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Published by CRIBFB, USA**THE COVID-19 PANDEMIC TOWARD BUYING BEHAVIOR FOR E-COMMERCE AMONG HOUSEHOLDS IN MALAYSIA** Dhanonjoy Kumar ^(a) Abul Bashar Bhuiyan ^(b) Tasnuba Haque ^(d) Jafor Ali ^(e) Md. Kamal Uddin ^(d)^(a) Professor, Department of Management, Islamic University, Kushtia, Bangladesh; E-mail: dhanonjoykumarsaha@gmail.com^(b) Associate Professor, Faculty of Business and Accountancy, Universiti Selangor, Shah Alam, Malaysia; E-mail: bashariuk@gmail.com^(c) Lecturer, Faculty of Business and Accountancy, Universiti Selangor, Shah Alam, Malaysia; E-mail: haquebornee@gmail.com^(d) Assistant Professor, Faculty of Business and Accountancy, Islamic University, Kushtia, Bangladesh; E-mail: jaforkb@gmail.com^(e) Assistant Professor, Department of Accounting and Information Systems, Islamic University, Kushtia, Bangladesh; E-mail: ddinkamal1983.ku@gmail.com**ARTICLE INFO****Article History:**Received: 25th October 2022Accepted: 17th December 2022Online Publication: 30th December 2022**Keywords:**

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ABSTRACT

The COVID-19 epidemic has altered many people's lifestyles and incentives, causing their shopping habits to shift. The current study aims to evaluate these changes. In order to achieve this aim, the study analyzed the influence of the pandemic on Buying Behavior for e-commerce transaction across industries in order to discover household preferences. The present study is intended to respond to research questions of quantitative and qualitative nature. Data collection and analysis techniques from both methods were implemented. Regression analysis was used to study situations in which variables were dependent and simultaneously influenced by several independent variables. The study found that buying behavior is influenced by a number of characteristics, including mental health, isolation, lockdown, price sensitivity, and financial distress. The study also found four factors have a positive association with the dependent variable, whereas the remaining one factor has no relationship with the dependent variable. The world economy, and particularly international trade, have suffered and continue to suffer huge losses as a result of the Coronavirus Epidemic. The uncertainty in which enterprises and end customers have found themselves is exacerbated by a number of issues. These include, to mention a few, income loss, cross-border travel limitations, evolving consumer demand, and changing market actor behavior.

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INTRODUCTION

This turbulent situation has a huge impact on everyday consumers' lives. The pandemic of COVID-19 has dramatically changed both the way businesses act and how consumers behave (Pantano, Pizzi, & Services, 2020; Potter, Jayne, Britt, & Planning, 2020; Verma & Gustafsson, 2020). Laato, Islam, Farooq, Dhir, and Services (2020) underline that the government prepared for lockdown by closing schools, restaurants, some shops, and public services, which may have spread fears of what will happen in the future. Due to this fact, it is also possible to consider that customers will change their shopping habits in the long run. Kirk and Rifkin (2020) note that history shows that a period of crisis can and is often perceived as an impetus for significant transformations in society. The study recommends paying attention to consumer behaviors in each of these three phases: reacting, coping, do-it-yourself behaviors, and then also longer-term adapting. The change in consumer behavior identified in this article was the COVID-19 pandemic. From the point of view of theoretical background, we can consider it as an external factor belonging to the group of natural factors (Alam et al., 2020; Ali, Bhuiyan, Zulkifli, & Hassan, 2022b). However, complementary factors that influenced consumer behavior were, according to the author, political and legislative factors and economic factors, which were represented by restrictions and uncertainty caused by concerns about the economic future.

There are many categories that affect buying behavior, like price sensitivity, mental health, lockdown, isolation, and financial distress. Moreover, during the COVID-19 crisis, monitoring and coverage by the media were incessant,

¹Corresponding author: ORCID ID: 0000-0002-0147-9303© 2022 by the authors. Hosting by CRIBFB. Peer review under the responsibility of CRIBFB, USA.
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increasing the level of perceived risk and finally causing consumers to immediately change their behaviors (Jones, 2020). The additional spread of certain fake news through the Internet and social media did little to calm people's anxiety, provided they were concerned about factors affecting their own health (Pantano, Pizzi, & Services, 2020; Potter, Jayne, Britt, & Planning, 2020; Verma & Gustafsson, 2020) like the COVID-19 did. The innovative discovery of a new purchasing motivation, coined as "exigency motivation," appeared in such a setting. This opens a new and interesting research venue in the field of consumer behavior. In Malaysia, e-commerce is no longer considered a new medium. The existence of e-commerce has boosted business activities and financial transactions without time limits and boundaries. Communication and dissemination of trade information have become an important point in the effort to develop and expand the use of e-commerce worldwide (Omar, Ishak, & Jusoh, 2020).

However, buying behavior can be influenced by various environmental elements and cultural influences. Customer behavior is dynamic. Customer preferences change over time (generations). The purpose of the study was to explore the effects of the COVID-19 pandemic on purchasing behavior for e-commerce among households in Malaysia. There are five main independent variables that can be associated with buying behavior, which range from mental health, isolation, lockout, price sensitivity, and financial stress. COVID-19 has significant implications for psychological health and the outbreak has posed additional public health challenges. In fact, the COVID-19 pandemic can be defined as more than just a health crisis because it has severely affected society and the economy (Ceccato et al., 2021). Therefore, this study aimed to investigate whether mental health factors influence buying behavior given that the COVID-19 pandemic is a new disease to the world. Unfortunately, anyone who has tested positive for COVID-19 or has close contact with a person who has been confirmed infected, they must perform self-monitoring and quarantine at home or social isolation. This causes frequent changes to buying behavior.

Subsequently, several national governments implemented long-term full or partial lockdown measures to reduce the spread of the virus. On 16 March 2020, the prime minister of Malaysia made an official statement on the current situation of the Covid-19 epidemic that hit our country until the announcement of the movement control order had to be made. Since, the pandemic changed the consumption patterns, for instance reducing sales for some product categories and improving sales for other categories such as entertainment products and basic necessities (Ceccato et al., 2021). High price sensitivity can be the cause that customers can easily reject buying a product since its cost is unreasonable. Therefore, the present study aims to identify the effects of the Covid-19 pandemic on buying behavior especially mental health, isolation, lockdown, price sensitivity and financial distress for e-commerce among households in Malaysia.

LITERATURE REVIEW

Global lockdown, social isolation, and other measures enacted to halt the spread of the COVID-19 epidemic have prompted people to spend more money on online markets. As a result, the corporate environment underwent tremendous alterations throughout the quarantine period. Finally, the financial crisis spurred the growth of digital commerce (Ali, Bhuiyan, Zulkifli, & Hassan, 2022a). Globally, a new digitally involved customer, one who is pickier and has financial difficulties, has evolved. The current study aims to evaluate these changes. In order to achieve this purpose, the study assessed the impact of the COVID-19 epidemic on purchase behavior for e-commerce across businesses in order to uncover online customers' preferences. The presence of links between the consequences of the COVID-19 pandemic and purchasing behavior was found based on the study, and the direction of their changes against the background of the pandemic was explored (Ali et al., 2022a).

Globally, e-commerce constituted about 2.29 trillion dollars in 2017 (John, 2018) and is expected to reach 4 trillion dollars by 2020 (Barnes, 2016). COVID-19 has impacted the lives of people around the world, including children and adolescents, in an unprecedented manner. Throughout the world, an essential modus of prevention from COVID-19 infection has been isolation and social distancing strategies to protect from the risk of infection (Qiu et al., 2020). This research helps to fill the gap by providing insight for academics and guidance for business professionals affected by the Malaysian household. The findings will help businesses decide whether to further invest in e-commerce platforms or to continue offering products. Mental health refers to cognitive, behavioral, and emotional wellbeing. It is all about how people think, feel, and behave. People sometimes use the term "mental health" to mean the absence of a mental disorder (Qiu et al., 2020). Mental health can affect daily living, relationships, and physical health. Looking after mental health can preserve a person's ability to enjoy life. Doing this involves striking a balance between life activities, responsibilities, and efforts to achieve psychological resilience. Conditions such as stress, depression, and anxiety can all affect mental health and disrupt a person's routine (Qiu et al., 2020). The term "mental health" is in common use. Many conditions that doctors recognize as psychological disorders have physical roots. Social and financial circumstances, biological factors, and lifestyle choices can all shape a person's mental health. A large proportion of people with a mental health disorder have more than one condition at a time. It is important to note that good mental health depends on a delicate balance of factors and that several elements of life and the world at large can work together to contribute to disorders (Stallmach et al., 2022).

The COVID-19 pandemic has disrupted retail and accelerated the trend towards electronic commerce. This study explores the reasons for and the implications of this shift. Our study builds on the consumer behavior literature, emerging COVID-19 research, and the environmentally imposed constraints perspective to describe how online purchasing behavior evolved during the COVID-19 crisis. The objective is to better understand how consumers use e-commerce to react to, cope with and adapt to periods of environmentally imposed constraints. Based on multiple sources including transaction and search data from a major French online retailer, we describe how consumer behavior evolves during such stressful life events as COVID-19. Our results support the usefulness of the multi-perspective react-cope-adapt framework of constrained consumer behavior in an online environment (Guthrie, Fosso-Wamba, & Arnaud, 2021).

Moreover, Isolation represents one of several measures that can be implemented in infection control. The prevention of communicable diseases from being transmitted from a patient to other patients, health care workers and visitors, or from an outsider to a particular patient. Various forms of isolation exist, in some of which contact procedures are modified and others in which the patient is kept away from all other people (Plangger et al., 2022). When isolation is applied to a community or a geographic area, it is known as a cordon sanitaire. Reverse isolation of a community to protect its inhabitants from coming into contact with an infectious disease is known as "protective sequestration (Agnihotri et al., 2022)." However, the lockdown is a restriction policy for people or communities to stay where they are usually due to a specific risk to themselves or to others if they can move and interact freely. The term "stay at home" is often used for lockdowns that affect an area rather than a specific location. A lockdown can also be used to protect people inside a facility or, for example, a computing system from a threat or other external event. In buildings, doors leading outside are usually locked so that no one may enter or exit. A full lockdown usually means that people must stay where they are and may not enter or exit a building or rooms within it, needing to go to the nearest designated safe place if they are not already in such a place (Allen, 2022).

In the same way, Price sensitivity is a measurement of how much the price of goods and services affects a customer's willingness to buy. Price sensitivity varies a lot. It's influenced by the kinds of goods and services (Simon, Helder, White, van der Boor, & Łaszewska, 2021). The kinds of customers and the wider market factors, such as social and economic trends, in economics, price sensitivity is described in terms of the elasticity of demand. A numerical figure that is worked out using the following equation Price sensitivity drivers vary, but here are some of the most common factors involved (Ali et al., 2022b). Even the financial distress is a condition in which a company or individual cannot generate sufficient revenues or income, making it unable to meet or pay its financial obligations. This is generally due to high fixed costs, a large degree of liquid assets, or revenues sensitive to economic downturns. For individuals, financial distress can arise from poor budgeting, overspending, too high of a debt load, a lawsuit, or loss of employment (Hasan, Mahi, Hassan, & Bhuiyan, 2021).

Development of a Research Framework

The framework of study blends with tangible theories. A perfect framework highlights and bolds up the important variables in the situation. Based on this research, the identified variables become components of the theoretical framework, which is an independent variable (IV), and a dependent variable (DV).

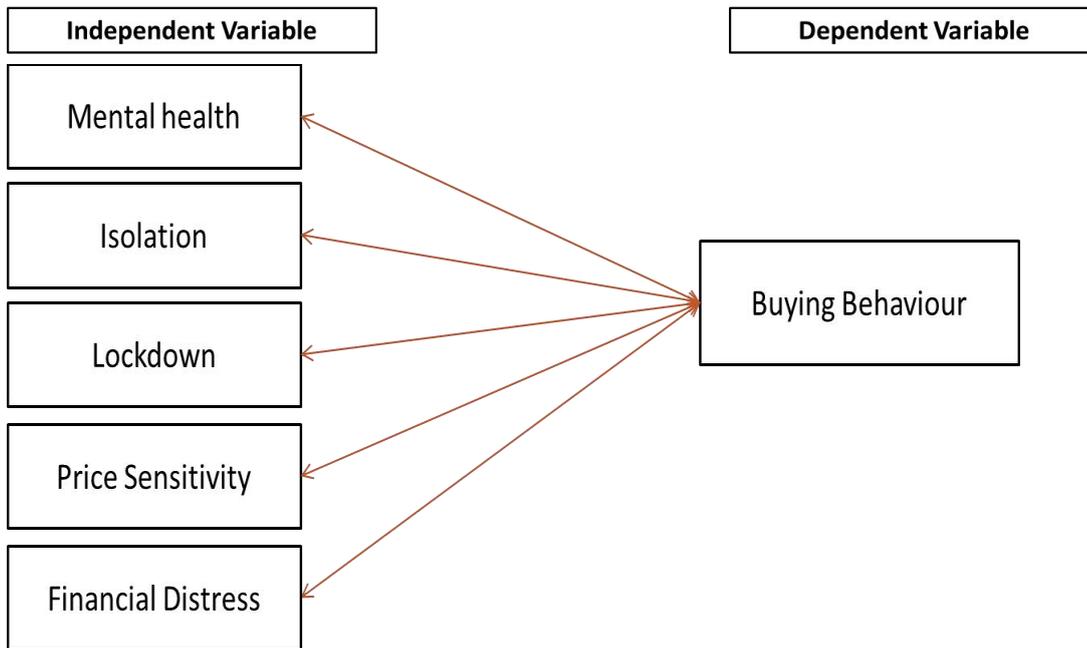


Figure 1. Conceptual framework

This study aims to examine the effects of the COVID-19 pandemic on buying behavior for e-commerce among households in Malaysia. Regardless of whether there is a positive or negative for ecommerce. This study included a focused investigation of the effect of the COVID-19 pandemic on buying behavior for e-commerce among households in Malaysia. The general objective of this study is to identify the relationship between buying behavior and e-commerce. Due to the COVID-19 pandemic, it has had a huge impact on e-commerce among households in Malaysia.

MATERIALS AND METHODS

To attain the intended objectives, mixed approach was chosen as the research question contain both qualitative and quantitative natures. The present study used descriptive statistics, econometric techniques to examine the buying behavior for e-commerce among households, is it really affect them or not effect whether buying on online or on physical. In research

primary data has used. In this study, the questionnaire designed and distributed to respondents through google form to collect the data. 8 sets of questionnaires were sent to our respondents. The function of the use of online questionnaires is to measure the reliability and validity to determine whether the method used is valid and reliable. Questionnaire consists of seven sections namely sections A, B, C, D, E, F and G. In section A, the questions are based on demographic elements such as age, gender, race, marital status and type of occupation. There are 110 samples collected by randomly sampling method from the University students and Klang Valley residents made by the researchers and the unit of analysis for our study is individual level. The multiple regression models were used to estimate the parameters that influenced the status of the buying behavior especially mental health, isolation, lockdown, price sensitivity and financial distress for e-commerce practice among households in Malaysia.

RESULTS AND DISCUSSIONS

The quantitative study conclusions are based on data from independent variables. Researchers employed descriptive analysis, regression analysis, and the reliability test to evaluate the frequency of respondents who completed the disseminated questionnaires in order to advance the study.

Table 1. Gender of Respondents

Construct	Frequency	Percent
Female	84	73.70
Male	30	26.30

Source: Primary Data from the Survey

The table above shows that the gender of respondents. Gender we managed to obtain 84 respondents from the female students (73.7%), while another 30 respondents were among the male students (26.3%).

Table 2. Race of respondents

Construct	Frequency	Percent
Malay	96	84.20
Indian	14	12.30
Chinese	4	3.50

Source: Primary Data from the Survey

The data shows the race of respondents. The highest percentages race of respondents are Malays which is 84.2%. The second highest percentages race of respondents are Indians which is 12.3%. Meanwhile, the lowest percentage race of respondents are Chinese which is 3.5%.

Table 3. Marital Status of respondents

Construct	Frequency	Percent
Single	108	94.70
Married	6	5.30

Source: Primary Data from the Survey

The data show that 94.7% of the respondents are single. Other than 5.3% of the respondents are already married.

Table 4. Occupation of Respondents

Construct	Frequency	Percent
Student	99	86.80
Self-employed	4	3.50
Private Sector	9	7.90
Public Sector	1	0.90
Unemployed	1	0.90

Source: Primary Data from the Survey

The data shows the occupation of respondents. The highest percentage of respondents is students, which is 86.8%. The second highest percentage of respondents is from the private sector, which is 7.9%. Meanwhile, the third percentage occupation of respondents is self-employed, which is 3.5% and lastly is from the public sector and unemployed, which is 0.9%.

Table 5. Reliability Analysis of the Study

Construct	Con, Alpha
Over All Reliability	0.813
Buying Behavior	0.834
Mental Health	0.765
Isolation	0.666
Lockdown	0.773

Price Sensitivity	0.865
Financial Distress	0.788

Source: Primary Data from the Survey

The reliability test is a method for determining the internal consistency of a scale. Cronbach’s Alpha was used to determine the degree of consistency, and Cronbach’s Alpha is frequently used to indicate the lowest limit of acceptability is greater than 0.6 indicates that the variables’ items are homogeneous and measure the same constant. The scores of 0.6 and 0.7 are considered good and excellent based on table 4.0. The overall reliability test, the Cronbach’s Alpha, was 0.813, which is high as it is greater than 0.6. This scale was created with 6 questions from dependent variables and 30 questions from independent variables. Thus, 110 respondents responded to all questions. The dependent variable has a satisfactory Cronbach’s Alpha of 0.834, which is greater than 0.6, whereas all independent variables have a Cronbach’s Alpha greater than 0.6, which are 0.765, 0.666, 0.773, 0.865, and 0.788.

Table 6. Multiple Regression for Hypothesis Testing

Construct	Standardized Coefficients		t	Sig.	Collinearity Statistics	
	Beta				Tolerance	VIF
(Constant)	-0.531	0.475	-1.116	0.267		
Mental Health	0.626	0.087	0.523	7.194	0.000	0.752
Isolation	0.146	0.125	0.099	1.167	0.246	0.551
Lockdown	0.167	0.108	0.126	1.544	0.126	0.599
Price Sensitivity	-0.168	0.102	-0.118	-1.644	0.103	0.774
Financial Distress	0.303	0.123	0.227	2.465	0.015	0.466
R Square			0.571			
Adjusted R Square			0.551			
Standard error of the estimate			0.57360			
F-Value			28.753			

Source: Primary Data from the Survey

Table 7. Summarized Results of Multiple Regression Analysis of Use of the Internet of Things

*** indicates significant at 0.01 level, ** indicates significant at 0.05 level, NS indicates not significant at 0.10 level.

Based on the summarized results in Table 7, the overall estimated result of the multiple regression analysis is satisfactory. This result is based on the cross-section primary data where the adjusted R² is 0.571 and the observed R² is 0.551. The adjusted R² reveals that the dependent and independent variables have a good relationship, and all independent variables can explain about 57%. The ANOVA table also reflected the goodness of the model, and the F-test estimated that the regression is quite meaningful because the dependent variable is related to each specific explanatory variable.

The linear relationship of the model is highly significant as the p value for F is less than 0.0001%. Furthermore, the estimated coefficient indicated that most variables are significantly related at the 0.01 and 0.05 levels, which is significantly different than zero. Moreover, this study employed the technique of collinearity diagnostics to eliminate multicollinearity. Moreover, the multiple regression was strongly supported by the value of adjusted R², which was significant at 0.01 level (F-test confirmed the significance of R²) and measured the goodness of fit of the model. The adjusted R² value of the increase in the effect on the efficient use of the internet of things by the respondent can be explained by all the independent variables in the model. Thus, the factors effecting the efficient use of the internet of things and demographic characteristics had significant relationships. The adjusted R² and F-value indicated that most explanatory variables significantly increased the efficient use of the internet of things. The major positive influences on the factors affecting the efficient use of the internet of things of respondents by the explanatory variables were likely to be mental health (X1), isolation (X2), lockdown (X3), and financial distress (X5). Moreover, the regression showed negative price sensitivity (X4). Overall, the results of this multiple regression analysis were strongly supported by the value of adjusted R², which was significant at the 0.01 level (F-test confirmed the significance of R²), and measured the goodness of fit of the model. The adjusted R² value of the increase in the factors effecting the efficient use of the internet of things can be explained by all the independent variables in this model. Thus, the first alternative hypothesis, "The effects of the COVID-19 pandemic on buying behavior for e-commerce among households in Malaysia," was accepted.

Table 7. Objectives and Hypotheses Testing Comparison

Objective	Hypothesis	Accept/Reject
To investigate the relationship between mental health and buying behavior during a pandemic COVID-19.	H1: There is a significant positive relationship between mental health and buying behavior during the pandemic.	ACCEPT
To investigate the relationship between isolation and buying behavior.	H2: There is a significant positive relationship between isolation and buying behavior.	ACCEPT
To investigate the relationship between lockdown and buying behavior.	H3: There is a significant positive relationship between lockdown and buying behavior.	ACCEPT
To investigate the relationship between price sensitivity and buying behavior.	H4: There is no significant positive relationship between the effects of curriculum price sensitivity and buying behavior.	REJECT
To investigate the relationship between financial stress and buying behavior.	H5: There is a significant positive relationship between financial stress and buying behavior.	ACCEPT

Table 8. Summary of the Main Findings

Research Objective	Research Question	Hypothesis	Result
To investigate the effects of mental health on the buying behavior of e-commerce among households in Malaysia.	Does mental health have an effect on the buying behavior of e-commerce households in Malaysia?	H1: There is a significant positive relationship between mental health and buying behavior during the pandemic.	ACCEPT
To investigate the effect of isolation on the buying behavior of e-commerce among households in Malaysia.	Does isolation have an effect on the buying behavior of e-commerce among households in Malaysia?	H2: There is a significant positive relationship between isolation and buying behavior.	ACCEPT
To investigate the effect of lockdown on the buying behavior of e-commerce among households in Malaysia.	What are the effects of lockdown on the buying behavior of e-commerce households in Malaysia?	H3: There is a significant positive relationship between lockdown and buying behavior.	ACCEPT
To investigate the effect of price sensitivity on the buying behavior for e-commerce among households in Malaysia	What is the effect of price sensitivity on the buying behavior of e-commerce households in Malaysia?	H4: There is no significant positive relationship between the effects of curriculum price sensitivity and buying behavior.	ACCEPT
To investigate the effect of lockdown on the buying behavior of e-commerce among households in Malaysia.	Does financial distress affect the buying behavior of e-commerce among households in Malaysia?	H5: There is a significant positive relationship between financial stress and buying behavior.	ACCEPT

The finding and result for the demographic profile of the respondent were clearly stated by using descriptive analysis such as frequency and percentage for each demographic item. By using those results, the finding is that there is a significant relationship with the effect of mental health, isolation, lockdown, and financial distress on buying behavior in Malaysia. According to Table 8 above, the first objective, research question, and hypothesis are accepted. There is a positive relationship between mental health, isolation, lockdown and financial distress towards buying behavior in Malaysia. The QO4 objective, research question, and hypothesis are rejected. Furthermore, the fourth objective, research question, and hypothesis are rejected. There is a negative relationship between price sensitivity and buying behavior. As shown in the table above, a summary of the research hypotheses is provided under each research question. The four hypotheses (H1, H2, H3, and H4) are supported by the empirical findings, and the discussion.

CONCLUSIONS

The purpose of this study is to determine "the effects of the COVID-19 pandemic on buying behavior for e-commerce among households in Malaysia. Buying behavior is influenced by a number of characteristics, including mental health, isolation, lockdown, price sensitivity, and financial distress. It is strongly believed that e-commerce among households in Malaysia can transform buying behavior. While it is expected to have increased buying behavior, contributing to changes in daily user behavior, it is important to study and develop this area. Buying behavior can be affected by numerous environmental elements and cultural influences. In order to be successful in its e-commerce, a company needs to know the reasons behind consumer buying behavior or decisions. Customer behavior is dynamic in nature. Customer preferences change over time (generations). This is a study that is growing hastily, and marketers need to understand the consumers' buying patterns, their likes, and to what extent the product appeals to them. COVID-19 has significant implications for psychological health, and the pandemic has given rise to additional public health challenges. As a matter of fact, the COVID-19 pandemic can be defined as far more than just a health crisis since it has heavily affected societies and economies. This study aims to investigate whether the factor of mental health affects buying behavior since the pandemic COVID-19 is a new disease to the world. The study found that four factors have a positive association with the dependent variable, whereas the remaining one factor has no relationship with the dependent variable. The regression test, correlation test, ANOVA, and also a descriptive test was used to investigate this result.

Recommendations for Future Research

The work attempts to draw on this importance by visiting relevant research, discuss the different potential and suggest a paradigm with use case scenarios. The paper shows the importance of considering the different perspectives while focusing on the household perspectives and control over the ecommerce buying behavior. Furthermore, it is expected that the buying behavior paradigm gives more flexibility on how for household e-commerce in Malaysia. Hence, the e-commerce among household should consider the detailing to incorporate the buying behavior like mental health, isolation, lockdown, price sensitivity and financial distress. Consequently, an evaluation study is performed to assess those aspects from the household perspective postulating several hypotheses relevant to household awareness of the e-commerce buying behavior, beliefs about its relevant to buying during pandemic covid-19 and increased acceptance by e-commerce as well as the need to well-defined buying scenarios. The paper discussed the results of the evaluation study which are mainly in support to the hypotheses. Going forward, with the help of IoT, more information can be collected in order to allow educators and administrators to turn data into actions by providing the university stake holders with a real-time view of the e-commerce among households in Malaysia. This data intelligence enables institutions to make more informed decisions in order to improve mental health, isolation, lockdown, price sensitivity and financial distress of the e-commerce among household in Malaysia during pandemic Covid-19.

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