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Knowledge, Attitude and Hygiene Practices Regarding Covid-19 among Retailers of Dhaka City

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Abstract**—** *The coronavirus (COVID-19) pandemic was one of the major disruptive events that challenged human existence. It broke the supply chain system and weakened the global economy. It tremendously cut the global health system and killed millions of people worldwide. However, the overall health consequences of COVID-19 were not the same in all the affected megacities worldwide; depending on their knowledge and attitude and their practices on preventive measures, the people of different megacities suffered from COVID-19 at various levels. This scenario has created the ground for this study to check people's knowledge, attitude, and practices on hygiene practices in Dhaka City during this pandemic. It accommodated the responses of 250 respondents and followed quantitative analysis that approached descriptive analysis, mean score, and correlation of variables with the application of SPSS to generate the expected outcome of the study. Results of the study found that retailers of Dhaka city scored 0.656 (range: -1 to 1); 3.639 (range: 1 to 5) and 1.944 (range: 1 to 3) on knowledge, attitude and practice toward COVID -19 respectively. It also revealed a positive correlation between the knowledge, attitude, and practices (KAP) of the people of Dhaka City on health hygiene during this invasion. A significant positive correlation was observed between knowledge with attitudes (r_s= 0.499, $p < 0.05$), knowledge with practice (r_s= 0.419, $p < 0.05$), and attitudes with practice (r_s= 0.474, $p < 0.05$). 25% of the time the knowledge of the shop retailers influences their attitude and practices by 18% of the time, and their attitude influences practices by 22%. This means a higher knowledge level about COVID-19 has a significant association with a positive attitude and good practices of health hygiene maintenance during the COVID-19 pandemic. This significance implies an urgency for effective health education efforts to raise awareness against any pandemic like COVID-19. Thus, the findings will encourage and inform decision-makers and program implementers to promote their preventive measures against any pandemic like COVID-19 in the future.*

Keywords**— KAP, COVID-19, attitude, Dhaka City, health hygiene, retailer.**

I. INTRODUCTION

The coronavirus pandemic (COVID-19) is a major disruptive event affecting global economies and unsettling the value networks connecting education, healthcare, manufacturing, and supply chain management (SCM). Due to its highly contagious nature, a severe global health crisis was seen during this pandemic [1,2]. Thus, analyzing the effects of disruptions on businesses is an important aspect of data analytics, particularly in the area of supply chain management (SCM).

Any pandemic like COVID-19, leads the people working in a group or the supermarkets to a possible risk of infection. Fear of the detrimental impact of COVID-19 made a significant change in consumers' behavior as they had to deal with a diverse group of people. They had to restrict their in-store shopping to some extent to avoid exposure to the threat or minimize health risks. For example, the leading retailers Costco and Target promptly introduced 'senior hours' and shortening store hours as a part of carrying out alternative actions to keep their organizations fit in terms of social response and market demand. Such a step supports institutional theory indicating that an organization's actions are governed by the institutional system in line with the favorable behavioral intentions. Thus, the question remains as to what is the best way to organize the dynamics of people working in a group or a crowded place to minimize the overall risk of infection during a pandemic like COVID-19

To prevent/minimize the spread and transmission of COVID-19, governments worldwide imposed some important measures such as partial or complete lockdowns, self-isolations, social distancing, curfews, wearing facemasks in public areas, avoiding large gatherings, etc. However, these measures created a major negative impact on the economy worldwide [3] in the sectors with high levels of human interaction, such as retail enterprises because of their dependency on regular customer trafficking and face-to-face contact. Thus, to minimize the risk of spreading COVID-19 enterprises worldwide implemented important protective measures - a) providing free hand sanitizer for the customers, b) stalling protective visors to protect the cashiers, c) implementing social distancing measures between the customers and floor signaling through the store, d) using cashless or contactless payment methods to minimize the handling of cash, and e) requiring customers to wear gloves and/or face masks.

The world was changed dramatically just within a few months of COVID-19 invasion. This pandemic not only affected the global economy but also altered people's lives. It created an immediate effect on retailing daily necessities - retailers of essential goods such as food, groceries, and healthcare experienced increased demand opportunities for serving consumers at home while facing challenges of keeping their facility a safe environment. On the other hand, retailers of non-essential goods, such as apparel and footwear, faced a significant drop in sales, and thus they had to just sustain themselves. As the world witnessed 1 million deaths due to the invasion of COVID-19, it's required to count on it to control such a pandemic in the future. Literature shows that the cause of the crisis during COVID-19 is its rapid infectious characteristics. Thus, all interventions focused on controlling the transmission of the virus. However, the "science" that guided governments or authorities, who understandably framed the health emergency in centuries-old terms of plague told that the story of COVID-19 is not so simple.

According to the literature review, only a few studies addressed the knowledge, attitude and hygiene practices regarding COVID-19 among retailers. Thus, this study was conducted to learn about the required knowledge, attitude and hygiene practices regarding COVID-19 among retailers in Dhaka city that will certainly help people to face any further pandemic. Thus, the research question of this study is "What is the status of the knowledge, attitude and hygiene practices during COVID-19 among the retailers in Dhaka City?" Based on this research question, its broad objective was to know the level of knowledge, attitude and hygiene practices of the retailers of Dhaka City during the invasion of COVID-19. Accordingly, its specific objectives were – a) to identify the knowledge level of retailers about this pandemic, b) to ascertain the attitude level of retailers towards safety measures during this pandemic, c) to ascertain the practice level of hygiene among the retailers during this pandemic, and d) to ascertain socio-demographic characteristics of those retailers.

II. LITERATURE REVIEW

A dashboard is an outstanding platform for data display accumulated from multiple sources [4]. According to [5], a dashboard is a consolidated visual display of relevant information to monitor and understand at a glance for further decisions [6]. Dashboards naturally encompass different visual methods accumulating data from multiple sources [7]. Carroll and Brown's review [8] stated dashboards as the richness of the information displayed through effective communication and interpretation of the dataset.

The retailers also approached the consumers with new ways of their services that made them accustomed, for example, online grocery shopping with home delivery. In addition, consumers also became accustomed to working out at home, subscribing to online fitness

classes, purchasing an in-home exercise bike, etc. Even, future research may therefore strive to understand the short-term and long-term impact of the pandemic on consumer behavior and provide guidance on how retailers should cope with those changes.

Millions Of individuals worldwide experienced the effects of this pandemic, which forced many of them to live in quarantine [9]. They also learned that people suffered from fever, exhaustion, dry cough, malaise, and breathing problems due to COVID-19 with different levels of severity depending on age level and other chronic health conditions. They learned that the risk of mortality was mostly associated with advanced age and pre-existing chronic conditions such as diabetes, hypertension, heart disease, lung disease, and cancer [10, 11]. According to a study on medical students in Saudi Arabia on COVID-19, the mean score for knowledge was 3.08 [12] for attitude was 3.02 [13], and for practice was 5.47 [14]. Liyanage et al. found that 78.9% of medical students in Sri Lanka had a favorable attitude about practicing good hand hygiene - the majority of them exercised proper health hygiene during COVID-19 [15].

In Saudi Arabia, while around 94 individuals were aware that touching their faces might spread the virus, only 76 of those persons avoided doing so. However, 96 individuals were aware that washing their hands for 20 seconds could prevent the infection, though only 84 of them followed this action [16]. However, it was also revealed that different factors such as age group, gender, family income, and educational level had a significant impact on following this action [17]. The Ethiopian workers at barber and beauty salons had an excellent understanding and favorable attitude toward controlling COVID-19, and thus they maintained proper hygiene procedures during this pandemic [18].

On the contrary, in Malaysia, people over 60 years of age had higher knowledge scores as they had a better understanding of the dangers of contracting with the affected people. However, the people with lower monthly incomes had poor knowledge scores, indicating a shortage of up-to-date and trustworthy information on this disease [19]. It was also revealed that marital status, employment, and gender were related to knowledge. The female participants had a higher average score for understanding of COVID-19 than the males. A study in Thailand showed that 73.9% of tourists cancelled or postponed their visit because of COVID-19 based on better information about COVID-19 [20]. A cross-sectional study conducted in South Korea found that a higher level of knowledge among respondents was associated with using masks and washing hands, as well as avoiding crowded locations [21].

According to the findings of a study on COVID-19 in Central India, scores for knowledge, attitude, and practice were higher for participants who were younger, highly educated and had a higher monthly income [22]. In West Africa, 65 people were concerned about the severity of COVID-19 infections and thus they were prepared to speak with medical experts if they got sick with the disease [23]. On the other hand, according to Nichola et al., most people in the South West Area of Cameroon were aware of COVID-19 and its preventive measures [24]. An online-based cross-sectional study conducted in Bangladesh between March 29 and April 19, 2020, showed that only 48.3% of respondents had accurate knowledge, 62.3% of them had positive attitudes, and 55.1% had frequent practices regarding COVID-19 prevention [23]. However, a study one week ago indicated that just 33% of respondents had adequate knowledge, although 52.4% and 44.8% of respondents had positive attitudes and practices respectively [25].

Research conducted at the Rohingya Refugee Camp at Cox Bazaar reported highly unsatisfactory scores on KAP [26]. However, a study conducted in the rural areas of Bangladesh found that the score on the knowledge questions was 90. The majority of participants (more than 90) were able to identify the main clinical symptoms of COVID-19 correctly, and they were aware that respiratory droplets and direct contact with contaminated surfaces are the modes of transmission. Again, a study conducted in Bangladesh with 2167 respondents indicated a strong correlation between the use of masks and higher levels of knowledge [27].

III. METHODOLOGY

Study Design:

The study was conducted as a cross-sectional one that covered both males and females working in some selected retail shops in Dhaka City. The retail shops were located at Bashabo, Mailbag, Lalbag, Nilkhet, Jurain, Mohammadpur, Jatrabari, Khilkhet, Azimpur, Mirpur, Derma, Kalabagan, Bosila, Dhanmondi, Shahjahanpur, Chankharpul, Hazaribug, Mugda, Motijhil, Nandipara, Sabujbag, Kakria, Gulistan, Segunbagicha,

Shantinagar, Ramna. Both the males and females of these retail shops who completed at least one year of services in the present shop and were physically and mentally sound were included in this study. It was a 6-month study from 13 June 2021 to 02 December 2021.

Sample Size ad method:

Using the following formula $n = Z^2pq / d^2$, where n = desired sample size, z= standard normal deviation (usually set at 1.96, which corresponds to a 95% confidence level) p= proportion in the target population, P= Prevalence of the level of knowledge, attitude, hygiene practice regarding COVID-19 among retailers as a study conducted in 1st January 2020 p=77.4. Thus, the required sample size was: n = (1.96)2x (0.774) x (0.226) / (0.05)2 = 268.8 plus 10% non-response rates. [Where, p = 0.774; q =1-p = 1- 0.774=0.226; d= degree of accuracy desire, usually set at 0.05]

Therefore, the sample size was = 268.8 + 10 = 268.8 + 26.88 = 295.68 = 296. However, this figure was reduced to 250 as per the directions of the study supervisor to maintain the time line. Ten wards of one City Corporation out of two in Dhaka City were selected randomly and every second retail shop was selected from each ward till the sample size was reached. First retail shop was selected purposively.

Data Collection Instruments and Methods:

A semi-structured questionnaire developed based on research objectives used in this study. It included questions to identify knowledge on COVID-19, its symptoms, nature of transmission, incubation period and at-risk factors for people. To measure the attitude towards COVID-19, a 5-point Likert scale was used and a checklist was used to identify practices toward prevention. The questionnaire was first developed in English and then translated into Bangla for the convenience of the respondents. It was also pre-tested among retailers other than study areas. After necessary corrections based on pre-testing were made in this questionnaire. Data was collected through face-to-face interviews maintaining COVID-19 safety protocol.

Data management and analysis:

Initially, data was checked for completeness and correctness by excluding missing or inconsistent issues. Later, data was entered into the computer using IBM SPSS (Statistical Package for Social Sciences) v26. Later, frequency and percentage distribution were done to identify the knowledge level and attitude of respondents regarding COVID-19. Data was presented using a frequency table, graph and chart.

Ethical issues:

The Ethical Review Committee (ERC) of the State University of Bangladesh was approached to ensure the ethical grounds of this study and duly obtained its approval. At the same time, permission was taken from the shop owners and verbal consent was taken from each respondent before enrolling in the study conditioning that the respondents had the right to withdraw from the study at any time during the data collection if they felt so. Confidentiality of data and the respondents was also maintained strictly.

IV. ANALYSIS

This section presents the statistical analysis of data along with corresponding interpretations. This analysis consists of two overarching categories - univariate analysis and bivariate analysis. The bivariate analysis illustrated the correlation between variables.

Table 1: Socio-economic profile of the respondents

Characteristics	Number	%
Gender Identity		
Male	231	92%
Female	19	8%
Marital status		
Married	191	76%
Unmarried	57	22%
Others	2	0.8%
Age Group		
<20	22	8%
21-30	56	22%
31-40	73	29%
41-50	63	25%
51-60	23	9%
60+	13	5%
Education Level		
Below SSC	160	64%
SSC to HSC	62	25%
Graduate	28	11%
Occupation		

Sales Associate	43	17%
Store Manager	18	7%
Cashier	14	6%
Owner	175	70%
Income level (monthly)		
<20,000	62	25%
20,001-40,000	126	50%
40,001-60,000	37	15%
60,000 +	25	10%

Out of 250 respondents in this study, 92% were males, and on the other hand, 76% of respondents were married (Table 1). It shows that most respondents in this study were between the ages of 31 and 40 years (n = 73; 29%) followed by 41–50 years (n = 63; 25%). However, the number of respondents above 60 was 13 (5%). Most respondents had attained less than SSC (n = 160; 64%), followed by below SSC to HSC (n = 62; 25%) (Table 1). However, 28 (11%) of the respondents at least completed their graduation (Table 1).

By occupation, 175 (70%) respondents of this study are owners, 43 (17%) respondents are sales associates, and 18 (7%) respondents are store managers as stated in Table 1. According to the monthly income level, 62 (25%) respondents earn less than BDT 20,000, and 25 (10%) respondents earn more than BDT 60,000 (Table 1). On the other hand, 126 (50%) respondents earn between BDT 20,001 to 40,000, whereas 37 (15%) respondents earn between BDT 40,001 to 60,000 (Table 1).

Table 2: Knowledge of Retailers toward maintaining preventive measures for COVID-19

Constructs of Variable of 'Knowledge'	**Mean Score**	**% (Yes)**
K-1. Is COVID-19 a contagious disease?	0.748	80.18%
K-2. Are fever, dry cough, and shortness of breathe the symptoms of COVID-19?	0.812	90.78%
K-3. Can COVID-19 be fatal in the Elderly, Diabetic, Asthmatic, and those with Cardiovascular problems?	0.396	68.20%
K-4. Do you know what quarantine is?	0.892	92.63%
K-5. Have you heard about social distancing?	0.912	94.47%
K-6. Can COVID-19 enter the human body through the mouth, nose, and eyes?	0.628	76.50%
K-7. Can COVID-19 be transmitted through the coughing and sneezing of the covid patient?	0.724	82.03%
K-8. Can COVID-19 be transmitted through air?	0.356	58.06%
K-9. Can COVID-19 be transmitted by touch (handshaking, hugging, etc.?	0.636	74.65%
K-10. Can COVID-19 be transmitted at gatherings like marriage ceremonies, religious congregations, shopping malls, markets, etc.?	0.768	84.33%
K-11. Can washing hands with water and soap eliminate the cause of the disease?	0.616	75.50%
K-12. Do you know the required time for hand washing with soap and water is at least 20 seconds?	0.42	57.14%
K-13. Can COVID-19 also be treated at home?	0.616	75.50%
Overall average mean score of 'Knowledge'	**0.656**	

Note: *Response type – Don't Know/No/Yes value range (-1 to 1)*

The overall knowledge level of the respondents on COVID-19 was found satisfactory as the average mean score was 0.656 (Table 2). It shows that the maximum mean score of knowledge respondents on COVID-19 was 0.912, whereas the minimum mean score was 0.356 indicating that the shop retailers had knowledge on COVID-19 toward its preventive measures. An important thing is that a 0.912 knowledge score was answered by 94.47% of respondents, whereas a 0.356 knowledge score was answered by 58.06% of respondents.

The mean score of 0.748 (answered by 82.18% of respondents) regarding the contagious characteristics of COVID-19, indicates that the respondents had

sufficient knowledge of this issue, followed by its symptoms (0.812; answered by 90.78% of respondents), patient's chronic diseases (0.396; answered by 68.20% of respondents), and quarantine (0.892; answered by 92.63% of respondents).

Regarding contamination, the knowledge score of respondents on physical touch was 0.628 (answered by 76.50% of respondents) followed by transmission through sneezing of COVID-19 patients (0.724; answered by 82.03% of respondents), transmission through handshaking (0.636; answered by 74.65% of respondents), and public gathering (0.768; answered by 84.33% of respondents). All these scores indicate that the knowledge level of respondents about COVID-19 was quite good. Regarding the effectiveness of handwashing as a preventive measure for COVID-19, the knowledge score of respondents was 0.616 (answered by 75.50% of respondents), followed by 20 minutes of handwashing with soap 0.42 (answered by 57.14% of respondents). Finally, the knowledge of respondents regarding the home treatment of COVID-19 patients was 0.616 (answered by 75.50% of respondents) indicating their home treatment initiatives for COVID-19-affected people.

Table 3: Attitude of Retailers toward Maintaining Preventive Measures for COVID-19

Constructs of Variable of 'Attitude'	**Mean Score**	**% (Agree/ / strongly agree)**
A-1. Social distancing is mandatory to prevent COVID-19.	3.92	82.03%
A-2. Vaccines can prevent you from COVID-19.	3.752	69.12%
A-3. Wearing a mask can prevent you from COVID-19	3.744	74.65%
A-4. Maintaining hand hygiene can protect you from COVID-19.	3.816	76.96%
A-5. Just wearing gloves is enough protection against COVID-19.	2.372	10.60%
A-6. It is important to maintain hand hygiene every time before touching the nose and face.	3.58	64.06%
A-7. Hand washing with soap is better than using alcohol-based hand rubs.	3.416	48.85%
A-8. Wearing gloves may be a substitute for hand washing.	2.56	13.36%
A-9. It is important to use hand sanitizers before wearing and removing facemasks.	3.352	5.23%
A-10. In the event of an increase in the number of cases of COVID-19, authorities should be ready to close educational institutions.	3.028	45.16%
A-11. The 14-day quarantine can prevent the spread of COVID-19.	3.524	57.60%
Overall average mean score of 'Attitude'	**3.639**	

Note: *Response type – Strongly agree, agree, neutral, disagree, and strongly disagree; value range (1 to 5)*

The overall attitude of the respondents toward COVID-19 was found satisfactory as the average mean score was 3.639 (Table 3). It shows that the maximum mean score of attitudes of respondents on COVID-19 preventive measures was 3.92 as agreed /strongly agreed by 82.03% of respondents for social distancing as a preventive measure and the minimum mean score was 2.372 as agreed /strongly agreed by 10.60% of respondents for wearing gloves as a preventive measure, indicating that the shop retailers displayed an agreeable attitude on maintaining preventive measures for COVID-19 (Table 3).

The mean score of vaccination as a preventive measure was 3.752 as agreed/strongly agreed by 69.12% of respondents, followed by wearing masks (3.744) as agreed /strongly agreed by 74.65% of respondents, hand hygiene (3.816) as agreed /strongly agreed by 76.69% of respondents, touching nose and face (3.58) as agreed /strongly agreed by 64.06% of respondents, handwashing with soap alcohol-based hand rubs (3.416) as agreed /strongly agreed by 48.85% of respondents, sanitization before wearing or removing masks (3.352) as agreed /strongly agreed by 5.23% of respondents, the closing of educational institutes (3.028) as agreed /strongly agreed by 45.16% of respondents, and 14 days quarantine for the patient (3.524) as agreed /strongly agreed by 57.60% of respondents (Table 3). However, in the cases of wearing gloves as a substitute for handwashing the attitude score of respondents was 2.56 as agreed /strongly agreed by 13.36% of

respondents, indicating that they disagreed with this preventive measure as shown in Table 3.

Table 4: Practices on Health Hygiene of Retailers Preventive Measures for COVID-19

Constructs of Variable 'Practices on Health Hygiene'	**Mean Score**	**% (Always)**
P-1. Do you wear a face mask when going out?	2.044	25.35%
P-2. Do you wear a face mask in crowded places?	2.164	36.87%
P-3. Do you wash your hands frequently using water and soap?	2.112	29.49%
P-4. Do you take more than 20 seconds times when you wash your hands?	1.976	22.58%
P-5. Do you maintain 3 feet of social distancing?	1.56	6.45%
P-6. Do you change your clothes when you come back from public places?	2.288	47.93%
P-7. Do you disinfect your hands with soap or alcohol-based hand rub upon returning from public places?	2.272	42.40%
P-8. Do you carry hand sanitizer with you all the time when you go outside?	1.544	12.90%
P-9. Do you use hand sanitizer before wearing and removing facemasks?	1.412	3.69%
P-10. Do you change your mask after coughing and sneezing inside the shop?	1.612	12.44%
P-11. Do you wash your hands after sneezing or coughing into your hands	2.08	28.11%
P-12. Do your family members also practice using hand sanitizers?	2.044	22.58%
P-13. Do you try to avoid shaking hands with people?	1.70	16.59%
P-14. Do you remove the mask if there is a need to talk when you are outside?	2.412	51.15%
Overall average mean score of 'Practices of Health Hygiene'	**1.944**	

Note: *Response type –Never, Sometimes, Always; value range (1 to 3)*

The overall score of the respondents on the practice of health hygiene toward COVID-19 was positive as the average mean score was 1.944 (Table 4). It shows that the maximum mean score was 2.412 as maintained by 51.15% of respondents in the case of maintaining a facemask while talking with outside people as a preventive measure of COVID-19, and the minimum mean score was 1.412 as performed only by 3.69% of respondents for using hand sanitizer as a preventive measure, indicating that only a few shop retailers always used hand sanitizer before using or removing facemasks as preventive measures for COVID-19 (Table 4).

The mean score for wearing a facemask as a preventive measure was 2.044 (performed by 25.35% of respondents), followed by wearing masks in crowded places (2.164; performed by 36.87% of respondents), frequently handwashing with soap (2.112; performed by 29.49% of respondents), and washing of hands with at least 20 seconds (1.976; as always done by 22.58% of respondents). The mean score of maintaining 3 feet distancing was 1.56 (performed by only 6.45% of respondents), followed by changing clothes upon coming back from public places (2.288; as performed by 47.93% of respondents) and disinfecting of hands with soap or alcohol-based hand rub (2.272; as performed by 42.40% of respondents).

Similarly, the mean score of carrying hand sanitizer while moving outside was 1.544 (as carried out by 12.90% of respondents), followed by changing of mask after coughing and sneezing inside the soap (1.612; done by 12.44% of respondents), and washing hands after coughing and sneezing into hands (2.08; maintained by 28.11% of respondents). The mean score of using hand sanitizer by the family members was 2.044 (maintained by 22.58% of respondents), followed by avoiding handshaking with people (1.7; maintained by 16.59% of respondents) as stated in Table 4.

Table 5: Internal consistency of indicators and correlations of variables

Variables	Cronbach's alpha (α)	Correlation		
		Knowledge	Attitude	Practice
Knowledge	0.763	1		
Attitude	0.768	0.499 (25%)	1	
Practice	0.829	0.419 (18%)	0.474 (22%)	1

The Cronbach's alpha values for knowledge, attitude, and practice variables were (0.763, 0.768, and 0.829, respectively), indicating good internal consistency and reliability (Cutoff value: 0.70, as recommended by Hair Jr. et al., 2017; Joseph F. Hair et al., 2014) of the questionnaire data for these three variables (Table 5). On the other hand, a significant positive correlation was observed between knowledge with attitudes (r_s = 0.499, $p < 0.05$), knowledge with practice (r_s = 0.419, $p < 0.05$), and attitudes with practice (r_s = 0.474, $p < 0.05$) as stated in Table 5. The knowledge of shop retailers about COVID-19 had a medium effect on their attitude and practice, while attitude had a better relation with practices. All the values of correlations were positive and significant but medium in strength. Regarding the relationship among the three variables, the correlation matrix showed that 25% of the time the knowledge of the shop retailers influences their attitude by 25%, practices by 18%, and their attitude influences practices by 22% of the time.

V. DISCUSSION AND SIGNIFICANCE

This study revealed that 80.18% of respondents viewed COVID-19 as a contagious disease, whereas 90.78% of them could understand the most common symptoms of COVID-19 were fever, dry cough, and shortness of breath. These findings were supported by literature as revealed in a study on medical students in India and Afghanistan [28, 29]. On the other hand, 68% of respondents thought that COVID-19 was lethal for elderly people, diabetic and asthmatic patients and those with cardiovascular diseases, whereas 94.47% of the respondents heard about social distancing as a preventive measure of COVID-19. However, 92.63% of respondents knew the purpose of quarantine for affected people. However, more than 57.60% of the retailers thought that a quarantine of 14 days could stop the spread of COVID-19, which is in line with other studies [30, 31].

57.14% of respondents in this study were aware of the minimum time necessary to wash one's hands with soap and water, which was less than that of neighboring country India, where 91.2% of people were aware of such preventive action against the COVID-19 invasion [32]. However, this awareness level varies from country to country or region to region. For example, 74.2% of people in China believed hand washing was a preventive action against COVID-19 infection [33].

According to the findings, 69.12% of the retailers of Dhaka City believed that vaccines could protect against COVID-19, which has been supported by a study conducted by Ntumba et al. that showed that Namibian people found a link between vaccines protecting against COVID-19 [34]. They also felt that wearing masks and practicing good hand hygiene were affordable measures to control COVID-19. More than 64.06% of retailers in Dhaka City thought that it was essential to practice good hand hygiene before touching one's nose or face as a measure against infections of COVID-19, which was also supported by literature [35]. However, the majority of them did not support wearing hand gloves or hand washing before touching face masks. At the same time, only 5.23% of retailers accepted the practice of hand sanitization before putting on and removing face masks.

According to this study, the knowledge and attitude of the respondent have been reflected in their practice. Nearly 25% of retailers used face masks, whereas 36.87 % of them always used masks while going out. This was nearly a consistent finding with a study conducted by Haque et al. [36]. These findings suggested that although there was a high degree of community understanding of the importance of hand washing, there was a need for community outreach and education on the optimal method for hand washing. However, only 12.90% of the retailers carried hand sanitizer with them while staying outside, which was alarming. Because hand sanitizer was the sole remedy for the retailers when they had moved from station to station. Carrying hand sanitizer was a standard healthcare procedure during COVID-19 [37]. In India, 93% of people carried hand sanitizer with them at all times while going outside during this pandemic [38].

VI. CONCLUSION

The current study has been conducted as an intense research interest on COVID-19 because of its last aggressive invasion of human beings. It followed a rigorous methodology and confirmed the participation of 250 respondents working in different retail shops in Dhaka City. It shows that the people of Dhaka City gained enough knowledge and displayed a positive attitude toward controlling the effects of COVID-19. It also shows that a higher knowledge of COVID-19 has a significant association with a higher positive attitude and good practices of preventive measures during this pandemic. This study has confirmed that 80.18% of people of Dhaka City accepted COVID-19 as a contagious disease with high transmission ability, and they were ready to manage their preventive measures accordingly, which is undoubtedly an indication of their knowledge and attitude toward controlling this pandemic. At the same time, they also learned well about the symptoms of COVID-19 which will help them seek early measures including social distancing, wearing face masks and hand gloves, and practicing good health hygiene issues including hand sanitizer. Thus, it suggests maintaining a high degree of community understanding of those preventive measures, which were pertinent to control COVID-19 in Dhaka City – one of the most populated megacities in the world. In sum, it was a meaningful effort to learn about the knowledge, attitude and practices (KAP) on health hygiene toward controlling COVID-19 in this Mega City that also enriched the literature and created a venue for further related studies in the future.

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