

# New Normal and Business Sustainability in the Age of Global pandemic

Abul Kalam<sup>a</sup>, Md. Alamgir Hossain<sup>b</sup>, Nusrat Jahan<sup>c</sup>, Minho Kim<sup>d</sup>

<sup>a</sup> Department of Marketing, Hajee Mohammad Danesh Science and Technology University, Bangladesh

<sup>b</sup> Department of Management, Hajee Mohammad Danesh Science and Technology University, Bangladesh

<sup>c</sup> Department of Management Studies, Rabindra University Bangladesh, Bangladesh

<sup>d</sup> Department of International Trade, Jeonbuk National University, South Korea

*Received 28 February 2021, Revised 18 March 2021, Accepted 25 March 2021*

## Abstract

**Purpose** - This study examines the awareness regarding the symptoms of COVID-19 exposures and safety distances strategies whether they were useful to resile the businesses a mid of the pandemic. Besides exploring the awareness and safety distances, the effectiveness of offering free use of protective equipment (mask, hand sanitizer, frequent hand washing, etc.) to the customers for visiting the business centers was also examined.

**Design/methodology/approach** - This study collected 264 survey data in Bangladesh which is one of the most densely populated country and very vulnerable for COVID-19 due to its socio-economic condition. The multiple regression analysis is used to analyze the data.

**Findings** - The findings of the study indicate that the awareness about the symptoms of virus exposures (cough, fever, diarrhea, and weakness) has significant affirmative effects to enhance the public movement for business purposes with the lower possibility to be affected by the virus. The study also indicates that safety distances and protective equipment can mediate the significant positive relationship between the awareness of the disease and the businesses' resilient capacity.

**Research implications or Originality** - COVID-19, as an apprehensive health issue in the current world, has sharpened the uncertainty of the businesses. One essential technique as lockdown, has been followed by almost every country to protect the transmission of the virus even though the scholars criticized it due to the substantial adverse effects on the country's economy. Under this circumstances, this study provides implications to the relevant businesses by assessing the nexus between the safety distances and the proper uses of protective equipment with the business resilient.

**Keywords:** Covid-19, Business Sustainability, Safety Distance, Protective Equipment

**JEL Classifications:** M10, I31, I11

## I. Introduction

The rapid widespread of COVID-19 across the world has sharpened the uncertainty regarding the variety of business sectors and consumptions, strengthens poverty, and prolongs the poorer's frustration with increasing domestic violence (Donthu and Gustafsson, 2020a; Campbell, 2020). To control over the massive infection rates and protect the functioning of the health care systems, numerous countries across the world have enforced the restrictions of the public

<sup>a</sup> First Author, E-mail: 18415075@life.hkbu.edu.hk

<sup>b</sup> CoAuthor, E-mail: shamimru@gmail.com

<sup>c</sup> CoAuthor, E-mail: njdisha@gmail.com

<sup>d</sup> Corresponding Author, E-mail: kimmh@jbnu.ac.kr

© 2021 The Institute of Management and Economy Research. All rights reserved.

movement by the lockdown, quarantines, shorter working hours, and closure of malls and businesses (Michie, 2020; Dey and Loewenstein, 2020). To lengthen the lockdown and travel restrictions across the national and internal boundary and impose social distancing policy, the country's economy is severely affecting since these policies have direct significant adverse effects on the businesses (Donthu and Gustafsson, 2020b; Giritli and Olofsson, 2020). The longer lockdown and quarantine policies of the government have increased the risks of enhancing corporate bankruptcy and government debts, enabling the significant financial imbalance that could extend the recovery period from the COVID-19 pandemic (Bofinger et al., 2020; Fu and Shen, 2020; Tucker, 2020). As a result, the proper strategies apart from the lockdown and quarantine policies are of utmost importance to protect the businesses and the country's economy by strengthening the health care systems (Anwar et al., 2020). Therefore, to increase the public movement and activate the businesses with self-protection from the virus, this study has explored the awareness regarding the common symptoms of the disease, effectiveness of safety distances and the uses of protective equipment to quick the public movement for business purposes and resilient the businesses during a pandemic. The main aim of this study is to discover the practical techniques to be suggested for increasing the public movement for enhancing the business transactions to resile the businesses since it has a significant positive association between the people travel and the economic activities of the country, which indicated that if the people movement increases, the economic activities also would be increased. On the other hand, if the lockdown and quarantine control the people's movement, then the financial activities of the country would be stable and stuck on the wheel of the economy (Shimanta et al., 2020). Moreover, although a series of studies (Bartik et al., 2020; Donthu, and Gustafsson, 2020c; Nicola et al., 2020; Altig et al., 2020; Queiroz et al., 2020 etc.) on the divergent issues of COVID-19 have been conducted to explore its adverse effects on the businesses, the investigation of the awareness regarding the indications of COVID-19, safety distances, and the uses of protective equipment for relaxing public movement to sustain the businesses still are scarce.

In this study, the five common symptoms of SARS CoV-2 (another name of COVID-19), such as; cough, fever, headache and neck pain, diarrhoea, and weakness, were explored to be aware of the disease. Furthermore, the mediating role of protective equipment and safety distances on resilient businesses during pandemic also examined. In line with the research objective, this study used qualitative and quantitative methods. In the qualitative method, we used content analysis of the relevant types of literature to explore the symptoms of the disease. On the other hand, in the quantitative approach, three specific steps were followed. Firstly, the five considered symptoms of COVID-19 were explored through the interview of the patients, doctors, and experienced people who had interaction or communication with any relatives or friends who exposed by the COVID-19 by the set of questionnaires placed by the Google form in the online platform. After scrutinizing the symptoms directly collected from the respondents through the questionnaire, it examined the common and unique indications described by the experts or doctors in the prior kinds of literature. Secondly, how the proper uses of protective equipment can encourage the people to be involved with the business transactions also explored in this study. Thirdly, the concept and the actual safety distance system should be maintained to visit any business places also explained. Moreover, the nexus between the safety distances and the proper uses of protective equipment with the business resilient was assessed. Finally, the mediating role of the safety distances and the appropriate protective gear benefits on business sustainability during the ongoing pandemic was calculated.

This study makes numerous significant theoretical and practical contributions to the existing literature. The information related to the COVID-19 could contribute to the researchers as their sources of information and citation. Additionally, the explored and examined new techniques as the awareness regarding the symptoms of the current new diseases, safety distances, and the proper uses of protective equipment to manage the customers of the businesses during the pandemic were suggested in the study, which could be the pathway to pretend the companies from the unexpected decline and flatten of margin curve that is usually happening in the giant organizations of Europe, America, and other developed nations including Bangladesh (Bell and Blanchflower, 2020; Asmelash and Cooper, 2020a). In addition to the significant contribution to scholars and diverse businesses, this study also would be benefited to other people, including doctors, nurse, community, and ultimately to the patients of this disease, by understanding the symptoms as enabling them to undertake prior preparation for surviving with the virus and take precaution for keeping safe to others. The Director-General of WHO mentioned that not only the epidemic but also the rumor and misleading information related to the COVID-19 made the situation more jeopardized (Yu et al., 2020a). As a result, crystal information related to COVID-19 should be shared amongst the community members; eventually, this study would be very conducive to incorporate it. Finally, this study could be the solid arms to more substantial the businesses during the current critical situation by suggesting increasing the public travels and the customers' proper management.

## II. COVID-19 in Bangladesh

The COVID-19, as the most disrupting health issue, affected the entire Medicare systems has originated in the wholesale sea market of Wuhan city, Hubei province, China, on December 12, 2019 (Zhou et al., 2020a; Adnan Shereen et al., 2020) and widely attacked across 213 countries in the world and World Health Organization (WHO) declared this virus as a global pandemic outbreak on January 30, 2020 (Peng et al., 2020a). The common symptoms of the COVID-19 patients were fever, cough, fatigue, muscle pain, diarrhea, sputum production, headache, hemoptysis, myalgia, dyspnea, dizziness, abdominal pain, nausea, vomiting, and pneumonia, which can produce massive respiratory distress syndrome, metabolic acidosis, infected tremor, thickening dysfunction, and organ failures such as liver, kidney, and heart failure or even death (Tan et al., 2020a; Peng et al., 2020b; Xu et al., 2020; Wu, et al., 2020a; Rothan & Byrareddy, 2020a; Drosten et al., 2020a). These symptoms of this virus are varied patient to patient (Wu, et al., 2020b; Zheng et al., 2020; Drosten et al., 2020b), which need to address adequately to detect the case and isolate the patient from others who are the main ways to control the affecting rate (Tang et al., 2020a).

Coronavirus first emerged in the mid-1960s, and there are seven different versions of the virus (229E, NL63, OC43, HKU1, MERS-CoV, SARS-CoV, and the SARS CoV-2 or COVID-19) broken into four groups: alpha, beta, gamma, and delta (Ou et al., 2020a) where the last member of the corona family, COVID-19 shaped as more danger and contaminated to the human body rapidly and other species of bat (Zhou et al., 2020b), cat, and tiger. The last statistics until 26 October 2020 of the world infected, killed, and survived people from the attack of COVID- 19 were recorded as 43,464,868, 1,160,636, and 31,959,804 respectively (Worldometer, 2020a).

COVID-19 first hits Bangladesh on 8 March 2020, diagnosed by the Institute of Epidemiology

Disease Control and Research (IEDCR) and one of the best ways as lockdown followed by almost every country worldwide has also imposed in the country from 23 March to 30 May 2020, eventually charged to remain close public and private organizations, restricted public movement by mass transportations with the forced shut down of the factories of readymade garment (RMG). Notwithstanding, this virus hits 401,586 people, killed 5,838 persons, and recovered 318,123 patients by 27 October 2020 in Bangladesh (Worldometer, 2020b). The hit of COVID-19 in Bangladesh brought unprecedented impacts on the entire economy of the country as it triggered a drop down the businesses, upwards the unemployment, the poorer became poorer, ultimately stuck the wheel of the productions with threatening to achieve the sustainable development goals (SDGs) of 2030 (Bodrud-Doza et al., 2020). Because of the forced lockdown policy in Bangladesh, the Institute of Labour Studies found 1,915 garment factories as closed caused 324,684 workers as unemployed and US\$500 million wages loss of workers. Moreover, the Bangladesh Institute of Development Studies (BIDS) explored that 164 million people added a new low in the country. At the same time, the International Centre for Diarrheal Disease Research (ICDDR) in Bangladesh estimated that 91 percent of sampled families were financially unstable, 47 percent leads inferior life as income were below the international poverty line of Tk160 (US\$1.90) per person per day, 70 percent experienced food insecurity, and 15 percent passed the days without having regular meals.

### III. Literature Reviews

The new virus COVID-19 is very contagious and spread quickly worldwide, which exposed some common symptoms to the affected patient (Cascella et al., 2020). In medical science, some dictionaries (medicine Net, Cambridge English Dictionary, Merriam-Webster, dictionary.com, etc.) defined the symptom of a disease as a physical or mental feature, or any subjective evidence of a disease, which is regarded as indicating a condition of disease, a departure from normal function or feeling particularly such as a feature that is apparent to the patient. The researchers conducted studies on COVID-19 that have marked some symptoms of the patient; (Zhong et al., 2020a) identified fever, fatigue, dry cough, myalgia, dyspnea, headache, dizziness, abdominal pain, diarrhea, nausea, and vomiting were the common symptoms of COVID-19 at illness. (Tan et al., 2020b) recognized fever, cough, fatigue, muscle pain, diarrhea, and pneumonia, which can develop acute respiratory distress syndrome, metabolic acidosis, septic shock, coagulation dysfunction, and organ failures such as liver, kidney, and heart failure, as the clinical manifestation of COVID-19. (Zheng et al., 2020) experimented on 68 COVID-19 patients admitted to the First Affiliated Hospital (Hefei) and Fuyang Hospital (Fuyang), both of which are part of Anhui Medical University in China revealed that most of the patients had the fever (80.88%), cough (73.53%), and sputum (32.36%) upon admission. The pervasiveness of other symptoms (e.g., headache, diarrhea) was relatively low. Wu et al. (2020) also conducted a deep experiment on one patient aged 41 years who was a worker at the Wuhan market of China where the COVID-19 originated and admitted to the Central Hospital of Wuhan on 26 December 2019 while experiencing a severe respiratory syndrome that included fever, dizziness and cough and he also reported that he has been suffering fever, chest tightness, unproductive cough, pain and weakness for one week. Accordingly, coughing, shortage of breathing, fever, weakness, diarrhea, and headache are identified as the primary symptoms of COVID-19, and hypotheses *H1* (a, b, c, d, e) are proposed. Table 1 present

the symptoms of the disease detected by the different scholars.

### 1. Mediating Role of Safety Distances During Business Transactions

Proper knowledge about the nature of virus (contamination, infectious, spreading voltage, spreading wings, life-threatening, symptoms, etc.), protection criteria (wearing a mask, washing hand for at least 20 seconds frequently, use of antiseptics, avoid touching the face, avoid close contact minimum of 3 meters, social distance, cleaning dwelling place with office and other areas, safety issues for going out unless emergency, etc.) improvement of the immunity system (food nutrition, vitamin, exercise, etc.), treatment ( no specific medicine and vaccine,) and patient management system (call on a doctor, test the result whether positive or negative, wearing personal protection equipment, isolation and quarantine technique, etc.) are the new phenomena of the current world. The tremendous hitting of this virus bound the people to stay at home without any emergencies. Consequently, the businesses are suffering significantly for reducing the transactions and customers' orders. What is more, prior one year experiences learned that keeping at least 3 meters distance from the affected people can protect others from remaining safe. As a result, the government of almost every country in the world allows the people to move with a limited scope with hardly maintaining the social distance.

**Table 1.** Common Symptoms of COVID-19

Symptoms	Sources
Cough	Zhong et al, 2020b; Peng et al, 2020c; Tan et al, 2020c; Zheng et al, 2020c; Wu et al, 2020b; Rothan and Byrareddy, 2020b; Qiu et al., 2020a
Fever	Zhong et al, 2020c; Peng et al, 2020d; Tan et al, 2020d; Zheng et al, 2020d; Wu et al, 2020c; Rothan and Byrareddy, 2020c; Qiu et al., 2020b
Headache and pain in neck	Zhong et al, 2020d; Peng et al, 2020e; Tan et al, 2020e; Zheng et al, 2020e; Rothan and Byrareddy, 2020d; Qiu et al., 2020c
Diarrhea	Zhong et al, 2020e; Peng et al, 2020f; Tan et al, 2020f; Zheng et al, 2020f; Rothan and Byrareddy, 2020e; Qiu et al., 2020d
Weakness	Tan et al, 2020g; Wu et al, 2020d; Lillie et al, 2020; Ou et al, 2020b; Qiu et al., 2020e; Khachfe et al, 2020a

Source: literature reviews

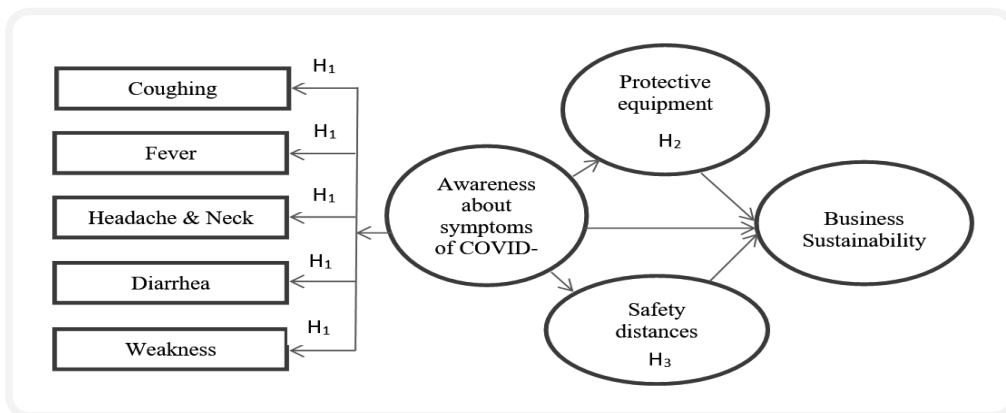
Moreover, the researchers (Zhong et al., 2020; Dey et al., 2020; Khachfe et al., 2020b) discovered that there is a crucial prerequisite to comprehend the public awareness of COVID-19 at this critical moment in addition to maintain the social distance, which means that if the people have awareness about the divergent issues of COVID-19, they will inspire to keep the social distance since it is quite challenging to have refereed distances during interacting between sellers and customers. Therefore, the mutual arrangement of possible social distancing system in the trade center can protect the customers from the attack of the virus. Besides, the business transactions can be smoothed to pretend the businesses a mid of pandemic. Even though, the self-possible distances depend on the awareness about the various issues of this critical virus. Again, the researchers (Ranjan et al., 2020; Huynh et al., 2020; Bedford et al., 2020, etc.) also stated that sufficient knowledge about the divergent issues of COVID-19 is essential among every member of the community for preventing the attack of Novel coronavirus. Therefore, it can be hypothesized that the arrangement for keeping possible social distances

can mediate in the relationship between the awareness regarding the symptoms of the disease and the business resilience during the pandemic, and  $H2$  is proposed.

## 2. Mediating Role of Using Protective Equipment During Business Transactions

The tremendous fighting with the current strong virus experienced that the proper uses of safety equipment (sanitizer, gloves, hand wash, detergent, soap, etc.), frequent hand washing, hot water, etc., can kill this virus. As a result, the WHO, doctors, and other experts always suggest using these materials to keep safe from the attack of the virus (Pandey et al., 2020). But the intention of customers to use those elements is substantially influenced by the knowledge regarding the danger of the virus and other relevant information. Moreover, if the marketers make available to avail that equipment during shopping in the trade centers easily, customers will feel encouraged to visit those places during the ongoing pandemic. Therefore, the availability of the marketers' protective equipment may motivate the customers to come forward instead of staying at home, which could increase the business transactions since it may raise the necessity to purchase any items. Thus, the proper uses of the customers' protective equipment may be sustain the businesses during the virus's attack. Still, the using intentions are severely influenced by the awareness rewarding the various sides of COVID-19 (Campedelli et al., 2020). So, protective equipment uses mediating effects in the relationship between the awareness about the current powerful virus and the business sustainability, and  $H3$  is proposed.

**Fig 1.** Conceptual Research Framework



The conceptual research framework illustrated that customer awareness regarding the symptoms of COVID-19, and other dangerous issues may enforce the use of protective equipment and keep the safety distances, which would be sufficient to resile the businesses during the pandemic. The framework also showed the proper uses of protective equipment and keeping the possible safety distances from the attack of the virus mediate in the relationship between the awareness about the COVID-19 and the business resilient. Knowledge about the symptoms is the primary indication of familiarity with the new virus, which is more conducive to protecting others from the affected patient's possible attack. As a result, the model only showed the symptoms. However, it was considered the other dangerous issue of the virus.

#### IV. Research Design

The proposed model is examined using survey data collected online. A self-administered questionnaire with a seven-point Likert scale is used, which is ranging from strongly disagree (1) to strongly agree (7). Random sampling is used as a data collection technique. The survey is conducted from April 1 to April 15, 2020, in Bangladesh. Since Bangladesh is one of the most densely populated country and very vulnerable for COVID-19 due to its socio-economic condition. Initially, 286 samples were collected, but after data cleaning and removal of missing data, 264 are kept for final consideration. The measurement items are self-developed due to the absence of cross-sectional study in existing pieces of literature (shown in Table 2). Initially, we developed the measurement items based on our understandings of the context. Then, we discussed with several doctors, researchers, and other health professionals as well. We pre-tested the questionnaire in order to check wordings, structure, readability, and meaningfulness. Having the pre-tested results, we again consult with the expert mentioned above, and then the questionnaire is operationalized for data collection.

**Table 2.** Measurement Items

Measures	Code	Mean	Std. Deviation	Chronbach's alpha
Cough				
I have heard or had experience that Corona patience is persistently coughing	C1	5.03	1.772	0.60
I have heard or had experience that Corona patience is sometime coughing	C2	4.72	1.830	
I have heard or had experience that coughing for usual disease is same as the attack of Corona virus	C4	4.02	2.093	
I have heard or had experience that coughing is the one of the common symptoms of Corona virus	C5	5.42	1.869	
Fever				
I have heard or had experience that Corona patience has high body temperature	F1	5.46	1.720	0.66
I have heard or had experience that Corona patience has normal body temperature	F2	2.92	1.791	
I have heard or had experience that Corona patience has slight higher body temperature	F3	4.48	1.763	
I have heard or had experience that fever for usual disease is same as the attack of Corona virus	F4	4.21	2.098	
I have heard or had experience that fever is the one of the common symptoms of Corona virus	F5	5.77	1.580	
Pain in neck and head				
I have heard or had experience that Corona patience has hard pain in neck and head both	P1	4.48	1.944	0.77
I have heard or had experience that Corona patience has hard pain only in neck	P2	3.53	1.841	
I have heard or had experience that Corona patience has hard pain only in head	P3	3.31	1.746	
I have heard or had experience that Corona patience has normal pain in neck and head both	P4	3.53	1.750	
I have heard or had experience that Corona patience has normal pain only in neck	P5	3.21	1.772	

I have heard or had experience that Corona patience has normal pain only in head	P6	3.11	1.712	
Diarrhoea				
I have heard or had experience that Corona patience is persistently diarrhoea	D1	3.47	1.990	0.87
I have heard or had experience that Corona patience is sometime diarrhoea	D2	4.08	1.928	
I have heard or had experience that diarrhoea is the one of the common symptoms of Corona virus	D4	3.77	2.078	
Normally, diarrhoea is seen at the second stage of attack of the Corona virus	D5	4.19	2.044	
Weakness				
I have heard or had experience that Corona patience feels very weakness	W1	5.16	1.753	0.78
I have heard or had experience that Corona patience feels sometime weakness	W2	4.83	1.721	
I have heard or had experience that weakness is the one of the common symptoms of Corona virus	W4	4.53	1.920	
I have heard or had experience that Corona attack patience is more depressed than other disease	W5	5.18	1.917	
Uses of protective equipment				
Uses of protective equipment can reduce fear to go out of the customer.	A1	5.93	1.647	0.88
Uses of protective equipment can stronger the customer mental strength	A2	5.60	1.752	
Protective equipment is available to the business center.	A3	5.25	1.698	
Uses of protective equipment can relax public movement	A4	5.17	1.905	
Arranging protective equipment attract the customers.	A5	5.12	1.997	
Safety distances				
Safety distances are effective to carry on the business during pandemic.	Q1	5.90	1.552	0.89
Safety distances can delay the business process.	Q2	5.86	1.628	
Safety distances can influence the customer for shopping.	Q3	5.40	1.851	
Safety distances should be continued	Q4	5.85	1.513	
Safety distances require many spaces in the business corner.	Q5	5.23	1.785	
Business sustainability				
Business sustainability was affected by the virus	AR1	5.87	1.545	0.88
Business can be sustained by the awareness	AR2	5.63	1.791	
Business can be sustained by inspiring customer to use the free protective equipment	AR3	5.01	2.080	
Business can be sustained by maintaining safety distances.	AR4	5.85	1.636	
Business sustainability somehow depends on public movement.	AR5	5.74	1.687	
Business can be sustained by increasing customer interaction.	AR6	5.11	1.835	

Source: survey results



**Table 3.** Demographic Characteristics

Characteristics (N = 264)	Frequency	Percentage
<b>Gender</b>		
Female	205	77.7
Male	59	22.3
<b>Profession</b>		
Student	179	67.8
Job holder	69	26.1
Unemployed	9	3.4
Business	6	2.3
Home maker	1	0.4
<b>Educational qualification</b>		
Below undergraduate	13	4.9
Undergraduate	131	49.6
Higher degree by research	112	42.4
PhD	8	3
<b>Age group</b>		
20-24	146	55.3
25-29	71	26.9
30-34	20	7.6
35-39	22	8.3
40-44	5	1.9
<b>Monthly income</b>		
Below \$500	164	62.1
\$500-\$1000	35	13.3
\$1000-\$1500	9	3.4
\$1500-\$2000	3	1.1
\$2000-\$2500	9	3.4
More	2	0.8

Source: survey results

Among 264 participants, 77.7% are female and 22.3% are male. 67.8% of the participants are students followed by job holder 26.1% and unemployed 3.4%. Overall, the maximum numbers of the respondents are undergraduates and obtained a higher degree by research 49.6% and 42.4%, respectively. The leading age group of the participants is 20-24 as 55.3% and most of them earn around \$500 in a month. A detailed review of the respondents' demographic profile is shown in Table 3.

## V. Empirical Results

In regards to the reliability and validity of the data, this study assesses construct-wise reliability. Chronbach's alpha value of each construct is higher than its critical value of 0.60, representing good internal consistency of data (shown in Table 2). Kaiser-Meyer-Olkin measure of sampling adequacy is 0.931 with a significant p-value. Besides, the model explained 38% of the variance by the first factor, and several factors have Eigenvalues greater than one, which represents no model biasness issue in this study. Having adequate data and model relativity, we conduct regression analysis in SPSS in order to examine the hypothesized relationships among variables. Table 4 shows the effect size of individual causes of COVID-19 to the business

sustainability. The results of the study reveal that among five causes, four are highly representative to be aware of the COVID-19.

**Table 4.** Individual Symptom Effect on Business Sustainability

Hypothesized paths			Estimate	<i>t</i>	<i>p</i>	Decision
Cough	→	Business sustainability	0.16	2.65	***	accept
Fever	→	Business sustainability	0.32	5.01	***	accept
Pain	→	Business sustainability	-0.01	-0.37	n.s.	reject
Diarrhea	→	Business sustainability	0.10	2.16	**	accept
Weakness	→	Busine.ss sustainability	0.32	5.68	***	accept

Variance explained in business sustainability of 0.56.

Note: \*\*\* *p* < 0.001, \*\* *p* < 0.05, n.s. not significant.

According to Baron and Kenny (1986) model, we measured the mediation effect of safety distances and used protective equipment in business resilience by aggregating the individual symptoms. Table 5 shows the different models' impact on business sustainability, which is significant with their coefficient value. Model 1 shows the maximum direct effect of aggregate symptoms on business resilience. Once safety distances are entered into the model (model 3), the coefficient value has become lower, similar results are found for the uses of protective equipment mediation variable in model 5. Overall, in the full model (model 6), the effect size of aggregate symptom to business sustainability becomes less than its half-effect compared to the direct model. Also, the Sobel test results reveal that there is a mediation effect of uses of protective equipment (*t* = 7.75, *p* < 0.001) and safety distances (*t* = 8.32, *p* < 0.001) in the relationship between aggregate symptom and business sustainability.

**Table 5.** Mediation Analysis

Variables	Direct effect model	Uses of protective equipment mediator model		Safety distances mediator model		Full model
	model 1 <i>β</i> ( <i>t</i> -value)	model 2	model 3	model 4	model 5	model 6
Aggregate awareness _ business sustainability	0.72 (16.93)***					
Aggregate awareness _ uses of protective equipment		0.66 (14.27)***				
Aggregate awareness _ business sustainability			0.41 (8.48)***			
uses of protective equipment _ business sustainability			0.45 (9.28)***			
Aggregate awareness _ safety distances				0.67 (14.89)***		
Aggregate awareness _ business sustainability					0.38 (7.87)**	
safety distances _ business sustainability					0.49 (9.960)**	
Aggregate awareness _ business sustainability						0.30 (6.09)***
uses of protective equipment _ business sustainability						0.28 (5.24)***

safety distances						0.34
_ business sustainability						(6.18)***
Variance explained	0.52	0.43	0.64	0.45	0.65	0.68
Sobel test results:						
via uses of protective equipment: t-statistics = 7.75, std. error = 0.052, $p < 0.001$ .						
via safety distances: t-statistics = 8.32, std. error = 0.053, $p < 0.001$ .						

Note: \*\*\*  $p < 0.001$ , \*\*  $p < 0.05$ .

## VI. Discussion and Conclusion

COVID-19 is the most dangerous virus in the Corona group, significantly influencing the world economy, almost stabling daily life since people are restricted from going out. Additionally, the force lockdown because of the attack of COVID-19 had an enormously detrimental effect on businesses, declined the profit curve, closed some branches, and sacked many employees around the world (Asmelash and Cooper, 2020b). As a result, effective strategies rather than Medicare until available in the market are crucial. Additionally, the people of Bangladesh are sensitively biased by the rumors and unauthentic source of information as emotion and openness are rooted in their ethnic background (Siddique, 2015), and due to widely spread of fake news and propaganda regarding the COVID-19, at least 12 people from different professionals was arrested by the authorities (Human rights watch, 2020). Considering the miserable consequences of rumor and propaganda regarding COVID-19, we attempted to conduct this study to explore the disease's typical symptoms and concerned the people on those indications rather than misguides to be fear with resilient businesses. To relax the public movement through the awareness about the signs and other dangerous issues of the virus, this study efforts to establish the consciousness about the disease's typical symptoms and the light of the mediating effects of using protective equipment and keeping safety distances on the business sustainability. The results of the individual symptom effect (Table 4) show that the hypothesized paths of cough, fever, diarrhoea, and weakness are significantly influencing the business sustainability as the awareness of the virus since the entire hypotheses associated with the symptoms are accepted without the sign of pain. As a result, cough, fever, diarrhoea, and weakness are established as the primary antecedents of the symptoms of the disease affected by COVID-19. As the results of the prior studies (Zhong et al., 2020g; Tan et al., 2020h; Peng et al., 2020g; Wu et al., 2020e, etc.) conducted by the experts in medical science on the symptoms of the disease are consistent on our study which established that cough, fever, diarrhoea, and weakness are the main symptoms of the disease hits by COVID-19, should be familiar with the people not to be matched with other indications of diseases and free from over-abundance of information as marked by Director General of WHO (Yu et al., 2020b). Therefore, the accurate knowledge of the symptoms of the patient provides a chance to be more aware of the disease through which the patient could isolate and prevent others, which ultimately effect continuing the public movement and the business sustainability during the pandemic.

In addition, the result of mediation analysis (Table 5) reveals that the uses of protective equipment and safety distances are significantly mediating in the relationship between the awareness about the symptoms of the disease and business resilience. (Table 5) shows that in the direct effect model, the coefficient value of awareness is 0.72 (Model 1). In contrast,

when the mediating variable uses of protective equipment is added, the coefficient value reduces to 0.41 (Model 3), moreover, again when the mediating variable safety distances are added, the coefficient value reduces to 0.38 (Model 5) and a combination of two mediating variables (uses of protective equipment and safety distances) diminish the coefficient value to 0.30 (Model 6). Furthermore, the Sobel test result also supports that protective equipment and safety distances mediate the relationship between the awareness of the disease and business resilience. The history of Taiwan, Singapore, South Korea, New Zealand, China, etc., for following the safety distance technique to fight against COVID-19 brought substantial effective results to monitor the COVID-19 and sustainable their businesses.

Furthermore, a series of studies (Peak et al., 2020; Nussbaumer-Streit et al., 2020; CEBM, 2020; Tang et al., 2020b, etc.) on the effectiveness of quarantine and safety distances to monitoring the affecting rate of COVID-19 and business survival has been executed on various perspectives and settings revealed that safety distances were the effective strategy to protect the people from the affected people hit by COVID-19 could encourage people to stay out at home which also directly establish the reliability of our results. Therefore, it can clearly state that if the people are getting more awareness about the COVID-19 (symptoms, causes, treatment, prevention, etc.) and properly use the protective equipment strictly in addition to maintaining the possible safety distances from each other during the public gathering to purchase anything, it would be possible to have the smooth customer movement in the market which could be supported to sustainable the businesses during the ongoing pandemic. Thus, it is well established that the awareness regarding the symptoms and relevant information about the attack of COVID-19 and the proper uses of protective equipment as well as arranging possible safety distances of customers from each other while buying the products and services are the effective new techniques of the marketers during the pandemic to sustain the businesses.

This study has five specific areas on the side of the contribution: patient, community, decision-maker of the country, the researcher, and the businesses. Firstly, this study could significantly contribute to the patient being familiar with the symptoms so that he/she would get a chance to take some preventive measures and isolate them from others to protect the family and community. Secondly, the community would learn from the study that using protective materials and getting possible safety distances from each other during public gatherings could positively influence to suppress the virus's affecting rate. Consequently, it would teach the people to go for shopping and involves with the business dealings. In addition to the gen of proper uses of protective ingredients and keeping safety distances, the community would also be capable of going for travel. Thirdly, the decision-makers of the particular region would get the guidelines from the study that how the familiarity of symptoms of the disease could benefit aware the societies and the significance of using defensive techniques and social distances to control the affecting rate of the virus and sustain the businesses. As a result, the announcement of symptoms and key issues of awareness regarding the virus through various media could concern the people and monitor the community transmits; besides, the effectiveness of using materials and safety distances could also be measured from the study. Fourthly, the scholars would find further issues to conduct research where this paper could contribute significantly. Finally, the businesses can return to the new normal life smoothly since it would contribute to controlling the affecting rate and reduces the fear about the disease's danger (COVID-19) among the people through which enhances their movement. Donthu and Gustafsson (2020d) mentioned that due to the restrictions of the public movement, Sears,

JCPenney, Neiman Marcus, Hertz, and J. Crew of US companies experienced massive financial crisis and 80% of hotel rooms of the renters were empty as well as the airlines bounded to cut 90% workforce with profit free businesses of the tourism industry.

As same experiences played by the businesses in diverse sectors of Bangladesh due to the force lockdown in the country, the effective uses of protective equipment and confirming safety distances by the marketers for the customers can be the pathways for the sustain of the businesses during the current critical situation in the world.

The current study has two specific limitations; firstly, the items and constructs used in the study were self-developed by the researchers due to the shortage of works of literature. As of the new issues, most of the studies have been conducted on the virus's medical structure, whereas it has a scarcity of papers on behavioral science. As a result, we could not follow any constructs and items from the existing pieces of literature to design a questionnaire for this study. Secondly, data of the study have been collected from the 264 respondents who had an experience with the virus (COVID-19). Thus it would require more representatives by including more general sample and more diverse countries. The researchers would have the scope to conduct further study on the gaps mentioned above.

## References

- Adnan Shereen, M., S Khan, A. Kazmi, N. Bashir and R.Siddique(2020), "COVID-19 infection: origin, transmission, and characteristics of human coronaviruses", *Journal of Advanced Research*, 24, 91-98.
- Altig, D.,S. Baker, J. M.Barrero, N. Bloom, P. Bunn, S. Chen and G. Thwaites, (2020), "Economic Uncertainty Before and During the COVID-19 Pandemic", *Journal of Public Economics*, 191, 104274.
- Anwar, S.,M. Nasrullah and M. JHosen(2020), "COVID-19 and Bangladesh: Challenges and How to Address Them", *Frontiers in Public Health*, 8.
- Asmelash, L. and A. Cooper, (2020), "Nearly 80% of hotel rooms in the US are empty, according to new data", *CNN*. Available from <https://edition.cnn.com/2020/04/08/us/hotel-rooms-industry-coronavirus-trnd/index.html>
- Bartik, A. W., M.Bertrand, Z. Cullen, E. L.Glaeser, M. Luca and C. Stanton, (2020), "The impact of COVID-19 on small business outcomes and expectations", *Proceedings of the National Academy of Sciences*, 117(30), 17656-17666.
- Bedford, J., D. Enria, J. Giesecke, D. L. Heymann, C. Ihekweazu, G. Kobinger, et al. (2020), "COVID-19: towards controlling of a pandemic", *Lancet (London, England)*, 395(10229), 1015-1018.
- Bell, D. N. and D. G.Blanchflower (2020), "US and UK labour markets before and during the Covid-19 Crash", *National Institute Economic Review*, 252, 52-69.
- Bodrud-Doza, M., M. Shammi, A. Islam and M.Rahman, (2020), "Strategic Assessment of COVID-19 Pandemic in Bangladesh: Comparative Lockdown Scenario Analysis, Public Perception, and Management Perspectives", Preprints 2020, 2020040550 (doi: 10.20944/preprints202004.0550.v1).
- Bofinger, P., S. Dullien, G.Felbermayr, C. Fuest, M.Hüther, J.Südekum, et al. (2020), "Economic implications of the corona crisis and economic policy measures", *Wirtschaftsdienst*, 100(4), 259-265.
- Campbell, A. M. (2020), "An increasing risk of family violence during the Covid-19 pandemic: Strengthening community collaborations to save lives", *Forensic Science International: Reports*, 100089.

- Campedelli, G.M., A. Aziani and S. Favarin (2020) "Exploring the Effect of 2019-nCoV Containment Policies on Crime: The Case of Los Angeles", <http://dx.doi.org/10.31219/osf.io/gcqp8>
- Cascella, M., M. Rajnik, A. Cuomo, S. C.Dulebohn and R.Di Napoli (2021), Features, evaluation, and treatment of coronavirus (COVID-19). *Statpearls [internet]*. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK554776/>
- CEBM. (2020) "Is 14-day quarantine effective against the spread of COVID-19?" <https://www.cebm.net/covid-19/is-a-14-day-quarantine-effective-against-the-spread-of-covid-19/> / (accessed October 28, 2020)
- Dey, M. and M. A.Loewenstein (2020), "How many workers are employed in sectors directly affected by COVID-19 shutdowns, where do they work, and how much do they earn?", *Monthly Labor Review*, 1-19.
- Dey, S. K., M. M.Rahman, U. R. Siddiqi, and A. Howlader (2020), "Analyzing the epidemiological outbreak of COVID-19: A Visual Exploratory Data Analysis (EDA) Approach", *Journal of Medical Virology*, 92, 632-638.
- Donthu, N. and A.Gustafsson (2020), "Effects of COVID-19 on business and research", *Journal of Business Research*, 117, 284-289.
- Drosten, C., S. Günther, W. Preiser, S.van der Werf, H.-R. Brodt, S. Becker, et al.(2003), "Identification of a Novel Coronavirus in Patients with Severe Acute Respiratory Syndrome", *New England Journal of Medicine*, 348(20), 1967-1976.
- Fu, M. and H.Shen(2020), "COVID-19 and Corporate Performance in the Energy Industry", *Energy Research Letters*, 1(1).
- Girtli Nygren, K. and A. Olofsson(2020), "Managing the Covid-19 pandemic through individual responsibility: the consequences of a world risk society and enhanced ethopolitics", *Journal of Risk Research*, 1-5. <https://www.bls.gov/opub/mlr/2020/article/covid-19-shutdowns.htm>.
- Human rights watch, (2020), "Bangladesh: End Wave of COVID-19 'Rumor' Arrests", <https://www.hrw.org/news/2020/03/31/bangladesh-end-wave-covid-19-rumor-arrests>. (accessed October 28, 2020)
- Huynh, G., T. N. H.Nguyen, V. K. Tran, Vo, K. N., Vo, V. T. and L. A.Pham(2020), "Knowledge and attitude toward COVID-19 among healthcare workers at District 2 Hospital, Ho Chi Minh City", *Asia Pacific Journal of Tropical Medicine*, 13(6), 260-265.
- Khachfe, H.H., M. Chahrour, J. Sammouri , H. Salhab, B.E. Makki and M.Fares(2020), "An Epidemiological Study on COVID-19: A Rapidly Spreading Disease", *Cureus*, 12(3).
- Lillie, P. J., A. Samson, A. Li, K. Adams, Capstick, R., G. D.Barlow, Schmid and M. L. (2020), "Novel coronavirus disease (Covid-19): the first two patients in the UK with person to person transmission", *Journal of Infection*, 80, 578-606.
- Michie, J. (2020), "The Covid-19 crisis-and the future of the economy and economics", *International Review of Applied Economics*, 34(3), 301-303.
- Nicola, M., Z. Alsafi, C. Sohrabi, A. Kerwan, A. Al-Jabir, C. Iosifidis, M. Agha and R. Agha (2020), "The socio-economic implications of the coronavirus pandemic (COVID-19): A review", *International Journal of Surgery*, 78, 185-193.
- Nussbaumer-Streit, B., V.Mayr, A. I.Dobrescu, A. Chapman, E. Persad, I. Klerings and G. Gartlehner (2020), "Quarantine alone or in combination with other public health measures to control COVID-19: A rapid review", *Cochrane Database of Systematic Reviews*, 1-47.
- Ou, X., Y.Liu, X.Lei, P.Li, D.Mi, L. Ren and Z.Qian, (2020), "Characterization of spike glycoprotein of SARS-CoV-2 on virus entry and its immune cross-reactivity with SARS-CoV", *Nature Communications*, 11(1).

- Pandey,R, V.Gautam, K.Bhagat and T.Sethi(2020), "A Machine Learning Application for Raising WASH Awareness in the Times of Covid-19 Pandemic", arXiv:2003.07074.
- Peak, CM, R. Kahn , Y.H. Grad, et al. (2020), "Individual quarantine versus active monitoring of contacts for the mitigation of COVID-19: a modelling study", *Lancet Infect Dis*, 20(9), 1025-1033.
- Peng, X., X. Xu, Y. Li, L. Cheng, X. Zhou and B.Ren (2020), "Transmission routes of 2019-nCoV and controls in dental practice", *International Journal of Oral Science*, 12(9).
- Qiu, Y., X.Chen and W.Shi (2020), "Impacts of Social and Economic Factors on the Transmission of Coronavirus Disease 2019 (COVID-19) in China", GLO Discussion Paper, 494, Global Labor Organization (GLO), Essen.
- Queiroz, M. M., D. Ivanov, A. Dolgui and S. Fosso Wamba (2020), "Impacts of epidemic outbreaks on supply chains: mapping a research agenda amid the COVID-19 pandemic through a structured literature review", *Annals of Operations Research*, 1-38.
- Ranjan, R., G.K. Ranjan and Tutor. (2020), "Knowledge Regarding Prevention of Novel Coronavirus (COVID-19): An Electronic Cross-Sectional Survey among Selected Rural Community", *International Journal of Trend in Scientific Research and Development*, 4(3), 422-426.
- Rothan, H. A. and S. N.Byrareddy (2020), "The epidemiology and pathogenesis of coronavirus disease (COVID-19) outbreak", *Journal of Autoimmunity*, 109, 102433.
- Shimanta, M.L.R.H.Gope; I.J.Sumaiya(2020), "Readymade Garments Sector and COVID-19 in Bangladesh", Preprints, 2020060336.
- Siddique, M.A.B. (2015), "Why is the Bengali Nation Called Emotional?", Alochonaa, <https://alochonaa.com/2015/06/06/why-is-the-bengali-nation-called-emotional/> (accessed October 28, 2020)
- Tan, L., Q. Wang, D. Zhang,J. Ding,Q. Huang, Y. Q.Tang, Q. Wang and H.Miao (2020), "Lymphopenia predicts disease severity of COVID-19: a descriptive and predictive study", *Signal Transduction and Targeted Therapy*, 5(1), 33.
- Tang, B., F. Xia , S. Tang , N.L. Bragazzi, Q. Li , X. Sun, J. Liang, Y. Xiao and Y. Wu (2020), "The effectiveness of quarantine and isolation determine the trend of the COVID-19 epidemics in the final phase of the current outbreak in China", *International Journal of Infectious Diseases*, 95, 288-293.
- Tucker, H. (2020), "Coronavirus Bankruptcy Tracker: These Major Companies Are Failing amid the Shutdown", Forbes, <https://www.forbes.com/sites/hanktucker/2020/05/03/coronavirus-bankruptcy-tracker-these-major-companies-are-failing-amid-the-shutdown/#118914f33425>
- Worldometer, (2020a), <https://www.worldometers.info/coronavirus/> (accessed October 26, 2020)
- Worldometer,(2020b), <https://www.worldometers.info/coronavirus/country/bangladesh/> (accessed October 27, 2020)
- Wu, F., S. Zhao, B. Yu, Y.-M. Chen , W. Wang ,Z.-G. Song and Y.-Z. Zhang (2020), "A new coronavirus associated with human respiratory disease in China", *Nature*, 579, 265-269.
- Xu, H., L.Zhong, J.Deng, J.Peng, H.Dan, X. Zeng and Q. Chen (2020), "High expression of ACE2 receptor of 2019-nCoV on the epithelial cells of oral mucosa", *International Journal of Oral Science*, 12(8).
- Yu, M., Z.Li, Z.Yu, J.He and J.Zhou (2020), "Communication related health crisis on social media: a case of COVID-19 outbreak", *Current Issues in Tourism*, 1-7.
- Zheng, H.-Y., M. Zhang, C.-X. Yang , N. Zhang, X.-C. Wang, X.-P. Yang and Y.-T. Zheng (2020), 'Elevated exhaustion levels and reduced functional diversity of T cells in peripheral blood may predict severe progression in COVID-19 patients', *Cellular & Molecular Immunology*, 17(5), 541-543.
- Zheng, M., Y. Gao, G. Wang, G. Song, S. Liu, D. Sun and Z. Tian (2020), "Functional exhaustion of antiviral lymphocytes in COVID-19 patients", *Cellular & Molecular Immunology*, 17, 533-535.
- Zhong, B.L., W. Luo, H.M. Li, Q.Q. Zhang, X.G. Liu, W.T.Li and Y.Li (2020), "Knowledge, attitudes, and

practices towards COVID-19 among Chinese residents during the rapid rise period of the COVID-19 outbreak: a quick online cross-sectional survey”, *International Journal of Biological Sciences*, 16(10), 1745-1752.

Zhou, P., X.-L. Yang, X.-G. Wang, B. Hu, L. Zhang, W. Zhang and Z.-L. Shi (2020), “A pneumonia outbreak associated with a new coronavirus of probable bat origin”, *Nature*, 579, 270-273.