



Social Impact of COVID-19 on Rohingya Refugees in Bangladesh and India's Policy Stand: An Analytical Study

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Authors' contributions

This work was carried out in collaboration between both authors. The Author NP in this article contributes to data collection and analysis of research data and is responsible for the findings of the article. The author CRA of this article studied the concepts of the article. Both the authors read and approved the final manuscript.

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ABSTRACT

Aims: The Paper will explore about the COVID- 19 social challenges confronted by the Rohingya refugees in Cox's Bazar of Bangladesh and will also discuss the role of India in providing medical assistance to Rohingyas in Bangladesh and further will explain a set of policy recommendations designed to improve the life chances of the Rohingya community both now and in the future.

Study Design: Descriptive Study.

Methodology: A detailed and related Review of literature of the previous work has been collected in order to extract the information about the vulnerable conditions of Rohingyas refugees in Bangladesh amid novel coronavirus. The paper is based on qualitative research design and the

data has been collected from official reports, documents, newspaper, journal articles, books based on Rohingyas refugees in Bangladesh.

Results: The COVID-19 pandemic represents a grave social threat to the Rohingya refugees in the camps of Bangladesh. Having fled decades of persecution by the Burmese military, the majority of Rohingya currently live in densely populated refugee camps in Bangladesh. Most are denied access to the internet, mobile phones, humanitarian aid, and sanitary conditions and living in congested camps—all of which heighten the risk of infection and contamination. Currently in 2021, Government of India and International Organization are providing COVID- 19 vaccines and medical assistance to Rohingyas in Bangladesh.

Conclusion: Despite facing social impact from COVID- 19, Government of India are taking imperative steps, both to protect the Rohingya from widespread infection and to create the conditions whereby future tragedy can be preempted.

Keywords: Bangladesh; Corona virus; India; Persecution; Rohingyas.

ABBREVIATION

| | |
|------------|---|
| COVID- 19 | : Novel Corona Virus Disease 2019. |
| COVAX | : Covaxin |
| GOB | : Government of Bangladesh |
| SARS-COV-2 | : Severe Acute Respiratory Syndrome Coronavirus 2 |
| TB | : Tuberculosis |
| UN | : United Nations |
| UNICEF | : The United Nations Children's Fund |
| WHO | : World Health Organizations |

1. INTRODUCTION

Amongst the world's most heavily persecuted minority communities are the Rohingya people who fled from Myanmar over the decades and are currently living in Cox's Bazar (a small town on the southeast coast) in Bangladesh [1]. About 600,000 Rohingyas left Myanmar in 2017 and joined the previously fled 200,000–300,000 Rohingya refugees, making the overall 1 million [2] Around 65% of them live in a very overcrowded camps in 5 square miles. According to various sources, presently this is the world's largest and most densely populated (120,000 people per square miles) refugee camp (World vision, 2020). The living condition in the camps is woefully inadequate and un-healthy. The average number of people per household is 4.5. Almost all of them are living in modest temporary shelters of 14 m 2 size built through bamboo and tarpaulins. They have limited access to clean water and sanitation [3]]. The majority of Rohingyas sleep on a plastic paper spread over the muddy floor in their tents. In these situations, keeping even minimum hygiene is difficult, and any contagious virus outbreak has the potential to kill thousands of people [4].

In March 2020, COVID-19 outbreak has substantially affected all over the world, including Bangladesh, where an aggregate of 12,425 confirmed cases was documented as of May 07, 2021.(Worldmeter, 2020). On May 14, 2020 the first case of COVID- 19 Pandemic was reported in Rohingya refugee camps [5]. As the COVID-19 cases are growing rapidly, the nation state is facing increasing challenges to safeguard its citizens. Recently in July 2021, the spread of new COVID-19 delta variant in Bangladesh has exponentially increase the number of conformed cases and death ratio in the country, like what we had observed in the last year in China, Italy, and some other countries [6].

In July 2021, a sharp increase in cases among Rohingya refugees was observed. Since July 14, 2021 a total of 2147 confirmed COVID- 19 cases was reported and 20 deaths was reported from the Rohingya refugee camps and approx. 60% female was suffering from COVID- 19. By the first week of July 2021, more than 100 cases had been reported. The Rohingya's suffering from COVID- 19 belongs to median age of 22 years (range 0-107) with approx. 50% of them are male. More than 80% of Rohingyas belongs to 40 years of old age persons. In terms of disease severity, 15% of patients had moderate and 26% severe disease, which included fever, cough,

headache and sore throat. At the hospitalization admission 55% of the patients who died had severity conditions. Moreover, 20% patients who died from COVID- 19 were below the age of 30 years.(Table 1). In addition to the deaths reported from COVID- 19 cases, more than 100 suspected acute respiratory infection among Rohingyas was suspected [7-9].

Table 1. Source: Data from WHO report (as on 14 July 2021)

| Cases | Numerical Data |
|----------------------------|----------------|
| Total number of cases | 2147 |
| Deaths | 20 |
| Sex: | |
| Male | 50% |
| Female | 60% |
| Severity of disease | |
| Critical (%) | 2% |
| Severe | 26% |
| Mild/Moderate | 15% |
| Asymptomatic | 4.8% |
| Unknown | 80% |

Currently, in Bangladesh new COVID- 19 delta variant is spreading at an alarming rate at the Rohingya refugee camps. In 2021, the number of serious COVID- 19 cases as well as deaths in the Rohingya refugee camps surged three times as compared to the last year of 2020. Though, Government of Bangladesh had provided antiviral drugs like Hydroxychloroquine, Chloroquine and Ivermectin to Rohingyas for the treatment of mild to moderate case of COVID- 19 disease [10] but the COVID- 19 breakout in the current year of 2021 shows that the Rohingya camps may be worsened in the coming days. As such, people all over the world are being advised to stay home, to practice “social distancing”, and to make hygiene a priority. Such measures are definitely not possible to put into practice in a refugee camp. Importantly, the Rohingya refugees and the Bangladeshi local community are living across the camps and even it is restricted for local people to enter the camps, and for Rohingya people to exit the camp, although by law they are not permitted to do so. Thus, refugee people are in a dire state of stress, many of them have a range of underlying health conditions and nutritional inadequacies. All these threat considerations may suppress their immune systems to fight against COVID-19, and as a result, the current community-level transmission of COVID-19 puts them at risk of getting infected.

However, if a single case of COVID-19 is detected at Rohingya camps, any interventions aiming to prevent further infection and manage the infected cases would be a “mission impossible” as the number of cases might rise to thousands within a insignificant period of time due to close-proximity in the camps and high virulence of COVID-19. So, to handle the dire situation as well as to control new variant of COVID- 19 at the Rohingya refugee camps, the Government of India and various international organization are providing adequate aid as well as medical assistance to Rohingya refugees in Bangladesh and ensuring them with the comprehensive strategy and immediate provision of vaccines and medical drugs against COVID-19.

This paper is based on Review of Literature. The title and abstract were screened carefully and studies that are related to the paper were included. Initially, 80 articles were selected, some of them were found unrelated and some were duplicates. Hence, then excluded from the study. The authors reviewed only full text articles and finally 32 articles were selected for this study. Against this backdrop, the study aims to explore and explain about the social impact of COVID 19 on Rohingya immigrants in Bangladesh and the role of India and international organizations in providing medical assistance to Rohingyas in Bangladesh amid COVID- 19 Pandemic.

1.1 Aim and Objectives

The research paper is based on secondary sources in order to review and explore the situations of Rohingya refugees in Bangladesh amid COVID- 19 Pandemic. The specific objectives are:

1. To analyze the social impact of COVID- 19 on Rohingyas refugees in the camps of Bangladesh amid COVID- 19 Pandemic.
2. To analyze and provide some recommendations to curb the spread of COVID- 19 at Rohingya refugees camps.
3. To analyze the role of India in providing medical assistance to Rohingyas in Bangladesh amid COVID- 19 pandemic.

1.2 Research Questions

The research intends to seek answers to the following research questions:

1. What are the social impacts faced by Rohingyas refugees in Bangladesh amid COVID- 19 Pandemic ?
2. What medical assistance provided by Government of India and International Organization to Rohingya refugees in Bangladesh amid COVID- 19 Pandemic ?

1.3 Literature Review

A brief review of literature is conducted and presented in this section. The current literature is exploring the impact of COVID- 19 on social and health of Rohingyas refugees in the camps located at Bangladesh. Islam [11] discusses Rohingyas refugees in Bangladesh are under significant health risk in Cox bazaar and they are facing continuous barriers that are affecting on their health and use of health care services. Lopez et al. [12] suggested that Rohingyas in Cox's Bazaar are not allowed to work outside the camps as they are depended on daily wage-earning activities. This impacted on their economic livelihood. Rahman et al. [13] discusses Coronavirus cases in Rohingya refugee camps, that how they are more vulnerable to COVID- 19 and some measures should be adopted by Government to combat the crisis. Further, it also explained that It is necessary some measures should also be adopted by International Organization to curb the virus to spread in the camps. If this measure is not adopted it can lead to mini pandemic in the camps. Kluge [14] explains the situations and crisis faced by Rohingyas and migrants in COVID-19 Pandemic. There is a possibility of a large number of cases being undetected in the camps due to limited testing capacities and lack of social distancing measures in the camp. Morawska and Milton [10] describe psychological effects of Rohingyas during post-migration stressors in the camp. Islam and Nuzhath [11] emphasize Migration has impacted on the economy, and social fabric of our society. Sehgal (2020) describes impact of COVID-19 crisis on Refugees and how it had led to ill treatment of Refugees in the world. Islam and Purohit [3] emphasized on mental health and psychological wellbeing of Rohingya refugees displaced to Bangladesh and its neighboring countries. It also explains that most of the Women's and girls were impacted severely in the camps and their needy services were not fulfilled. On the other hand, Truman (2009) describes in his article that Rohingyas faces limited resources, inaccessible health services, and limited English proficiency in the host countries. Due to this they are more

fearful and are not able to express their difficulties in the camps. Islam and Yunus [15] explains the global outbreak of novel coronavirus and its impact of human health. He also included that Nutritional deficiencies are exceedingly predominant among Rohingya. Verma (2020) discusses about the largest persecuted community of the world. Rohingya's history is complex, as they are more exposed to the human rights violations.

2. METHODOLOGY

This study was carried out as a desk study to address the phenomenon under research as outlined in the reference list, which provides a detailed information of sources that were reviewed. A detailed Review of related Literature is utilised in order to collect current and topical data from the reports, journal and articles. Electronic media was also consulted to answer the objectives of the study. In addition, a wide range of additional sources of information from the websites were utilised. International, Regional and National frameworks also anchored this review. Tables and figures are also presented to highlight the issue. This study is focused mainly to elaborate literature written in 2020 and 2021 to ensure a detailed assessment of the vulnerable position of Rohingyas refugees in Bangladesh amid coronavirus pandemic. The current studies rely on the application of 'Qualitative analysis'. The paper is conducted in a systematic search across multiple sources of information with reference to the social, and health-related factors amongst Rohingya refugees were used.

This Research paper discusses as follows: Section one introduces the topic of the paper and reviews the previous literature. Section two explains the methodology used in the paper. Section three explains the social challenges at Rohingya refugees camps and further discusses high vulnerability of COVID- 19 transmission and it also elaborates about India's medical assistance to Bangladesh and lastly Section four of the paper explains recommendations to fight against COVID- 19 Pandemic and followed by conclusion.

3. RESULTS AND DISCUSSION

In August 2017, Bangladesh saw a massive influx of Rohingya refugees into its territory in Cox's Bazar from Rakhine state, following their violent persecution by the Myanmar authorities,

(Fig. 1) and the United Nations described it as a textbook example of “ethnic cleansing”(UN REPORT, 2020).

Since then, the district of Cox’s Bazar has been home to nearly 900,000 Rohingya refugees living in extremely harsh, overcrowded and unhygienic conditions [13]. They continue to survive and live under clouds of distress, constantly burdened with the helplessness of being ripped off their identity, the agony of being stateless, the sadness of having no home to call their own and the anguish of losing their loved ones. Four years into their exodus and yet no agreement has been reached on their peaceful repatriation to send back to their homeland.

However, since early 2020, governments across all over the nations have imposed lockdowns [6], shut down businesses, closed down all the universities and schools, banned all recreational activities and social gatherings, in an attempt to curb the spread of COVID- 19 [14]. In addition to these, Government of Bangladesh (GoB) has also enforced mandatory measures like use of thermal scanners in workplaces, prohibition of domestic and international travel, and quarantine period for incoming travelers as well as Government had also imposed strict COVID- 19 protocols in Cox Bazaar, where numerous Rohingya refugees are residing. A specialized lockdown was levied in Cox’s Bazar which restricted entry into or exit from the district, except for emergency of food and medical supplies [16].

Public toilets and bathing facilities are installed at various points in the camps. These are to be shared by almost everyone living in the camp. Residents of different tents/households have to

share the same facilities as there is one latrine for every 19 persons and one bathing facility for every individual [27]. While some have soaps and water points installed, while most of the Rohingya refugees have no provision for any sort of handwashing facilities. To collect water for drinking and daily chores, refugees are gathering around water points. To access these facilities, one must walk a few meters, thus making it difficult for women and children to access at night for security reasons. These facilities are being shared by everyone and it is serving as a hotspot for the transmission of the coronavirus in the camps [17].

3.1 High Vulnerability of COVID- 19 Transmission

The literacy level of the Rohingya population is very low. Despite being educated by the various aid agencies, they are not able to maintain basic personal hygiene as they have limited access to soaps and water. Handwashing and use of facemasks is not a common practice among this high-risk group of population [18]. During the eruption of COVID- 19 virus many of them was not aware about its consequences [18]. In 2020, Humanitarian organizations was facing difficulty to spread information regarding COVID-19 protocols due to the internet ban enforced by the Government of Bangladesh (GoB), since September 2019, there was limited access to mobile data and communications in the refugee camps [19]. This blackout has prevented the dissemination of vital information and delivery of updated knowledge on COVID-19 inside the camps, eventually leading to the spread of misinformation and misinterpretation of facts.

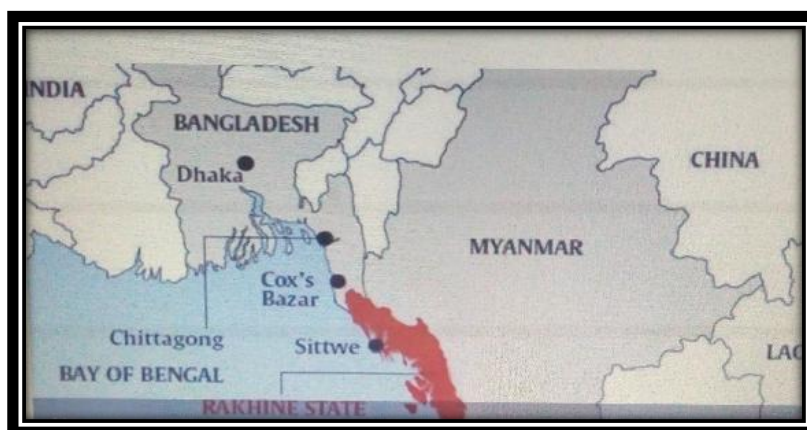


Fig. 1. Rakhine State
Source: worldvision

However, due to the lack of social distancing measures in the camp [12] the Rohingya refugee continues to be at highest risk for exposure to COVID-19. The present infrastructure of the camps is unsuitable for maintaining “social distance” and the lack of hygiene practice is creating the virus to spread in the Rohingya camps [10]. (Fig. 2).

Besides, the low level of literacy and lack of awareness among the population makes these camps a potential breeding ground for COVID-19 transmission as a result, most of the Rohingyas was found COVID positive in September 2020 and October 2020. (Fig. 3).

All in all, we are awaiting the mini pandemic within the Rohingya refugee camps, especially in Cox’s Bazar of Bangladesh [7-9].

Apart from COVID- 19 disease, Rohingya refugees in Bangladesh are suffering from other such diseases. According to WHO 2021 data, nearly 54% Rohingya refugees children, 60% Rohingya refugees women and 10% Rohingya refugees pregnant women’s are residing in

Bangladesh. According to a study, the major health problems prevailing among Rohingya refugees are unexplained fever (2,27,928), acute respiratory infection (2,23,651) and diarrhea (1,92,560). In August 2021, the Rohingya refugees camps located in Cox Bazaar are experiencing a sudden outbreak of diphtheria and measles that were spread among the community. (Table 2).

In Bangladesh, the cases of tuberculosis (TB) in Rohingya refugees camps are highly prevalent among the vulnerable Refugees, considering the fact that Myanmar is one of the top 30 countries with the highest TB ridden country. According to a report of January 2021, it is estimated that in Bangladesh approx. 51.5 % had hypertension and 14.2% had diabetes. Additionally, 36,930 refugees were suffering from injuries. Most of the Rohingya refugees in the congested camps are addicted to alcohol, tobacco etc. Nutritional deficiencies are exceedingly predominant among Rohingya refugees, particularly among children. In Rohingya refugees camps, children aged among six to 59 months are anemic and one-fourth had Global Acute Malnutrition (GAM [7-9].



Fig. 2. Refugee camp in Cox’s Bazaar with dense congested area
 Source: [researchgate.net/publication/347706854](https://www.researchgate.net/publication/347706854)

Table 2. Health crisis faced by Rohingya refugees in Bangladesh

| Type of Disease | Affected Population | Total Cases |
|-----------------------------|---------------------|--------------------|
| Unexplained Fever | Adult, Children | 2,27,928 |
| Acute Respiratory Infection | Adult, Children | 2,23,651 |
| Diarrhea (watery & bloody) | Adult, Children | 1,92,560 |
| Malaria | Adult, children | 53 |
| Measles/ Rubella | Adult, children | 1,410 |
| Diphtheria | Adult, children | 7,772 (42 deaths) |
| Tuberculosis | Adult, children | 4,000 |
| COVID- 19 | Adult, children | Data not available |

(source- www.unhcr.org/Bangladesh)

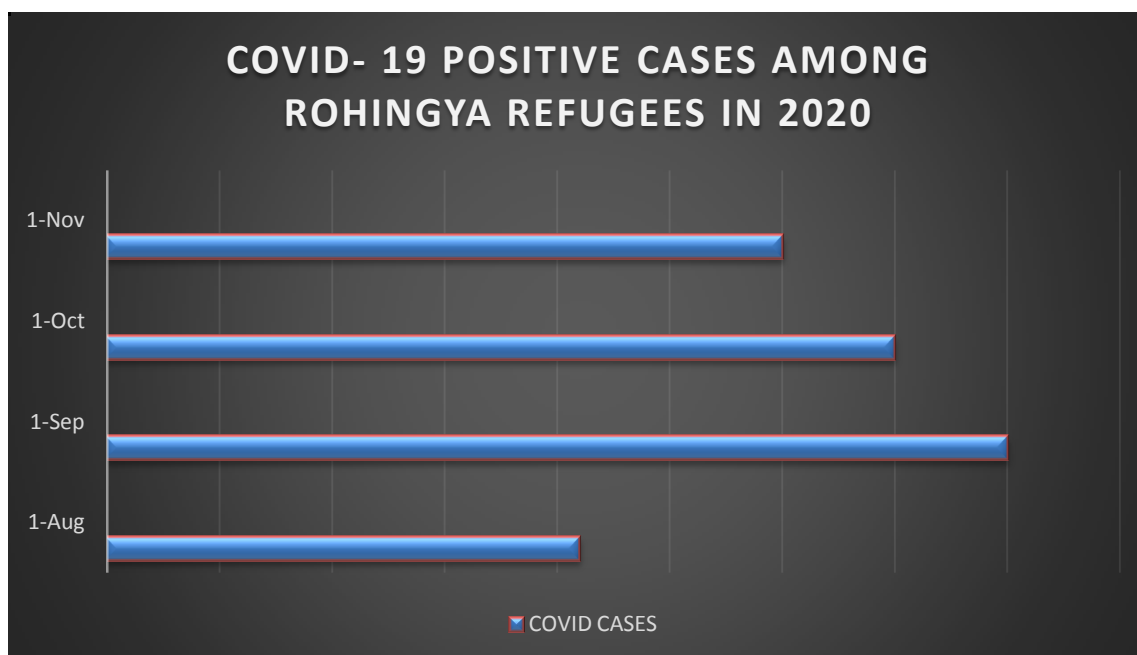


Fig. 3. COVID- 19 positive cases among Rohingya Refugees at Cox’s Bazaar

COVID- 19 impacted on the life and livelihood of Rohingya refugees [20]. Women’s and girls were impacted severely in the camps and their needy services were not fulfilled [20] this resulted the adolescent girls and young women in the risk of sexual exploitation [21-22]. Moreover, the higher risk of COVID- 19 is on the elderly population, people disability and people suffering from medical problems [23]. The Rohingya refugee camps are congested with 123,932 household and a sharp increase in the cases among Rohingya refugees has been observed from July 2021. From July 1- August 1, 2021, a total 2475 Rohingyas was infected by COVID- 19 virus and 28 Rohingyas was expired. From August 2- August 15, 2021, a total of 2677 patients from Rohingya refugees had COVID- 19 disease and 29 deaths was reported from the camps. The median age of Rohingya men effected from COVID- 19 was between 21- 40 years and women age was between 41- 60 years. From August 16- August 29, 2021, a total of 2883 confirmed COVID- 19 cases was found from Rohingya refugee camps and about 30 deaths was recorded in the camps and 66% male and 34% female was suffering from COVID- 19. In addition, 20% of deceased patients were under 30 years of age. From August 30- September 5, 2021, a total of 2922 cases was confirmed among Rohingya refugee camps and approx. 32 deaths was recorded in the camps. In addition, 53% male was affected and 47% female was effected from COVID- 19.(Table 3) [9]). However,

the disease condition of 80% of patients was unknown. (data missing or under reported).

Table 3. Cases of deaths

| (Month) 2021 | Total Death |
|---------------------------|-------------|
| 1 July- 1 August | 28 |
| 2 August- 15 August | 29 |
| 16 August- 29 August | 30 |
| 30 August- 5 September | 32 |
| 6 September- 12 September | 0 |

Source: WHO Report, July- Sept, 2021

Table 3. Total number of COVID- 19 cases

| (Month) 2021 | Total Cases |
|---------------------------|-------------|
| 1 July- 1 August | 2475 |
| 2 August- 15 August | 2677 |
| 16 August- 29 August | 2883 |
| 30 August- 5 September | 2922 |
| 6 September- 12 September | 53 |

Source: WHO Report, July- Sept, 2021

It has been observed that, from July-September,5 2021, the confirmed cases and deaths ratio of Rohingyas at Rohingya refugee camps are increasing due to the outbreak of new COVID- 19 delta variant. The values in the (Fig. 4) describe the infection disparity level between male and female population. It shows that men are more vulnerable due to COVID- 19 in the camps as compared to women. From 1 July- 29 August, 2021 the ratio was constant and same

as 68% percent Rohingya men were suffering from COVID- 19 whereas from 1 July- 1 August, 32% women were having COVID- 19. From August 2- August 29, approx. 34% women were suffering from COVID- 19. From August 30- September 5, 53% men were having COVID- 19

and 47% women were suffering from the virus. From July- September, 2021, a comparison level model (Fig. 5) is explaining the comparison level of death among Rohingya men and women effected due to the outbreak of COVID- 19 in the camps.

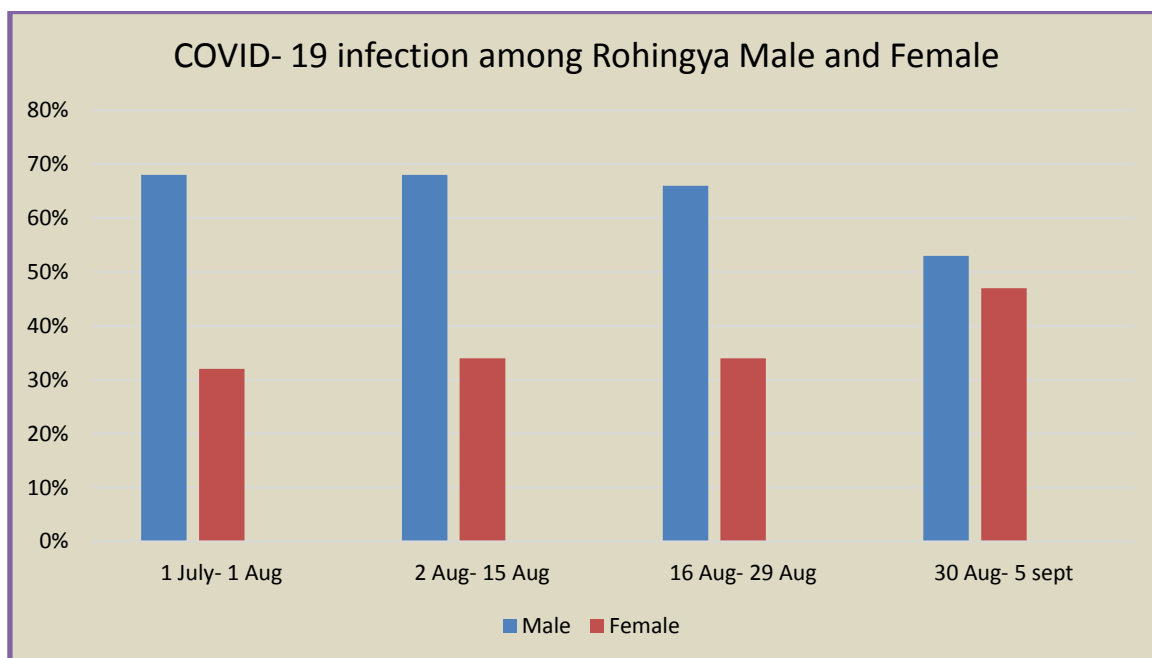


Fig. 4. COVID- 19 infection level among Rohingya Male and Female from July- Sept, 2021.
 Source: WHO Report, July- Sept, 2021

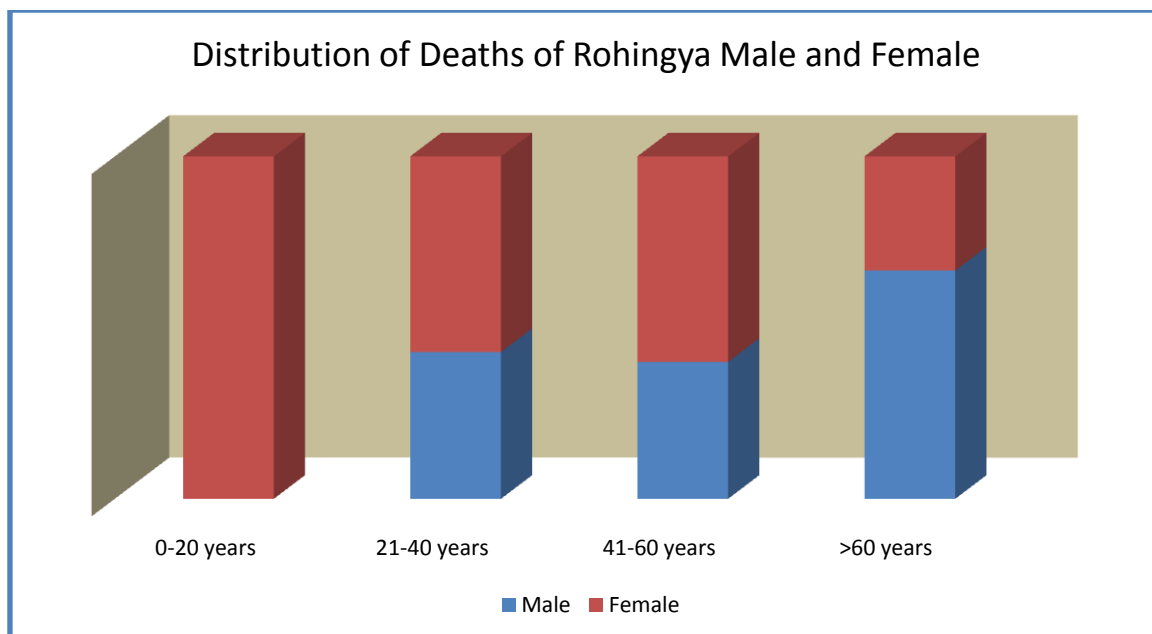


Fig. 5. Comparison level model of deaths of Rohingya men and women from July- Sept, 2021
 Source: WHO Report, July- Sept 2021

3.2 Understanding India's Assistance to Rohingya Refugees in Bangladesh

India has received Refugees from Pakistan, Bangladesh, Afghanistan, Sri Lanka and Tibet etc. from South Asian region and other nations. Rohingya refugees crisis have become one of the prominent issues for India. India's will and direct competition with Chinese investment in Myanmar have kept India's leadership absent from making decisions with Myanmar. Nations around the world, in spite of having recognized the Rohingya issues, have amplified no big support to Bangladesh. In spite of the fact that India's help with the arrangement of relief materials in the form of drain powder, dried fish, infant food, raincoats and gumboots etc. are provided to Rohingyas in Bangladesh [24]. In 2021, India has provided medical aid and COVID- 19 vaccination assistance to Bangladesh. (Table 4).

India gave 1.2 million free doses of the AstraZeneca coronavirus vaccine to Bangladesh, in March 2021. Dhaka also asked New Delhi to maintain a regular supply of shots to battle the pandemic. All this initiative by India can leads to maintain innovative opportunities to promote India's foreign policy and diplomatic relations between nations in its neighborhood and across globe. India had also supplied hydroxychloroquine, Remdesivir and paracetamol tablets, as well as diagnostic kits, ventilators, masks, gloves and other medical supplies to a large number of countries including Bangladesh, to help them to deal with the COVID- 19 pandemic. Both countries are in active discussion regarding cooperation in the field of COVID- 19 vaccine, including phase 3 testing, vaccine distribution and co- production. (Ministry of External Affairs, 2021). By financing shipments from India's assistance program for cash-strapped neighboring countries desperately needing such assistance, India shall earn the long-term goodwill of its immediate neighbors and across Indian ocean countries. Early shipment from India to Bangladesh could help counter China's vaccine and mask diplomacy in its neighbourhood. India always follows India's neighbourhood first policy. Though, in all this initiative a provision provided to Rohingya refugees was also mentioned [25].

Currently, Government of Bangladesh is working closely with COVAX, a global vaccine distribution by WHO. Currently, on September 18, 2021, a total of 3,54,55,905 COVID- 19 vaccine doses are distributed to Bangladesh by WHO [9] On August 10, 2021, the Directorate General of Health Services (DGHS) issued an official communication announcing vaccine prioritization for Rohingya refugees over 55 years old with the revision of inclusion of all Rohingya volunteers of more than 18 years of age and the second round of COVID vaccine was commenced on September 18, 2021 for Rohingya refugees aged 55 years and above.(September 2021, data is not available). WHO continues to provide epidemiological data to support operational decision making for the COVID- 19 response in Cox's Bazaar. On August 10, 2021 nearly 48,000 Rohingya refugees received vaccination against COVID- 19 [9] and on August 11, 2021, more than 4,000 Rohingya refugees received COVID- 19 vaccine in Cox Bazaar of Bangladesh [26].

The Government of Bangladesh signed a revised version of the National Deployment and Vaccination Plan (NDVP) in early February 2021, a national campaign that included the Rohingya refugee population. Because of the complexities of the humanitarian situation in Cox's Bazaar, the operational guidelines for the Rohingya community was revised in consultation with the Civil surgeon, the Ministry of Health and Family Welfare of India and major humanitarian partners such as WHO, UNICEF and UNHCR. At the Rohingya refugee camps, 57 health facilities have been identified at vaccination sites and 62 vaccination teams, made up of two vaccinators and four trained volunteers have been set up. Presently, 59 health facilities are serving as immunization fixed sites and another 66 vaccination teams conduct outreach sessions in healthcare facilities to ensure the progression of daily schedule immunization program at Rohingyas camps of Bangladesh [9]. Therefore, this campaign launched by Government of Bangladesh with the support provided by India and WHO will be a pivotal in containing COVID- 19 transmission and to lower mortality and morbidity among Rohingya refugees in Bangladesh.

Table 4. Vaccine received by Bangladesh from India

| Country | Grant | Commercial | Total |
|---------|-------|------------|-------|
| India | 3.3 | 7 | 10.3 |

Source: Ministry of External Affairs Report, 2021.

4. CONCLUSION

Throughout the research it has been observed that COVID- 19 Pandemic has socially impacted on Rohingya refugees in Bangladesh and it is challenging to follow social distancing, isolation method, hygiene practices, good living conditions and sanitization treatment etc. at the Rohingya refugee camps. All this has created a difficult stance to curb the spread of the virus at the Rohingya refugee camps. But, in the year 2021, the scenario got changed when Government of India and various International Organization provided medical aid and vaccine assistance to Bangladesh citizens as well as to Rohingya refugee in Bangladesh to curb the spread of COVID- 19 pandemic. The Government of Bangladesh is leading the COVID- 19 campaign at the Rohingya refugee camps, with technical assistance from WHO, UNICEF and UNHCR. WHO has also provided training to medical officers, vaccinators and other members of the health care employees and provided assistance to Rohingya refugees. As such, thousands of health care employees work tirelessly to promote and mobilize communities for health and hygiene measures as well as to provide them with critical health services. From August 2021, in the first round of COVID- 19 vaccine campaign approx. 86% Rohingyas was vaccinated and the current second round of vaccination is at the progression level. Importantly and to be noted, those who have been vaccinated must continue to wear face masks, practice hand hygiene and follow other COVID- 19 protocols to curb the virus to spread.

5. RECOMMENDATION

Based on the above discussion and availability of reports to the authors, some recommendations should be undertaken to prevent COVID-19 among Rohingya refugees camps in Bangladesh. Such as in the camps Rohingyas refugees have limited access to TV, radio and the internet. So, to collect the accurate information, Government and other humanitarian organization have become the only last source. So, to gather a well-defined data, an evidence-based source from refugees needs to be expanded. An effective Health education should be provided to Rohingyas refugees in the camps. So that they might not get confused with symptoms of common illness already present amongst the refugees (TB, diarrhoea, flu). Therefore, a careful attention must be paid to detailed health education related to COVID- 19. It is also

important to focus on non- pharmaceutical interventions (face mask, medical gloves, alcohol-based sanitizer, social distancing) to be adopted as a preventive measure to reduce the spread of COVID- 19. Due to the huge population of Rohingya refugees in the camps, a more large-scale testing sites and testing facilities should be increased so that it can easily mitigate the spread of COVID- 19. The Government of Bangladesh, NGOs, and foreign health organizations should need to undertake a further and future initiative to achieve containment of the spread of COVID-19 pandemic in the Rohingya refugee camps in Bangladesh. Electronic billboards can be installed to provide static and full motion texts, images, and videos related to COVID-19. The contents on the billboards can guide refugees on how to keep social distances, wash hands, use masks, and other basic hygienic behaviours to prevent and control COVID-19. The recommendations at the Rohingya camps can contribute in controlling the spread of COVID- 19 and will further protect the health of refugees. This recommendation can also influence around 26 million vulnerable refugees living across the worldwide.

LIMITATIONS AND STUDY FORWARD

The major limitations of the present study are the constant change in facts and figures in terms of data available for the research. Since, it is an evolving crisis, it was difficult to analyse the data available at a given point of time due to their dynamic nature. Second, limitation of the research was lack of access to the Rohingya refugees' settlement for collection of empirical data on the ground. So, due to the outbreak of the virus the authors were heavily dependent on secondary sources. Thirdly, the research was mainly confined to Bangladesh, whereas in the pandemic phase the Rohingyas faced adverse conditions in other parts of Asia as well. This deprives the research of its comparative analysis dimension.

The study opens avenues for researchers, policymakers, and scientists to further investigate the extent and impact of novel coronavirus on Rohingya refugees in Bangladesh and in other parts of the country.

DISCLAIMER

The products used for this research are commonly and predominantly use products in our

area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

CONSENT

It is no applicable.

ETHICAL APPROVAL

It is no applicable.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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