

Frequency of symptoms of COVID-19 disease among the people of Bangladesh

ABSTRACT:

Aims: To find out the differences of symptoms of COVID-19 diseases among vaccinated and unvaccinated individual.

Study design: This was a cross section type observational study.

Place and Duration of Study: Out door of cost guard Hospital Dhaka Bangladesh from July 2021 to January 2022.

Methodology: Here all persons who were found positive RT-PCR for COVID-19 from July 2021 to January 2022 were included in this study. This study was carried out among people who were serving under Cost guard Bangladesh. Here we had included all persons who became infected with COVID-19 irrespective of sex, ethnicity and vaccination status against COVID-19. Sampling was done by purposive random sampling method. Sample size was 104. Data analysis was done by using SPSS-26.

Results: In this study most of the participants (72.2%) were among 20-39 years age group and 97% were male. There was no specific symptom of COVID-19 rather its presentation mimics many other diseases. Fever (90.4%) and cough (85.6%) were found most common presentation. Other symptoms were sore throat (65.4%), loss of taste sensation (64.4%), headache (54.8%), loss of smell (40.4%), fatigue (36.5%) and loose motion (09.6%). In this study most of the participants (89%) were not vaccinated against COVID-19 before they have been infected with SARS COV-2. In this study we found that most prominent symptoms were fever and cough, of them 13% were vaccinated whereas 87% participants were not vaccinated against COVID-19 infection.

Conclusion: COVID-19 disease affects many part of the body and it's presentation varies depending its effects on organs. Vaccine is an important invention to combat against COVID-19 though it cannot prevent a person from being infected. Vaccination cannot immune a person from being infected but it significantly reduced symptoms of infection. So vaccinations have beneficial effects.

Keywords: Symptom, COVID-19, SARS COV-2.

1. INTRODUCTION

COVID-19 is a zoonotic disease which is caused by SARS COV-2 enveloped virus. (1) It is highly contagious. It transmits from human to human. It is an air born disease. Due to its high infectivity it had spreads throughout the word in a very short time and already mankind had experienced its severity and diversity. SARS COV-2 viruses underwent several mutations and showed various presentations of same disease. Various vaccines have invented and peoples of different age group are receiving vaccines in Bangladesh. Epidemiological observation showed that both vaccinated and unvaccinated people are becoming infected by SARS COV-2. So we have designed a study to find out the frequencies of symptoms and severity both among vaccinated and non-vaccinated individuals for that we have included all persons who became infected with SARS COV-2 irrespective of vaccination status. Many symptoms of COVID-19 had similarities with other diseases. Presenting features of this disease is still under matter of study.

2. METHODOLOGY

This was a cross sectional type observational study. Here all persons who were found positive RT-PCR for COVID-19 from July 2021 to January 2022 were included in this study. This study was carried out among people who were serving under Coast guard Bangladesh. Here we had included all persons who became infected with COVID-19 irrespective of age, sex, ethnicity and vaccination status. Sample size was 104. Sampling was done by purposive random sampling method. Data analysis was done by using SPSS 26.

3. RESULTS

In this study most of the participants were among 20-39 years age group and which was 72.2% (Fig-1).

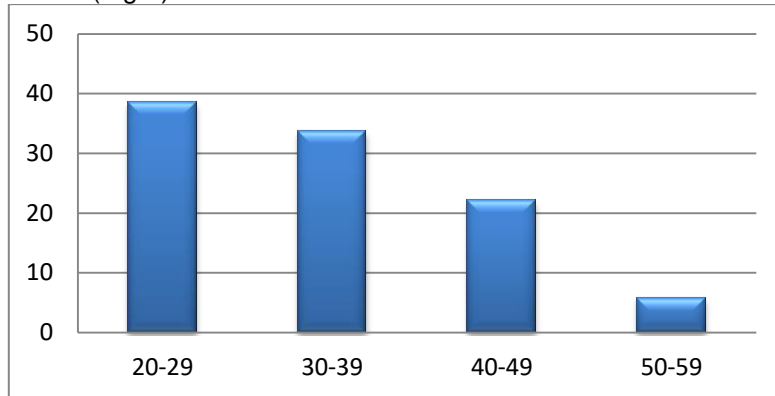


Fig-1: Age distribution of the participants

In this study most of the participants were male and which comprises 97% which was a limitation of this study. In this study we found that out of 104 participants 94 participants were suffering from fever and of them 42% belongs to age group 20-29, 34% were among 30-39 age group, 20% were among 40-49 age group and 04% were 50-59 age group. second most common presenting complaints was cough which was 85.6% and out of which 41% were among age group 20-29, 32% were among 30-39 age group, 21% were among 40-49 age group and 06% were among 50-59 age group. Next common presentation was sore throat (65.4%) out of which 38% were among 20-29 age group, 35% were among 30-39 age group, 22% were among 40-49 age group and 05% were among 50-59 years age group. Another common presentation was loss of taste sensation (64.4%) out of which 37% were among 20-29 age group, 28% were among 30-39 age group, 26% were among 40-49 age group and 09% were among 50-59 years age group. Headache was found among 54.8% out of which 37% were among 20-29 age groups, 31% were among 30-39 age groups, 23% were among 40-49 age group and 09% were among 50-59 years age group. Loss of smell also found among 40.4% participants out of whom 31% were among 20-29 age group, 29% were among 30-39 age group, 26% were among 40-49 age group and 14% were among 50-59 years age group. Fatigue also found among 36.5% participants out of whom 39% were among 20-29 age group, 21% were among 30-39 age group, 29% were among 40-49 age group and 11% were among 50-59 years age group. Loose motion was found among 40.4% participants out of whom 40% were among 20-29 age group, 20% were among 30-39 age group, 40% were among 40-49 age group but none were found among 50-59 years age group.(Table-1)

Table-1: Distribution of symptoms of COVID-19 disease in relation with age of participants in percentages

Age	Fever (%)	Cough (%)	Fatigue (%)	Headache (%)	Loss of taste (%)	Loss of smell (%)	Loose motion (%)	Sore throat (%)
20-29	42	41	39	37	37	31	40	38
30-29	34	32	21	31	28	29	20	35
40-49	20	21	29	23	26	26	40	22
50-59	04	06	11	09	09	14	00	05

In this study most of the participants (89%) were not vaccinated against COVID-19 before they have been infected with SARS COV-2 (fig-3).

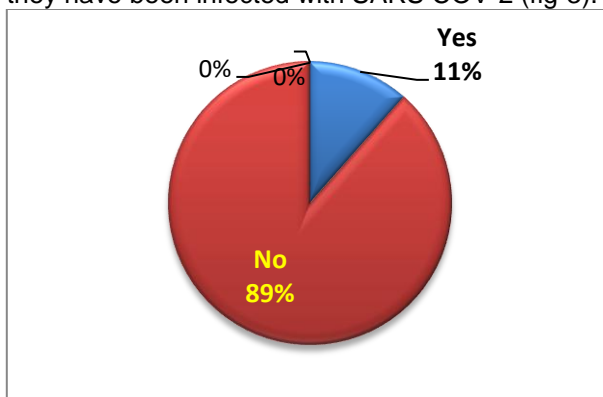


Fig-3: Distribution of vaccination against COVID-19 infection.

In this study most common presentation were fever and cough which comprises 90.4% and 85.6% respectively. Other common presentations were sore throat, loss of test sensation, headache, loss of smell and fatigue. Some of them presented with loose motion which comprises 9.6% among the patients with COVID-19 infection (Fig-4).

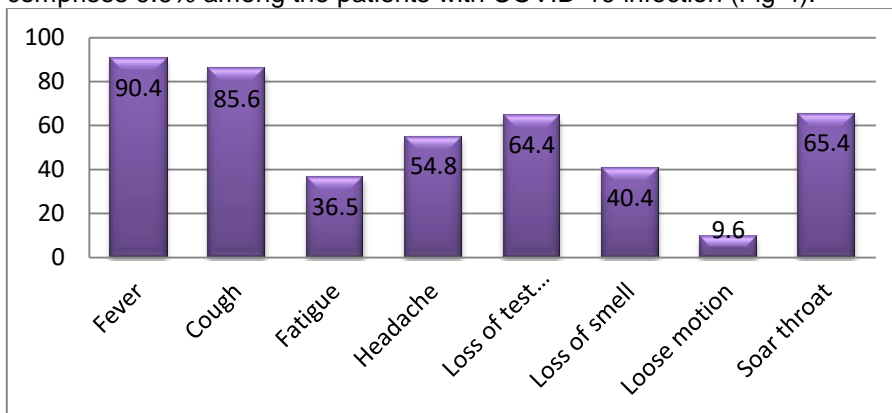


Fig-4: Frequency of symptoms of COVID-19 infection.

In this study we found that fever and cough were the predominant symptoms and who had presented with these symptoms 13% of them were vaccinated but 87% patients were not vaccinated against COVID-19 infection. Another symptom was headache, who were suffered with this of them (93%) were not vaccinated but only 07% of them were vaccinated. Here we have found that the persons who were not vaccinated became more symptomatic like fatigue (82%), loss of taste sensation (96%), loss of smell (98%), loose motion (90%) and sore throat (81%) than vaccinated patients like fatigue (18%), loss of taste sensation (04%), loss of smell (02%), loose motion (10%) and sore throat (19%). Vaccination cannot immune a person from being infected but significantly reduce symptoms of infection and none of the vaccinated individual required hospitalization for treatment and they become symptom free with only symptomatic treatment. So vaccinations have beneficial effects as shown in figure-5 and table-2.

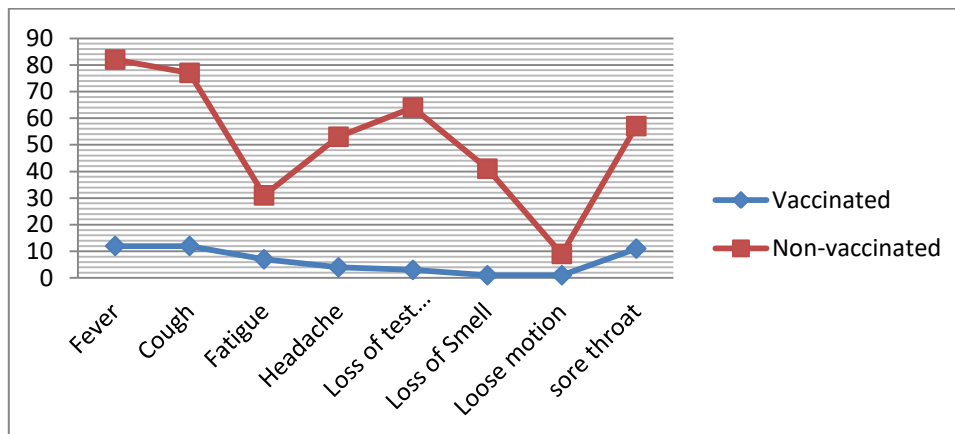


Fig-5: Distributions of symptoms of COVID-19 disease.

Table-2: Comparison of symptoms of COVID 19 between vaccinated and non-vaccinated individuals.

Symptoms	Vaccinated (%)	Non-vaccinated (%)
Fever	13	87
Cough	13	87
Headache	07	93
Fatigue	18	82
Dysjuicia	04	96
Anosmia	02	98
Loose motion	10	90
Sore throat	19	81

4. DISCUSSION

COVID-19 disease is caused by SARS COV-2 virus. The incubation period of this disease is 02 to 07 days from the date of exposure. (2) No age is immune to SARS COV-2 infection and here we found that most of the participants were among 20-39 years age group and which was 72.2% which may be due to exposure of young is more than older to COVID-19 infection otherwise immunological correlation can't be done with this young predominance. However further study with larger scale can be done to find out the exact immunological basis. This study is similar to the study done by Barbara 2021 where it is found that prevalence of SARS COV-2 infection is greater among young adult than older (3) but differs from the study done at Wuhan china where most of the infected individual were among the age group 55-59 years. (4) Here most of the infected individuals were male which may be due to their exposure in outdoor activities as male are mostly the earning member of a family so they have to come in exposure to outdoor than female in socio-demographic culture of Bangladesh which is similar to the study. (5)

Most of the symptoms of COVID-19 disease were similar to many diseases. It presents with nonspecific symptoms like fever, cough, sore throat, headache, loss of taste sensation, loss of smell, loose motion, fatigue and so on but none of them is specific for COVID-19 disease. (6)

Here we have found that SARS COV-2 infection is more among non-vaccinated individual but vaccinated persons also become sufferer with COVID-19 disease. Fortunately it was observed that vaccinated persons were less symptomatic than non-vaccinated moreover none of the vaccinated persons need to hospitalize due to severity of this disease. It was obvious in this study that vaccination cannot stop infection and disease. Here study populations were collected from outdoor clinic and during the study period no one of them fulfilled the criteria of hospital admission. They have been treated on outdoor basis symptomatically. They become cured after 14 days symptomatic treatment and no antiviral was given to any of them. There was no therapeutic challenge among the study population.

5. CONCLUSION

COVID-19 disease affects many part of the body and it's presentation varies depending its effects on organs. Fever and cough was the commonest presentation in this study. Vaccine is an important invention to combat against COVID-19 though it cannot prevent a person from being infected. Vaccination cannot immune a person not to be infected but significantly reduce symptoms of infection. So vaccinations have beneficial effects

6. ACKNOWLEDGEMENTS

Here we acknowledge the participants who take part in this study voluntarily though they were in suffering due to COVID-19 disease. Moreover they did not take any monetary benefit from this study.

7. COMPETING INTERESTS

There was no competing interest exists in this study.

8. AUTHORS' CONTRIBUTIONS

"Author-1' collected the data and bears publication processing fee, 'Author-2' designed the study, performed the statistical analysis, wrote the protocol, wrote the first draft of the manuscript, and literature searches and "Author-3' collected the data. Finally both authors read and approved the final manuscript."

9. CONSENT

Written informed consent was obtained from the patients for publication of information given by them.

10. REFERENCES:

1. *Frequency of Side Effects after First Dose of Vaccination against COVID-19 Among the People of Bangladesh.* **H. M. Khaleduzzaman, Nafisa Jabin Mishu.** 3, s.l. : European Journal of Medical and Health Sciences, 2021, Vol. 3. 2593-8339.
2. *Clinical Characteristics of Coronavirus Disease 2019 in China.* **Wei-jie Guan, Ph.D., Zheng-yi Ni, M.D., Yu Hu, M.D., Wen-hua Liang, Ph.D., Chun-quan Ou, Ph.D., Jian-xing He, M.D., Lei Liu, M.D., Hong Shan, M.D., Chun-liang Lei, M.D., David S.C. Hui, M.D., Bin Du, M.D., Lan-juan Li, M.D., et al.,.** 2020, The new england journal of medicine, pp. 1708-1720.
3. *Prevalence of COVID-19 in adolescents and youth compared with older adults in states experiencing surges.* **Barbara Romain, Moshe Schneiderman and Allan Geliebter.** 2021, National library of medicine, National center for biotechnology information, p. 16.
4. *Epidemiological and clinical characteristics of 99 cases of 2019 novel coronavirus pneumonia in Wuhan, China: a descriptive study.* **Chen, Nanshan.** 2020, Lancet. , pp. 507-513.
5. *Sex difference in coronavirus disease (COVID-19): a systematic review and meta-analysis.* **Biruk Beletew Abate, Ayelign Mengesha Kassie, Mesfin Wudu Kassaw, Teshome Gebremeskel Aragie, Setamlak Adane Masresha.** 2020, Diabetes and endocrinology, p. 129.
6. *Coronavirus Disease 2019 (COVID-19): Diagnosis.* **Özdemir, Öner.** 2020, Erciyes Med J, p. 242.