this pandemic era. From the total population, 170 respondents were taken by random sampling method. The data in this study are primary data obtained through the distribution of questionnaires. From the data obtained, then an analysis was carried out using the Structural Equation Model method using Partial Least Square with Smart-PLS software.

This study consisted of 1 exogenous variable and 3 endogenous variables. The exogenous variables in this study are knowledge of COVID-19 and the endogenous variables in this study are health protocols, fulfillment and online purchase intention. The operational definitions of variables in this study are as follows:

1. Knowledge of COVID-19 is a person's understanding of the covid virus, its dangers and prevention. The measurement of knowledge of COVID-19 uses several indicators including knowing the dangers of COVID-19, knowing efforts to prevent COVID-19, knowing the development of pandemic conditions, knowing hoaxes related to COVID-19, always updating information related to COVID-19 (Ali, 2020).
2. Health protocol is an act of wearing a mask, washing hands, keeping a distance from other people as an effort to prevent the spread of COVID-19. The health protocol indicators include wearing masks, washing hands, keeping a distance, not crowding, frequently cleaning themselves, limiting going out of the house (Kemenkes, 2020).
3. Fulfillment is a behavior to meet the needs of daily life. The fulfillment measurement consists of several indicators including the fulfillment of food needs, fulfillment of raw material needs, fulfillment of clothing needs, fulfillment of household needs and fulfillment of entertainment needs (Pantano et al. 2020).
4. Online purchase intention is an activity to procure daily necessities by purchasing online. Online purchase intention indicators include having several online shopping applications, buying food online, buying clothes online, buying household necessities online, likes shopping online (Koch et al. 2020).

Results and Discussion

Respondent Characteristics

Respondents in this study amounted to 170 respondents who are students in Yogyakarta Indonesia. Of the total respondents divided into several characteristics. The first characteristic is the age of the respondent, the age of the respondent in this study is to have an age range of 20 - 25 years as much as 78% while the rest have an age range of 15 - 20 years. The next characteristic is the area of origin of the respondents, which found that most of the respondents came from Central Java as much as 43% and DIY as much as 37%. Then the condition of the area of origin of the respondents is still dominated by agricultural areas and rural areas, the conditions of trade and industrial areas are less.

Outer Model Evaluation

The outer model analysis in this study consisted of validity and reliability tests. The validity test used in this study is convergent validity and construct validity. The results of the convergent validity test shown in Figure 1 and Table 1.

The indicator validity standard is the loading factor value > 0.7 and the variable validity standard is the AVE value > 0.5 . Table 1 shows that all indicators have a loading factor value according to the standard and all variables have also been declared valid. Furthermore, the results of the reliability test are shown in Table 2.

A construct can be said to be reliable, if it has Cronbach's alpha value it must be 0.6 and the Composite reliability value must be 0.7. Table 2 shows that all constructs in this study have a Cronbach's alpha value 0.6 and a Composite reliability value 0.7, so it can be said that all constructs are reliable. This can be interpreted that each construct in the research model has internal consistency in the instrument reliability test.

Inner Model Evaluation

Testing of the inner model or structural model is carried out to predict causal relationships between variables or test hypotheses. This test can be seen through the results of the coefficient of

determination, goodness of fit, and hypothesis testing. When the significant relationship between variables is known, then it can be concluded that the hypothesis related to the variables used in this study can be concluded. Hypothesis testing is done by bootstrapping. The results of the PLS bootstrapping output in this research model are shown in Figure 1.

Table 1. Validity Analysis

Indicators	Loading Factor	AVE
F1	0.804	0.654
F2	0.837	
F3	0.850	
F4	0.770	
F5	0.778	
HP1	0.835	0.655
HP2	0.810	
HP3	0.820	
HP4	0.834	
HP5	0.841	
HP6	0.709	
KC1	0.812	0.641
KC2	0.795	
KC3	0.792	
KC4	0.862	
KC5	0.782	
KC6	0.757	
OP1	0.720	0.598
OP2	0.723	
OP3	0.788	
OP4	0.829	
OP5	0.802	

Table 2. Reliability Analysis

	Cronbach's Alpha	Composite Reliability
Fulfillment	0.867	0.654
Health protocol	0.894	0.655
Knowledge of covid-19	0.887	0.641
Online purchase intention	0.831	0.598

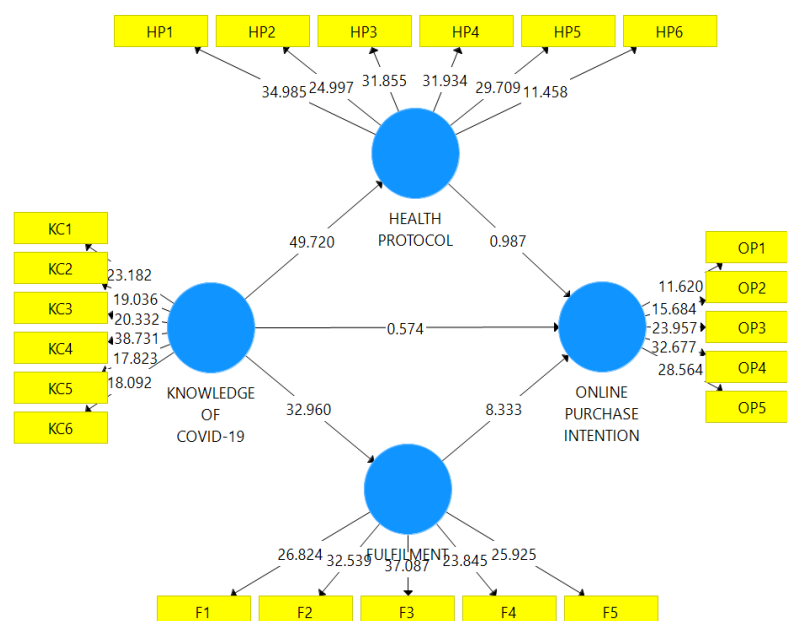


Figure 1. Inner Model

R Square

The coefficient of determination can be seen in the R-square table by multiplying the R-square value by 100%, if the result is more than 67% then it indicates a good coefficient of determination, if the result is less than 67% but more than 33% indicates a moderate coefficient of determination, and if less than 33% but more than 19% indicates a weak coefficient of determination (Chin (1998; Ghozali, 2008). The coefficient of determination test results show that all variables have a good coefficient of determination as shown in Table 3.

Table 3. R-Square

	R Square	R Square Adjusted
Fulfillment	0.721	0.719
Health protocol	0.804	0.803
Online purchase intention	0.731	0.726

Based on the R-square value shown in Table 3, the coefficient of determination of each variable is 0.721 or 72.1% for the fulfillment, 0.804 or 80.4% for health protocol and 0.731 or 73.1% for online purchase intention. These results indicate that all endogenous variables in this study have a good coefficient of determination.

Goodness of Fit

PLS can also identify global optimization criteria to determine the goodness of fit model (GoF). The Gof index is calculated from the square root of the average communality index and the average R-square value. $GoF = 0.1$ means small, $GoF = 0.25$ means medium, $GoF = 0.36$ means large. GOF value can be calculated using the formula $Goodness\ of\ fit = \sqrt{AVE \times R^2}$. The calculation results are shown in Table 4.

Table 4. Hasil Goodness of Fit Model (GoF)

Construct	AVE	R Square
Fulfillment	0.648	0.721
Health protocol	0.772	0.804
Knowledge of covid-19	0.690	
Online purchase intention	0.732	0.731
Average	0.870	0.752
Gof		0.809

Based on Table 4, it can be seen that the GoF value of the model reaches 0.809 which is greater than 0.36 so that the model is included in the large category (large).

Hypothesis Test

The measurement items used are said to be significant if the T-statistics value is greater than 1.96 and the p-value is less than 0.05 at the 5% significance level. Meanwhile, the parameter coefficient that shows the direction of influence is by looking at the positive or negative of the original sample (Ghozali, 2008). The results of hypothesis testing are shown in Table 5.

Table 5. Path Coefficients

	Original Sample (O)	T Statistics (O/STDEV)	P Values
Knowledge of covid-19 → health protocol	0.897	49.720	0.000
Knowledge of covid-19 → online purchase intention	0.058	0.574	0.566
Knowledge of covid-19 → fulfillment	0.849	32.960	0.000
Health protocol → online purchase intention	0.097	0.987	0.324
Fulfillment → online purchase intention	0.718	8.333	0.000

Table 5 shows that hypothesis 1 which states that knowledge of covid-19 has a positive and significant effect on health protocol is supported. These results are indicated by a positive original sample value of 0.897, a statistical t value above 1.96, which is 49.720 and a p value below 0.05, which is 0.000. Hypothesis 2 which states that knowledge of covid-19 has a positive and significant effect on online purchase intention is not supported. These results are indicated by the positive original sample value, which is 0.058, the t statistic value less than 1.96, which is 0.574 and the p value above 0.05, which is 0.566. Hypothesis 3 which states that knowledge of covid-19 has a positive and significant effect on fulfillment is supported. These results are indicated by a positive original sample value that is 0.849, a statistical t value above 1.96, which is 32.960 and a p value below 0.05, which is 0.000. Furthermore, hypothesis 4 which states that health protocol has a positive and significant effect on online purchase intention is not supported. These results are indicated by a positive original sample value of 0.097, a statistical t value less than 1.96, which is 0.987 and a p value above 0.05, which is 0.324. And hypothesis 5 which states fulfillment has a positive and significant effect on online purchase intention is supported. These results are indicated by the positive original sample value 0.718, the t statistic value above 1.96, that is 8.333 and the p value below 0.05, which is 0.000.

This study analyzes the effect of knowledge of COVID-19 on compliance with health protocols, online shopping behavior and fulfillment of needs. This study also analyzes the effect of health protocols and fulfillment of needs on online shopping behavior. From these variables, five research hypotheses were developed and it was found that three hypotheses were supported, namely H1, H3 and H5, while H2 and H4 in this study were not supported.

Knowledge of COVID-19 was proven in this study to have a significant effect on health protocol compliance. These results indicate that one of the efforts that must be made in controlling the health protocol is to understand the public regarding the dangers, impacts and efforts to overcome the spread of COVID-19. The results of hypothesis 1 test are supported by several previous studies by Wang et al. (2020; Sher, 2020; Guitton, 2020). Guitton (2020) suggests that access to information and knowledge as well as filtering hoax news should be owned by the public with government assistance to reduce vulnerability and long-term complications from COVID-19.

Further results from this study indicate that in the case of students, knowledge of COVID-19 did not have a significant effect on online shopping behavior. This can be interpreted that with a high level of knowledge about the dangers of COVID-19, students should be careful when shopping, but it doesn't have to be done online. COVID-19 scares most people, especially those who have congenital diseases and traumatize the elderly, while young people who are physically strong, mostly strong and able to have a strong immune system to face this virus, do not fully correlate COVID-19 knowledge with online shopping behavior. which is expected to reduce the transmission of the virus.

Hypothesis 3 in this study is that knowledge of COVID-19 has a significant effect on fulfillment. The results of the analysis in this study indicate that hypothesis 3 is supported so that it is proven that the behavior of fulfilling needs is influenced by knowledge about COVID-19. Yılmaz et al. (2020) shows that COVID-19 has caused changes in students' eating habits and food buying behavior, they now pay more attention to hygiene when buying food, and have improved the quality of their consumption compared to before.

Health protocol behavior by wearing masks, washing hands and keeping a distance has a positive but not significant effect on online purchase intention for students. These results indicate that hypothesis 4 in this study is not supported. Jiradilok et al. (2014) stated that there are many studies on customer satisfaction and purchase intentions on online purchases but little or no knowledge about the most influential factors in motivating online purchase intentions.

As the finding in hypothesis 2 that knowledge of COVID-19 is not able to have a significant effect on online purchase intention, the health protocol was also found not to have a significant effect on online purchase intention in students. Koch et al. (2020) emphasizes that online shopping behavior for youth has existed since before the pandemic. There is a hedonic motive for youth in doing online shopping, so the reason for doing online shopping for youth, especially students, is not only because of the health protocol but also as their lifestyle since before the pandemic.

As a consequence of being aware of the dangers of COVID-19, students apply health protocols, aside from strong social control in various formal and informal institutions implementing

health protocols, many personally follow life procedures during the pandemic. Health protocols have an impact on online shopping as a consequence of controlling the spread of COVID-19. The desire to shop to meet the daily needs of students has a positive and significant influence on students' online shopping behavior. So that hypothesis 5 in this study is supported. The desire to shop and the desire to be protected from exposure to COVID-19 have an impact on online shopping behavior.

Lisbet (2020) states that COVID-19 cases and victims spread across various countries show that COVID-19 has become a global problem, and has had an impact on international activities, such as the economy and various other activities. Efforts to prevent the spread of the virus by self-isolation and reducing crowds. According to (Sheth 2020), the COVID-19 pandemic has forced people to practice social distancing and has disrupted consumer habits in doing shopping activities. So consumers learn to live new habits by shopping from home (online shopping), then the shop that comes to the house delivers groceries.

Theoretical Implication and Managerial Implication

The spread of COVID-19, which has caused many victims, has had many impacts on changes in the economic system and changes in consumer behavior, so the spread must be stopped so as not to increase the number of victims in the community. All parties, including all parties, must help make the program successful in stopping the spread of COVID-19, by maintaining social distance, wearing masks, and washing hands. Reducing going out and avoiding crowds is an effort to stop the spread of COVID-19, an effort to meet the needs of daily life is done by shopping online.

Shop from home, order goods from home, goods will come to the house. Online shopping can stop the spread of COVID-19, it can save time and energy. To be able to have the will to shop online in order to avoid crowds, people need socialization, education and habituation, especially encouragement of health protocols from families, discipline of government officials handling covid. The existence of restrictions on visitors in shopping markets, restaurants, and so on makes shopping done remotely, as well as restrictions on people leaving the house can encourage consumers to shop from home (online).

The results of the analysis in this study also provide recommendations for business people in this pandemic era to emphasize online buying and selling services. Online marketing is also recommended because the more people understand about COVID-19, the less they do activities outside the home, so the most effective marketing is through social media which is accessed by the public every day.

Conclusion and Future Direction

This study analyzes the factors that influence online buying interest in the pandemic era for students. The analysis in this study found the effect of knowledge of COVID-19 on health protocol, fulfillment and online purchase intention. The results of the analysis show that hypothesis 1 which states that knowledge of covid-19 has a positive and significant effect on health protocols is supported. Hypothesis 2 which states that knowledge of covid-19 has a positive and significant effect on online purchase intention is not supported. Hypothesis 3 which states that knowledge of covid-19 has a positive and significant effect on fulfillment is supported. Furthermore, hypothesis 4 which states that the health protocol has a positive and significant effect on online purchase intention is not supported. And hypothesis 5 which states fulfillment has a positive and significant effect on online purchase intention is supported. For further research, it is expected to be able to examine more deeply online purchase intentions across generations and compare them. Further research is also expected to include several other variables that have a role in online shopping behaviour.

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