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The Impacts of Face Mask on Elderly People in Dhaka City

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ABSTRACT

In this Explanation, we discuss influence of face masks on older people in Dhaka city. In this research were 222 respondents and ages of the participants are 60 plus age. This study established among 100% respondents were 16.7% Businessman, 20.7% job holder, 22.1% retired person, 24.3% house wife and other occupation were 16.2%. For finding other problems of respondents were 9% has respiratory disease, 36% were hypertension, 5% were low blood pressure, and 16.2% had diabetics. In this research, we discover that physiologic effects with possible to control disease (e.g. Covid-19, air pollution, droplet infection disease, etc.) during wearing masks for prolonged periods of time, including special considerations, such as mask wearing among those who engage in job, another service, activity of daily living, exercise and concerns for individuals with pre-existing chronic diseases (e.g. Breathing difficulties, Irritability, Dizziness). This research here 28% face some problems, including 8.6% breathing difficulties, 4.0% irritability, 5.9% dizziness, 4.5% nausea or vomiting, and 5% other problems during wearing face masks. In hygienic people, a mask didn't seem to reason any detrimental physiological changes, and the probably life-protecting advantages of using face masks appear to outweigh the presented problems.

Keywords: Effect, face mask, Older people, Dhaka city, Covid-19, Physiological impacts, and Breathing difficulties.

INTRODUCTION:

Face mask are a simple barrier to help prevent our respiratory droplets from reaching others. 9 During the pandemic important in preventing respiratory infection face masks play important role is thought to be because it can prevent the transmission of pathogens. (Kwan *et al.*, 2021) Surgical or medical masks are recommended by international and national institutions on purpose prevention the transmission of the virus that causes COVID-19 (CDC guideline, 2020). Bangladesh and some countries, these are supported by government regulations. In some places in Asia (e.g., the Republic of Korea and Hong Kong), masks are universally worn by the public (Bressington *et al.*, 2020).

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Governments to advocate face mask use for the general public under certain conditions only, such as in areas with known or suspected community transmission, settings where public distance can't be maintain, and among people with any symptoms suggestive of COVID-19, the WHO advised on June 5, 2020. It appeared that wearing masks has produced additional benefits, including the reduction in other viral diseases, like as influenza. (WHO guideline, 2020) Known from physiology, oxygen supply and ventilation are controlled by feedback loops. Rising pressure of arterial carbon dioxide and a fall in oxygen pressure both are lead to an increase in minute ventilation, which controlled by respiratory rate and tidal volume (Ward *et al.*, 2013). In the feedback

loop, almost topical pulmonary drive represents hypercapnia, also with a rises in heart rate corresponds hypoxemia. Wearing face mask is related with both hypercapnia and hypoxemia (Kurtz *et al.*, 2019). On 21 August 2020, the limited messages about the wear of face masks, especially for older peoples, were emphasized in the advice issued by the Geriatric society of UN (UNGS) & WHO (WHO guideline, 2020). This rules show that, without mask are harmful effect in the pandemic stated that older aged sixty years and above should wear masks. Authors advise that, a risk-based accession for old aged 60 years of age and it comes to using masks when over should be treated as adults (Greenhalgh *et al.*, 2020). Although these observations pertained to different populations, they were anticipated to be similar in older populations. Preventive behaviors caused by of causes involve health beliefs play a key role in preventing older people from contracting COVID-19 (Leung *et al.*, 2020) anyhow; this is scarcity of understanding of how health beliefs were attached by face mask wearing behavior. Previous studies have also shown that health beliefs predict depressive symptoms in older people with diabetes (Sifat Uz Zaman *et al.*, 2021; Korytny *et al.*, 2021).

Lately, some Organization and Old home has manifested solicitude to health providers and public media that face mask may detrimental to senior citizen. The negative news of face mask and its impact have been increases (Smart *et al.*, 2020). Masks are a simple barrier to help prevent respiratory droplets from reaching others. Studies show that masks reduce the spray of droplets when worn over the nose and mouth (Hoffman *et al.*, 2020). Wearing masks of society ought to ascertain, and not exchange other prohibitive measures, like physical distance maintaining, during illness not to go outward, communicate to mobile phone & internet if possible, behavior with respiratory complaisance, maintain sensible hygiene.

Literature Review

August 2020, this year to propulsion a study in England to discover the COVID-19 disease that place had been abundant debate in the media on whether wearing facemask should be stop the pathogens expansion. They working in two ways, it's not an simple issue to searched and numerous factors are engaged like drop-let size, transmissions of mosquito spray and the

pathogen load, alongside the earmarked peculiarity of any mask. The process use in that study were measured to alter in correlative during using facemask, comparison to no using mask, in several scene, assumptive based that the pathogen is airborne the smaller the rise in dampness the low the spreads of the pathogens. Research outcomes show that wearing of facemask, omit few ordinary home-make ones, importantly decreases the dampness spreading. Scarano *et al.* (2020) conducts a study in Italy towards discover Individual respiratory protective devices and face masks play a central role in decreasing the spread infection of corona virus disease (COVID-19). Aim of this investigation to compare temperature on facial skin and the temperature increase when using medical surgical masks and N95 respirators. Total 20 subjects were included and when evaluation, all subjects was invited to use a surgical mask or respirator for 1 h. Next morning at the same time same duration the subjects wearing a N95 mask for 1 h under same methods. The facial warmth evaluation to measure of result to the moisture, heat, skin redness, breathing dysfunction, and irritability was recorded. A distinction in temperature stream and perioral region heat was recorded among the N95 and surgical mask. Finding of the research suggested the results that N95 mask was capable to bring about aggravates temperature on facial skin, larger irritability and smaller wearing adhesion to surgical facemasks when compared. September 2020, this year to propulsion a study in United States to discover, the physical effect of wearing facemasks for longest periodical time, with particular considerations, like using facemask, who connected with exercise, daily activities and thought the personals with preceding chronic diseases. Among the hygienic peoples, using a facemask did not show any negative physical changes and the feasible convenience of using masks appear to outperform the recorded irritabilities (e.g. dizziness). Whatever, there successive to be discussion on using facemask in the America, whereas using a facemask appears to have tiny physical discomforts. When there are smaller physical effects on using a facemask, the centric record indicates that has perhaps consequent psychological effects of using facemask on the elementally psychological demand of ability, freedom, and pertinence. That psychological influences be able overcomes to the dispute connected with covering

facemasks in the COVID-19 situation of America. Then this study discusses the physical impact of wearing facemask, also discussed psychological impacts connected with using facemasks during COVID-19 disease. Spitzer, (2020) conducts a study in Germany towards discovers that the face masks can prevent expansion of the pathogen SARS-CoV-2, in particular as this spread can occur from people with no symptoms. Though, cover the lower half of the face decrease the capability to communication, explain, Discussion, and imitative disclosure with another peoples. Become low recognizable of Positive emotions, and negative emotions are exacerbated. The advantages and impact of wearing masks in institutions should be importantly considered, made sure ideas about mask to both students and teachers. The institutions specific circumstance ought to also appraise any pronouncement pertaining face mask uses. Mheidly, (2020), that year to propulsion a study in Spain to discover, COVID-19 situations the diametrical personal communication have been significantly influenced. Prohibitive measures, like physical distance maintaining and use masks are important to increase protection contrary to pathogens but increases challenges on everyday confront communication. Face masks, especially, covering sounds and facial disclosure that extensive during confront communication. In the research, the role in communication

and high-lighted how the mask can interrupted inter-personal connection. In addition, they offer coping strategies and skills that can ease communication with face masks as they navigate the current and any future pandemic.

Research Question

What are the impacts of facial mask in older people in Dhaka City?

Study Objectives

General Objective - To find out the impacts of facial mask in older people in Dhaka City.

Specific Objectives

- 1) Discover the socio-demographic factors of the respondents.
- 2) To ascertain the mask related or respiratory problem of the respondents.
- 3) To analyze the health related problem of the respondents.
- 4) To discovers the hygiene related problems of the respondents.

Limitation of Findings

There were some limitation and barriers during conducting the study project. They are as mention below:

- o Number of question was selected.
- o Sample size is small but chosen purposively.

METHODOLOGY:

Conceptual Framework

Independent Variable	Dependent Variable
<div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">Socio-Demographic Factors</div> Gender, Age, Educational level, Occupation	Impacts of mask among the older people in Dhaka City
<div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">Precaution related variables</div> Use face mask, Wash hand, Sanitizer use	
<div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">Associated health problem related variables</div> Respiratory Disease, Blood pressure, Diabetics	
<div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">Factor analysis related variable</div> Duration of mask wearing, Facing any problem, suffer Covid-19, environmental pollution and any droplet infection during using face mask.	
<div style="border: 1px solid black; padding: 2px;">Information Education and Communication related variables</div> Idea about Covid-19, Advantage and uses of facial mask, Follow any preventive strategy.	

Plan of the Research

This is an Experimental study.

Study Area

The project was organized at Mirpur, Dhanmondi, Kolabagan, Kollanpur, Mohammedpur, New Market, Uttara in Dhaka city.

Target Respondent

Respondent in the research project is people, whose ages are 60+ (above 60) agreeing to give information of their own accord. The study population will consist of both Male and Female in Dhaka city.

Study Period

1st May 2021 to 10th November 2021.

Sample Size

222 subjects selected by maintenance of exclusion and inclusion criteria.

Inclusion criteria

- a) Subjects who are above 60 years old.
- b) Both sexes are involved.
- c) Subject who all are using face mask.
- d) Subject, of those stay in Dhaka city.
- e) Who are willing to give consent and participate?

Exclusion Criteria

- 1) Subjects, those are not stay in Dhaka city.
- 2) Subject who are under 60 years old.
- 3) Subject of, those are not willing to give consent and participate.

Sampling Technique

Purposive random sampling technique was applied.

Data collection tools

A structured questionnaire were promotes to the research purpose, then an orientation were organized in collectors with field test and finally collection the data by going door to door of aged people on that questionnaire. The project was organized at Mirpur, Dhanmondi, Kolabagan Kollanpur, Mohammedpur, New Market, Uttara area in Dhaka city we take their permission and gather data from them. The current studies we found that effect of mask in various levels of senior citizen.

Data Management & Analysis Plan

The respondents were organized of data after collection. After collection data was entered into the computer in a data base software package. SPSS 23.0

version use for narrative statistics for example frequency, ordination, mean and percentage. All scores and percentages were computed and presented in tabular form, charts and graphs as appropriate. Chi-square test and P-value will help further it was analyzed. Finally, interpreted data was discovered study findings.

Quality Control & Quality Assurance

This preliminary study has a numeral limitation. The experimental study was risk for the respondents. The population size was comparatively small due to financial constraints in this study period and thus the result is not being generalized.

Ethical consideration

The motive and goals toward with its benefits, risks and procedure was explained in the research to the respondents in easily the respondents in easily. Information was accepted from every respondents by use perceive native language. The researcher first introduced himself with respondents. Then the researchers will give them the assurance this facts of the responders will be usage just for the research purpose. The researchers tell them that their name will be hidden secret. All kind of privacy is confirmed and any resections from the respondent are first priority. They also told this information will only use for benefit of Physiotherapy profession and the improve health with decrease hazard.

RESULTS:

The Following **Table 1** explained about the ratio of sex of respondent in Dhaka city. Here among the 222 respondents in this place. In this place the ratio is 44.1% and 55.9% male female respectively.

Table 1: Distribution of respondents by Gender.

Gender		Number	Percentage
Valid	Male	98	44.1
	Female	124	55.9
	Total	222	100.0

Table 2: Distribution of respondents by Age

Age (by years)		Number	Percentage
Valid	60-69	158	71
	70-79	51	23
	80+	13	6
	Total	222	100.0

The **Table 2** explained the ordination in respondents by age in year. Here we have seen that most respondents in Dhaka city are 60-69 years in 71%, 23% are 70-79 years and above 80 years were 6% respondents. In addition 13.5% respondents were primary level, 25.2% SSC level, 12.6% HSC level, 33.8% graduate level, 9.5% master’s level and 5.4% respondents were no education level (**Table 3**). **Table 4** explained the delivers of respondents by occupation in Dhaka city in my study. Among 222 respondents in Dhaka city there were 16.7% businessman, 20.7% were job holder, 22.1% were retired person, 24.3% were house wife and other occupation were 16.2%.

Table 3: Distribution of respondents by educational level.

Educational level		Number	Percentage
Valid	Primary	30	13.5
	SSC	56	25.2
	HSC	28	12.6
	Graduate	75	33.8
	Masters	21	9.5
	No education	12	5.4
	Total	222	100.0

Table 4: Distribution of respondents by Occupation.

Occupation		Number	Percentage
Valid	Business	37	16.7
	Job	46	20.7
	Retired	49	22.1
	House wife	54	24.3
	Others	36	16.2
	Total	222	100.0

The following **Fig. 1** explained the ordination of respondents by use face mask regularly in the Dhaka city (year) of these research. Among 222 respondents in Dhaka city were 79.7% regularly, 20.3% were sometimes use mask but hasn’t any respondent of our finding who didn’t use face mask. The following **Fig. 2** explained the delivers of respondents how many times wash hand regularly. Among 222 respondents in Dhaka city were 16% wash hand below the 5 times and 84% wash hand above 5 times.

The following **Fig. 3** explained the ordination in respondents by how many times sanitize hand daily. Among 222 respondents were 82.4% were sanitizing

hand below 7 times and 17.6% were sanitizing hand above 7 times. The following **Fig. 4** explained the delivers of respondents by Respiratory disease. Among 222 respondents in Dhaka city were 9% has respiratory disease.

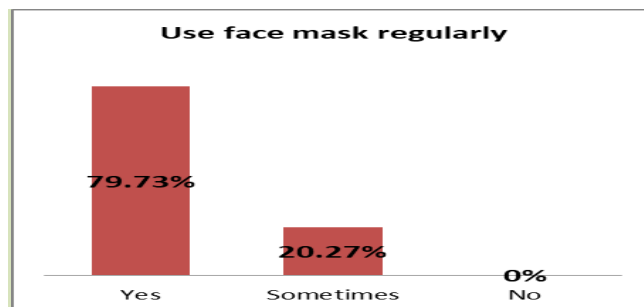


Fig. 1: Distribution of respondents by Use face mask regularly.

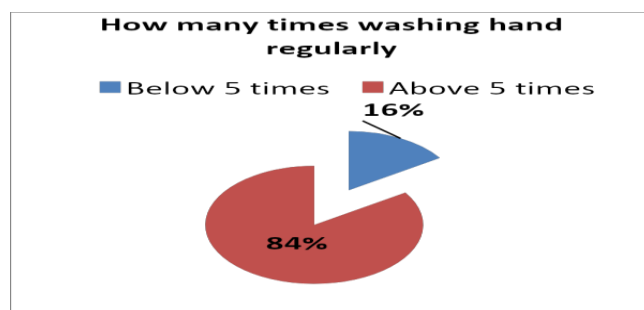


Fig. 2: Distribution of respondents by how many times washing hand regularly.

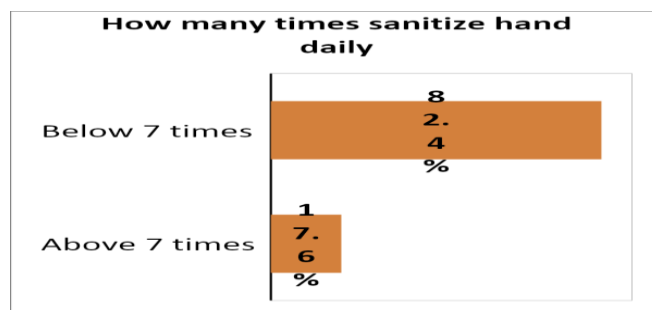


Fig. 3: Ordination of respondents by how many times sanitize hand daily.

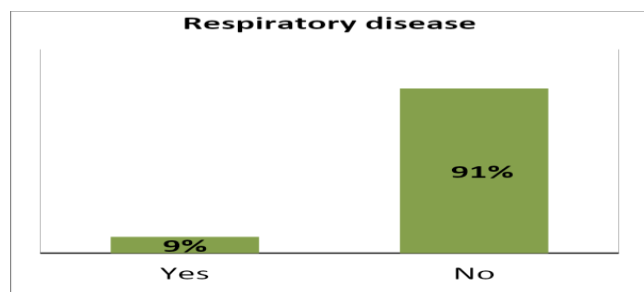


Fig. 4: Distribution of respondents by Respiratory disease.

The following **Fig. 5** explained the ordination in respondents by Blood pressure. Among 222 respondents 59% were normal blood pressure, 36% were high blood pressure and 5% were low blood pressure. The following **Fig. 6** explained the delivers of respondents by Diabetics. Among 222 respondents in Dhaka city were 16.2% having diabetics and 83.8% haven't diabetics.

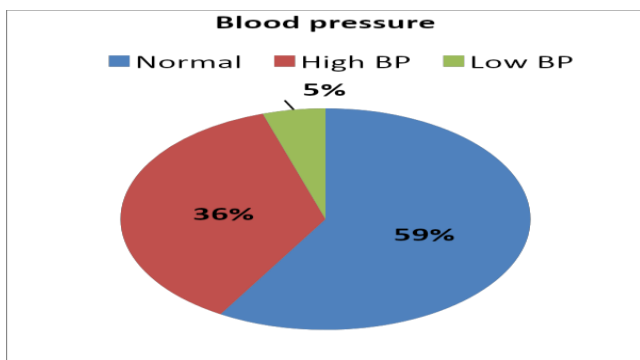


Fig. 5: Ordination of respondents by Blood pressure.

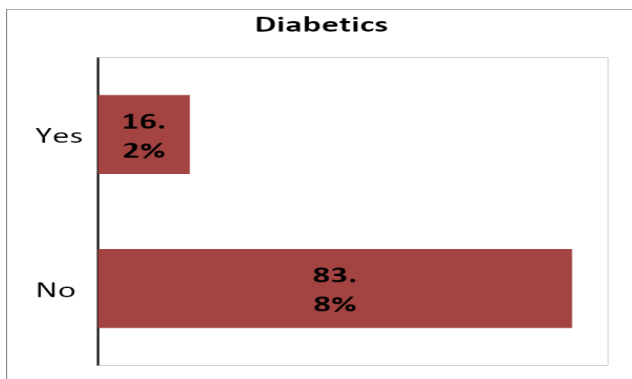


Fig. 6: Distribution of respondents by Diabetics.

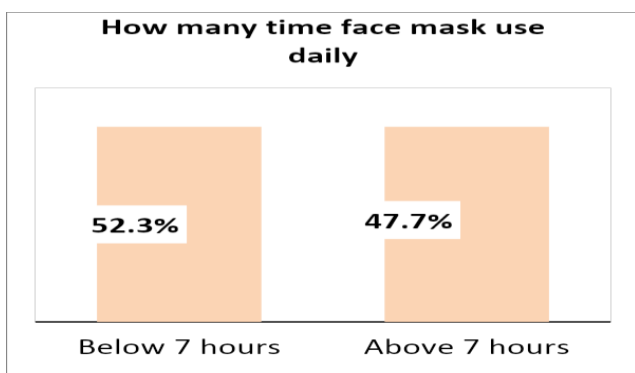


Fig. 7: Ordination of respondents by how many time face mask use daily.

From the above **Fig. 7** explained the ordination in respondents by how many time wear mask daily. Among 222 respondents in Dhaka city were 52.3% use face mask below 7 hours and 47.7% use face mask above 7 hours.

mask below 7 hours and 47.7% use face mask above 7 hours.

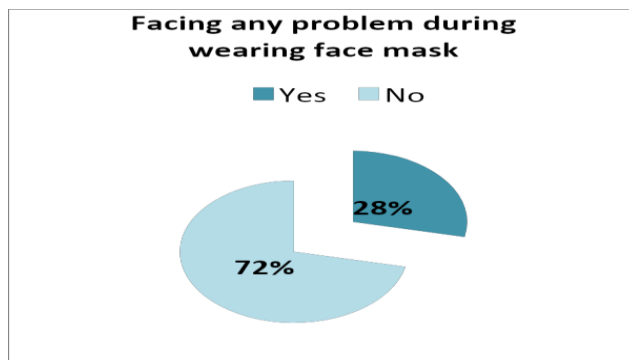


Fig. 8: Distribution of respondents by facing problem during wearing face mask.

From the above **Fig. 8** explained the delivers of respondents by facing any problem during wearing face mask in this research. Among 222 respondents in Dhaka city were 28% facing problem and 72% haven't any problem. From the following **Fig. 9** explained the ordination in respondents by facing various problems when wearing face mask. Among 222 respondents in Dhaka city were 8.6% breathing difficulties, 4.0% irritability, 5.9% dizziness, 4.5% nausea or vomiting and 5% others problems.

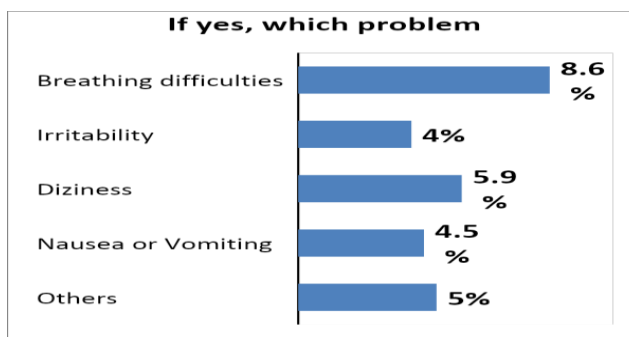


Fig. 9: Respondents ordinate by if yes, which problem.

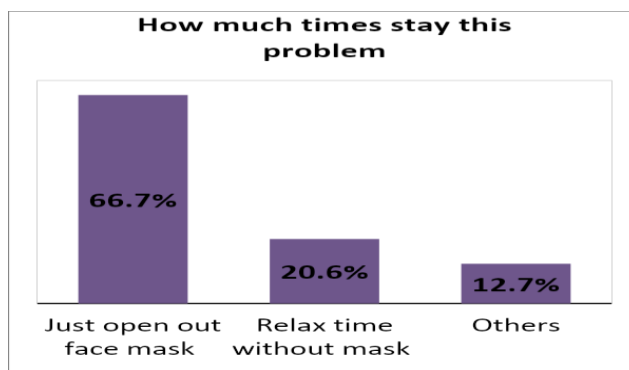


Fig. 10: Distribution of respondents by how much times stay this problem.

The above Fig. 10 explained the delivers of respondents by how much time stays this problem. 222 respondents in old home area were 28% facing various problems and sometimes stay these problems. Among them 66.7% were just open out face mask, 20.6% when relax without mask and 12.7% other times. The following Fig. 11 explained the ordination in respondents by suffer Covid-19 disease during using face mask in this finding. Among 222 respondents in Dhaka city were 4% suffer Covid-19 disease.

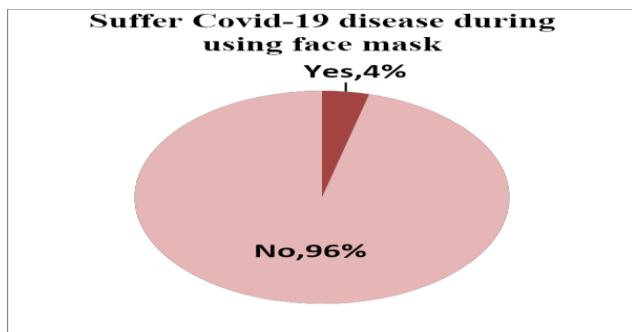


Fig. 11: Respondents ordinate by suffer Covid-19 disease during using face mask.

The following Fig. 12 explained the delivers of respondents by suffer environmental pollution disease during using face mask. Among 222 respondents in Dhaka city were 3.6% suffer pollution disease.

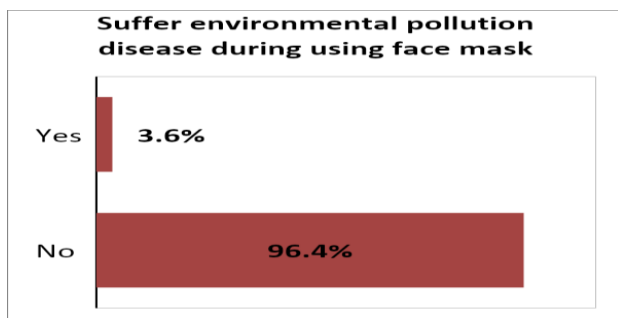


Fig. 12: Distribution of respondents by suffers environmental pollution disease during using face mask.

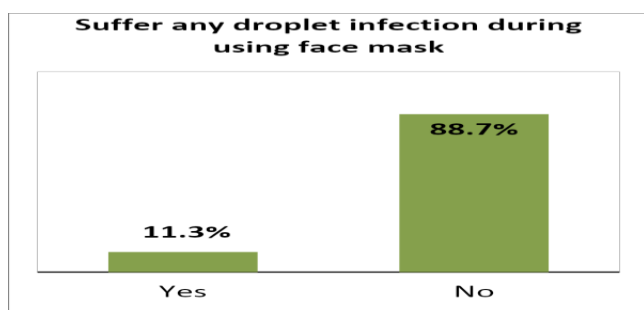


Fig. 13: Respondents ordinate by suffer any droplet infection during using face mask.

The following Fig. 13 explained the ordination in respondents by suffer any droplet infectious disease during using face mask in this study. Among 222 respondents in Dhaka city were 11.3% suffer droplet infectious disease. From the following Fig. 14 explained the ordination in respondents by has any idea about Covid-19 in this paper. Among 222 respondents in Dhaka city were 100% have idea about Covid-19. From the following Fig. 15 explained the delivers of respondents by knows advantage and uses of face mask. In this study among 222 respondents in Dhaka city were 100% knowing about advantage and mask uses.

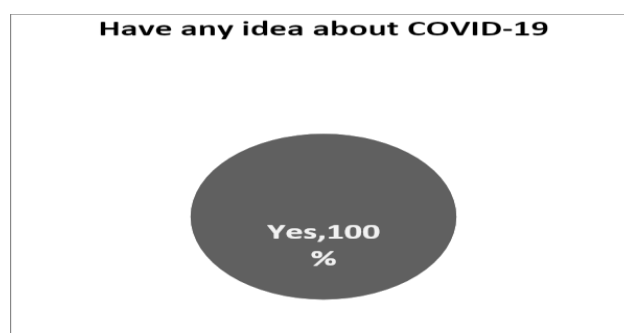


Fig. 14: Distribution of respondents by has any idea about Covid-19.



Fig. 15: Respondents ordinate by know about advantage and uses of mask.

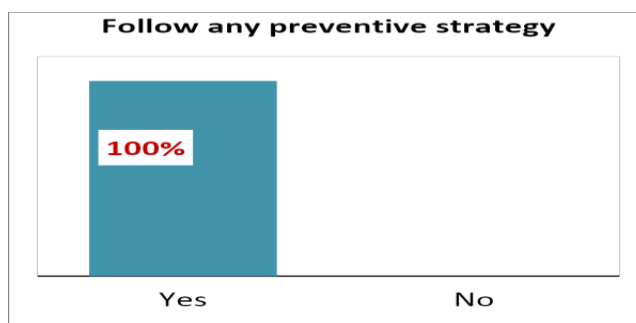


Fig. 16: Distribution of respondents by follows any preventive strategy.

From the above **Fig. 16** explained the distribution of respondents by follow any preventive strategy on our study. Among 222 respondents in Dhaka city were 100% respondents follow preventive strategy.

DISCUSSION:

This investigation of data were gather to search the factors which are related to impact of face mask among older peoples in Dhaka city, that is a small part in Bangladesh. This is necessary to observe present situation and find out the effect of face mask of aged population in Dhaka city. Objective in the research are discover the current Socio-demographic status, responsible factors, Health problem related factor, economical condition, information, education and communication related factor etc. This current paper a lot of information was presented. Here, the total 222 participants, in their male and female total 98 and 124 in Dhaka city. Older peoples age group sequentially 71% were 60 to 69 years old, 23% were 70 to 79 years old. And above 80 years only 6% were peoples in these papers. Their education status, we discover that 13.5% were primary level, 25.2% were SSC level, 12.6% were HSC level, 33.8% were graduate level, 9.5% were master's level and 5.4% were no education.

Among 222 respondents in Dhaka city there were 16.7% Businessman, 20.7% job holder, 22.1% retired person, 24.3% house wife and other occupation were 16.2%. Among 222 respondents in these investigation to use face mask regularly were 79.7% and sometimes use 20.3% but hasn't any respondent in this research who didn't use face mask. Among 222 respondents in Dhaka city were 16% below the 5 times and 84% above 5 times wash hand regularly. Respondents reside in the Dhaka city were 82.4% were sanitizing hand below 7 times and 17.6% were sanitizing hand above 7 times. Among 222 respondents in Dhaka city were 9% has respiratory disease. Among 222 respondents 59% were normal blood pressure, 36% were high blood pressure and 5% were low blood pressure. Besides in this field 16.2% having diabetics and 83.8% haven't diabetics. In case of distribution of respondents by how many time wearing mask daily. Among 222 respondents in Dhaka city were 52.3% use face mask below 7 hours and 47.7% use face mask above 7 hours. These studies the ordination in respondents by facing any problem during wearing face mask in this paper.

Among 222 respondents in Dhaka city were 28% facing some problems, including 8.6% breathing difficulties, 4.0% irritability, 5.9% dizziness, 4.5% nausea or vomiting and 5% others problems. Among 222 respondents in Dhaka city were 28% facing various problems and sometimes stay these problems. Among them 66.7% were just open out face mask, 20.6% when relax without mask and 12.7% other times. The investigation found that suffer any disease during using face mask. Among 222 respondents in Dhaka city were 4% suffer Covid-19 disease, 3.6% suffer air pollution disease and 11.3% suffer droplet infectious disease. This research discovers that, the respondents have any idea about Covid-19 disease. Among 222 respondents in Dhaka city were 100% have idea about Covid-19. Besides in this field were 100% knows advantage and uses of face mask in these study. Investigator discovers the respondents follow any preventive strategy on our study. Among 222 respondents in Dhaka city were 100% respondents follow preventive strategy.

CONCLUSION AND RECOMMENDATIONS:

Face masks, has deliberated a first move to obstruct and contain the disease expansion. Impact of face mask in elderly people in Dhaka city we wished to make proposal. We selected our study area at Mirpur, Dhanmondi, Kolabagan, Kollanpur, Mohammedpur, New Market, Uttara in Dhaka city. It was fully for the research purpose. So we made proposal, made questionnaire, data collection directly from participants, checking, entering into computer by using SPSS 23 software, analysis and prepared result. We have finding age, educational level, occupation and various disease patterns. Finally overall this study it perhaps expressed that elderly people in Dhaka are suffered in some complication like breathing difficulty, dizziness, irritability, nausea vomiting etc. It is useful because face mask help to obstruct transmission droplet infections. To lead healthier and comfortable life for the aged people is following:

- 1) Provision for use compulsory use face mask in this pandemic.
- 2) Increase of health awareness of infection to elderly people.
- 3) Elderly people must learn about importance and uses of face mask.

- 4) Increase provision of health awareness.
- 5) Regular maintain some physically activity or exercise for increase their physiological capability, e.g. walking, swimming, going to mosque and gymnasium (Chowdhury *et al.*, 2021)

Simple masks are primarily used to prevent transmission by holding back droplets. This is useful when the recommended minimum distance of 1.5 m is not feasible. The masks provide self-protection for its wearer and this is only when they are used properly.

ACKNOWLEDGEMENT:

Also thanks to the respondents for graciously accepting to inclusiveness in this study. We would like to pay our deep respect and gratitude to our family members for invaluable suggestions and affectionate encouragement at all stages in these research.

CONFLICTS OF INTEREST:

Researcher can represent our-self, our workplace and our country. We also want positional promotion with professional background. No potential conflicts to publish it.

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