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Health Risk Factors and Refugee Children in Bangladesh: A Study on Rohingya at Kutupalong Camps

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ABSTRACT

In the Cox's Bazar refugee camps, around 855,000 Rohingya people live, with 54 percent of them being children. In Myanmar, these children were denied access to adequate healthcare, immunizations, food & nutrition, hygiene, and education. Since August 2017, when the Rohingya were forced to flee from Myanmar to Bangladesh due to the Myanmar military's brutality, they have become more vulnerable. Children were vulnerable to hunger and various infectious diseases as a result of the fighting and displacement, which posed serious health hazards. The numerous health risk factors of the children were analyzed in this study in order to provide a picture of the refugee camp.

Method: In December 2017, a questionnaire was used to assess the shelter and camp environment, food and nutrition, WASH knowledge and practice, vaccination and immunisation, medication and supplements, and education of 120 parents of Kutupalong camp no 4, OO zone.

Result: The health of 29% of the children was better than a year before, while 68 percent of the children had the same result as the previous year. Breakfast and supper were consumed by 96.67 percent of the children, and 80.8 percent were fed three times lunch and supper, with 63 percent agreeing that the camp setting was not ideal for their growth. 61 percent of families could provide enough water for their children using the water containers provided by various NGOs (Non-governmental Organisations). Despite the fact that the water sources are not close to their homes, 98.3 percent of families use tube well water. Only 49.2 percent of parents said the latrines had enough water for bathing and cleaning, while 29.2 percent said they had adequate lighting and were in their suitable placements. After using the restroom, 66.7 percent of children used soap, 16.7% used soil or ashes, and the rest used nothing. Vaccinations had been given to 91.7 percent of Rohingya children. In Bangladeshi refugee camps, 56.2 percent of Rohingya children were educated by learning centers run by various NGOs and Maktabs (Muslim kids were taught Quran in masjids).

Limitations: This report has relatively limited data that does not provide a comprehensive picture of the children's camp situation.

Conclusion: Based on the findings of the study, the camp's status may be improved if the children and their families were given good WASH knowledge and introduced to the WASH awareness programme, proper water supply and sanitation, and health care as needed.

Keywords: Rohingya children; Health risks; WASH, Nutrition, and Vaccine

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Introduction

The Rohingya people are natives of Myanmar's northern Arakan region (1), and they have been escaping to Bangladesh as refugees since 1978, since they were exposed to unlawful killings, sexual assault, religious persecution, and violence by the Myanmar military in Rakhine state (adjoined to the Bangladesh border) (2, 3). They were denied status in Myanmar, which prompted in discrimination, deprivation of healthcare, along with constitutional identities and immunisations (4, 5). Since August 25, 2017, the Rohingya people have been migrating in large numbers, and the Bangladesh government has provided them with shelter at the Kutupalong Expansion Site (near the original Kutupalong Refugee Camp), Hakimpara-Jamtoli-Bagghona Camp, and Nayapara Camp in Cox's Bazar Sadar, Ramu, Teknaf, and Ukhia (2). According UNHCR and WHO figures from 2018, between 954500 and one million Rohingya individuals have moved to Bangladesh, with some crossing the border by land and others across the Naf river, which separates the two nations (6-9). The Arakan Rohingya Salvation Army (ARSA) launched an offensive with the support of 30 police posts (10, 11), which was followed by a Myanmar army and Rakhine Buddhist campaign against Rohingya civilians, resulting in hundreds of thousands of refugees crossing the Bangladesh-Myanmar border (2). The Bangladesh Army provided the Rohingya people with five basic supporting and survival resources after they crossed the Bangladesh border: shelter, water and sanitation, a small amount of food and nutrition, health services with consultations and drugs, non-food items such as water containers, housing materials, buckets, or cash money, and information (9).

More than 855,000 Rohingya people live in the Cox's Bazar refugee camps of Ukhia and Teknaf and 54 percent of them were children (12, 13). The majority of the camps did not have proper housing or sanitation systems, lack of access to safe drinking water and poor hygiene, overcrowding, limited food resources, and health services with limited resources increased their public health needs and vulnerability to infectious diseases such as cholera, diarrhea, and pneumonia (2, 14-17). Furthermore, it was discovered that Rohingya people lacked footwear to protect themselves from intestinal and other dangerous infections (9, 18). There have been reports of occurrences of Hepatitis A, E, and STD among women, which is a major issue because Bangladesh lacks the resources to effectively treat these diseases (9, 19, 20). Children make up more than half of the refugee population, and they require special attention since they are more susceptible to malnutrition and face greater illness risks as a result of displacement (14-17). Furthermore, Rohingya adults and children have encountered horrific events and tragedies such as property destruction, seeing the killing of their own kin, and violence, as well as suffering severe bodily and psychological traumas (2, 6). Children are affected in every manner by the sudden disruption of families and communities, as well as the refugee emergency situation. The health risks of Rohingya refugee children must be investigated in order to safeguard the children's future health. We won't be able to provide enough resources and health services until we reduce health hazards. Infants and small children are frequently victims of the violence, disease, and starvation that accompany population displacement and refugee camps (21). Children are deprived of their socioeconomic and cultural settings in this exceedingly precarious circumstance. Meeting the children's needs frequently entails assisting and supporting their families and communities.

In this study, several the health risk factors among the Rohingya children have been assessed through a survey questionnaire which showed the scene of the Rohingya Refugees at

Kutupalong extension camp. The objective of this study was to observe the health risk factors related to the social and physical health of the Rohingya children at Kutupalong camp.

Materials and Method

Study Area, Design, and Sampling Technique:

Kutupalong is one of the largest refugee camps in Cox's Bazar, with over 600,000 people (21, 22), which is why it was chosen as the study site. It is a survey study that collected data in December 2017 from parents of 18-year-old children since children are difficult to talk to and would not grasp all of the information they were required to supply. A lottery mechanism was utilized in the sampling procedure, and the number five was drawn to use systematic sampling. The study was place in the OO zone of Kutupalong Camp 4. Because of time constraints, the investigation will not be able to cover the entire area. As a result, we chose the number five as the house selection number. Every fifth residence is being questioned. A total of 120 refugee houses were interviewed for data collection using a systematic sampling approach, as if they were monograph samples.

Data Collection Procedure:

The quantitative data was acquired in December 2017 through a face-to-face interview survey in which the researcher employed a pre-tested Bangali questionnaire with the support of a Rohingya language translator after the children's parents given verbal consent. A number of areas were added to the questionnaire, including socio-demographic information, arrival dates, household risk factors, food and nutrition, WASH, vaccination and immunisation, medication and supplements, access to health services, education, and protection. There are open-ended and closed-ended questions in the survey, as well as some unstructured questions for respondents.

Data Analysis:

The independent variables were summarized using descriptive analysis using SPSS version 20 software. For data analysis, the Bengali questionnaire was translated into English. The questionnaire contained both open-ended and closed-ended questions, with close-ended questions being entered using the coding approach. Closed-ended inquiries include a variety of response options from which respondents select the one that best fits their dilemma. Data that are open-ended and do not fit into any set category have been described using detailed interpretation. It includes the respondent's perspective on the response. There were clear operational definitions of different crucial terms needed for this research to ensure reliability and validity. The study's questionnaire consisted of pre-selected questions, limiting replies to those that were required for the study's goal. To examine the research objective, a fixed measurement technique or questionnaire has been chosen. It was attempted to preserve the measurement of this research as legitimate and dependable as possible by following these techniques.

Results

The survey was conducted in December 2017 on the health risk factors such as shelter, environment, food and nutrition, vaccination, immunization, and education of the children in the Rohingya Kutupalong Camp. The objective of the study to give a clear picture of the health

status of the children in the camp and compare the health condition of the children prior year of their migration and also provide information of their health needs to the health services providers in Bangladesh.

Socio-Demographic Information:

In this study, 114 moms of the households responded to the questionnaire, whereas only 6 fathers did. The families were all Muslims.

The initial phase of the study focused on gathering general information about their position at the camp. It was discovered that 75 percent of the households in the 120 responder residences had 0-6 children and 25% had children older than seven years old. Each family had to have a minimum of six members. On the route to Bangladesh, 1.7 percent of families lost their children to various diseases, while the remaining 98.3 percent arrived safely in Bangladesh. The majority of Rohingya families arrived in Bangladesh between three and five months ago, with 29.2 percent arriving in two months and 70.8 percent taking three to five months. From the start of the data collection period in December to the time of the EId-ul-Adha, a Muslim religious celebration in Bangladesh, they arrived before or after the EId-ul-Adha. Walking to Bangladesh took 5 days for 36.7 percent, 6-10 days for 45 percent, and more than 10 days for 18.3 percent. The greatest rate of male and female children under the age of five in a family was 80.8 percent and 79.2 percent, respectively, in the survey area. Only three households had more than five male and female offspring. Almost 292 percent of parents stated their children's health was better than it was a year ago. Conditions were the same as a year ago for 68.3 percent of parents, and worse than a year ago for 1.7 percent of parents.

Shelter and Camp Environment:

97.5 percent of parents said camp huts provided appropriate safety for their children from the Burmese Army's continual threat. However, 36.7 percent of respondents responded positively to the topic of children's social development through safe and suitable shelter, while 63.3 percent responded negatively, indicating a big problem. The framework of the improvised communities was composed of bamboo and covered with plastic and tarpaulins. The weather in the villages was extremely warm in the mornings, but extremely cold at night. The houses offered no normal areas, privacy, or freedom of movement, according to 63 percent of parents, because the families were large and lived in one or two rooms. In this type of environment, proper infant growth would be impossible. Furthermore, all of the families remarked that there aren't enough spaces for the kids to play or have fun at the camp.

Food and Nutrition:

For breakfast, lunch, and dinner, the majority of the children in this research ate rice with vegetables, mashed potatoes or curries, and dry fish. Breastfeeding and rice with vegetables were found to be fed to 52.63 percent of children under the age of four. 30.26 percent of children were given cereal and breast milk, while 17.11 percent were given rice and milk powder solution or other nutrients from reliefs. Breakfast and supper were eaten by 96.67 percent of the children, and 80.8 percent were fed lunch and supper. 60.8 percent of children could obtain enough water in a day (>five glasses), whereas 39.2 percent could get less.

WASH (water, sanitation, and hygiene) Activities:

The residents of the camp get their water from several pumps or wells that were built with the help of NGOs or the government. Pumps or tube wells, on the other hand, have gone stale in certain regions. Those don't operate, and some are so far away from people's homes that they must collect water from other sources, such as little waterfalls known as jhiri or ponds. In the study region, 98.3% of families use tube well water, while 1.7 percent use other sources such as jhiri and other sources. 75 percent of families keep their water in containers donated by various NGOs, while 25% store it in a pot or bottle. Only 29.2 percent of parents felt that the latrines had appropriate lighting and were positioned in their proper locations, whereas 49.2 percent said having enough water for bathing and cleaning. The parents stated that their children were taught to wash their hands before eating, after eating, and after using the restroom. 80.3 percent of those surveyed used their hygiene knowledge. 66.7 percent of families instructed their children to use soap after using the restroom, 16.7% used soil or ashes, and the rest used nothing, posing a serious health risk. 90.2 percent of parents said the location lacked a proper drainage system. In addition, 98.3 percent said the camp lacked solid waste collection, transportation, and disposal facilities. 70% of parents claimed they have more troubles with their children while using the restroom at night. At the time of the poll, 45.8% of parents reported that their children were sick, which is a big issue in this congested camp. Fever or cold symptoms afflicted 25.8%, diarrhea and dysentery afflicted 15%, and skin illnesses afflicted 6.6 percent.

When it comes to menstruation, 97.22 percent of female children over the age of 13 (out of 36 respondents) use reusable cloths for menstrual hygiene, while 2.78 percent use sanitary napkins.

Vaccination and immunization:

In the camps, 91.7 percent of Rohingya children had received up-to-date vaccinations. In Bangladesh, 90.8 percent of people received one or two vaccinations. In the survey area, 62.5 percent of children under the age of five were immunized.

Medication, Supplement, and Health Services:

At the time of the poll, 45 percent of the children were unwell. The table below displays the medications taken by 45 percent of children for various conditions.

Table 1: Medication for Diseases

Medication for Diseases	Frequency	Percentage
Fever or cold	28	51.85
Diarrhea or Dysentery	17	31.48
Skin diseases and others	09	16.67
Total	54	100

Source: Field work December, 2017

After receiving treatment, 92.59 percent of the 54 sick children reported feeling better. When asked about their children's access to health services, the parents said they didn't know where the camp's healthcare center was, and that the lack of a male guardian also made it difficult to

get help for the children as they went to work at the construction site for the new makeshift settlements.

Education:

According to the parents, 50.8 percent of children in Myanmar receive primary education, while only 1.7 percent receive high school education. 56.2 percent of Rohingya children in Bangladeshi refugee camps were receiving education from various organizations learning centres and Maktabs (Muslim kids were taught Quran in masjids). The education system in the camp, according to the parents of the students who attended school there, was good for 34.78 percent and fair for 65.22 percent.

Discussion

The bulk of Rohingya children arrived in Bangladesh on foot with their families, taking an average of 20 days. They got weak as a result of walking for so many days and living in fear and anxiety, and their legs were scarred and bruised (22). Many investigations indicated that many migrants had gunshot wounds, burns, and other ailments sustained during the flight to Bangladesh (23). Because the majority of the respondents in this survey were mothers, it appeared that the majority of the families were headed by women, with the men having gone to work at the camp or having died. According to a UNHCR assessment, single moms raised the vast majority of children, with only 1% raised by single fathers (24).

Shelter and Camp Environment:

The Rohingya were resettled to camps within the temporary settlements as soon as they arrived in Bangladesh. The Rohingya built these makeshift settlements by clearing the forest areas of Cox's Bazar's hilly parts in order to avoid natural disasters, as Cox's Bazar is prone to them. To get to the camps in Kutupalong, person had to take a short stroll via the hills' roads. When it rains, the rainfall makes the roadways muddy and treacherous (25). Many studies indicated that these makeshift villages were prone to intense heat, lacked a ventilation system, and were built of plastic sheets, mud, tarpaulin, and bamboos, making them subject to disasters (26). The weather felt extremely hot because there were no barriers between the sun and the plastic roofs because they were on top of the hills. There was an uncomfortable breeze outside the makeshifts due to the aromas of sweat, stale meals, human feces, and untreated wastes of all kinds. The Rohingya camp settlements were crammed, had multiple clusters, and were congested, posing a major threat to children and adults (27-30).

The cyclone season presents an increased risk of flooding and landslides, which represent a direct threat to children's lives, in addition to the probability of illness epidemics and a lack of suitable makeshift shelters. Even a mild storm could have disastrous consequences for them. According to a study, typhoon Mora wrecked devastation on one-quarter of the tent communities in the Rohingya refugee camps (31). Monsoon storms and floods in June could wreak havoc on shelter, water and sanitation systems, and other infrastructure (31).

Food and Nutrition:

Due to a lack of basic nourishment, the children in this study were found to be undernourished. Children under the age of four are denied proper breastfeeding since their mothers do not eat properly on a regular basis. They ate two or three meals a day on a regular basis, but they were

not a proportionately balanced diet. It signifies that the meals do not meet the basic nutritional requirements. Several studies have discovered that the Rohingya children are very malnourished (32, 33). Children are at a significant risk of communicable infections as a result of their food instability and chronic malnutrition (9). Another study found that global acute malnutrition (GAM) was at 13% and that 240000 children in two UNHCR-registered camps in Cox's Bazar required nutritional assistance (9, 34, 35). Furthermore, the prevalence of severe acute malnutrition (SAM) was 7.5 percent (36) and untreated parasite intestinal infections could worsen the children's nutritional status (9). The children were also at a significant risk of contracting food-borne or fecal-oral illnesses, which could lead to additional malnutrition (9). After a study, it was shown that the malnutrition rate has dropped to 12% from 19% (37). However, 50% of children aged 6-23 months were at danger of anemia, and 50% of children aged 0-59 months were at risk of stunting, which is cause for concern (37).

WASH (Water, Sanitation, and Hygiene) Facilities:

At the Rohingya refugee camps, basic utilities such as water, sanitation, and hygiene are insufficient to meet the needs. Poor sanitation, water supply, and hygiene practices in congested camps were found to lead to the onset of several infectious diseases such as diarrhea, cholera, chickenpox, and diphtheria, according to research (38-41). Furthermore, persons between the ages of 18 and 30 had the highest rate of WASH awareness (40.60 percent) which did not prevent all of them from the diseases (39). It had such a dismal outcome among adults that it became a major source of concern for children. Tube wells, pipe wells, tiny tanks, and dug wells were all cited as water sources in various studies (39). Water sources were far away, and the mountainous terrain made it difficult for some families to collect water (42). People living near water sources were able to drink and utilize water as needed. However, they were unable to reach the sources as easily as others, and thus had less water every day. To make matters worse, a research indicated that from August to December 2017, 5731 tube wells were planted to provide water to the migrants, though by the end of January 2018, they were unusable and the water levels had dropped by 5-9 meters due to the high population density (43-45). Furthermore, some studies have found that a large refugee population might put a strain on the water infrastructure and cause a drop in the host country's groundwater levels (30, 46). As a result, the camp and the host area are at risk of future water shortages. The majority of the households in this survey always covered their water containers, according to the findings. Hsan et al. backed up this claim by demonstrating that 56.3 percent of families cover their water storage during transportation and storage (39). However, germs from the camp's temporary toilets near water points and shallow water sources contaminated 60% of the water, according to a World Health Organization report (42, 47).

Poor drainage systems and the use of plastic on the surface cause the water to stand still, allowing flies and mosquitoes to proliferate (9, 48). Furthermore, human waste has contaminated the water, resulting in waterborne diseases such as cholera, bloody diarrhea, and Hepatitis E. (49). In this study, 50.8 percent of parents said they had issues using community bathing and washing facilities because of uncovered spaces for women and female children, as well as distance. Women and female children were afraid that other guys would look in while they were using it. In Myanmar, they were used to bathing in a separate area with a cover. However, in the camps, the bulk of places lack such privileges. As a result, ladies and female children bathed in the dark when no one could see them. A study discovered that children drank water from tube wells while bathing, perhaps putting their health at danger owing to arsenic in

the water (50). Furthermore, the toilets were communal, with a few homes using them as their sole source of excrement (39) and the latrines lacked sufficient lighting and their suitable location. The bulk of the children had more difficulty going to the bathroom at night than the grownups. As a result, they engage in open defecation, which has resulted in further health problems (51). Consequently, it poses a complex health and safety problem for children who are susceptible to communicable infections. (47).

Before preparing food or feeding their children, the majority of mothers wash their hands. According to Hsan et al., 63.4 percent of mothers wash their hands before feeding their children (39). Parents also instilled in their children the need of washing their hands before eating and after using the restroom. This type of hygiene practice was also observed in other Syrian refugee camps in Lebanon and Jordan, where 79-90 percent of people washed their hands before eating and 73-83 percent washed their hands after using the restrooms (39, 52, 53). When female children above the age of 13 menstruate, they wear outdated clothes (97.22 percent out of 36 respondents). Due to the wet seasons, however, these reusable clothing do not dry quickly (26, 54, 55). Menstrual hygiene was also a problem due to a lack of WASH facilities and privacy (26). Only 2.78 percent of study participants used sanitary napkins. Some NGO workers who had provided them with sanitary napkins taught the responders how to use them once they arrived in Bangladesh. However, due to a shortage of napkins, the user rate was extremely low, and they repeatedly utilized previously used napkins (9). It posed a serious health risk to them. Wearing garments could lead to infections or other major health issues in the future. According to Hsan et al., WASH practice was substantially correlated with age, education, and WASH knowledge (41).

In a crisis, it is sometimes physically and socially impossible for female children to use menstruation reusable and disposable materials. The majority of female children above the age of 13 were found to use reusable clothing as menstruation materials in this study. Disposing of disposable or reusable menstruation materials, washing and drying, and safe storage for future use or during routine changes are difficult to maintain in a humanitarian situation (56). These problems are inextricably linked to the WASH system. For example, there was a lack of water in the restrooms to wash blood off of clothes and hands, as well as a lack of a sufficient drainage system and coverage to detect blood in running water. Furthermore, there are no garbage bins or private spaces where reusable menstruation items like pads, clothing, and underwear can be washed away from other people (56).

Vaccination and immunization:

The majority of Rohingya children were not properly vaccinated in Myanmar (4, 5, 57), however after arriving in Bangladesh, 92 percent got up-to-date immunizations, and the immunization rate for children under the age of five was 62.5 percent in the survey region. According to several research, the Bangladesh Ministry of Health and Family Welfare launched a measles and rubella vaccination program in 2017 with the help of WHO and UNICEF in response to the measles and diphtheria outbreak (9, 58, 59). A total of 55 percent of children under the age of 15 have been vaccinated (36). Other refugee camps, on the other hand, demonstrated that, even if the host country intended to properly vaccinate the refugee children, under five-year-old children nevertheless lag behind the host community (57). When the close contact of patients was discovered, vaccination for diphtheria began, and children aged six weeks to seven years old were given tetanus, whooping cough, Haemophilus influenza type b, and hepatitis B. (60). In the camps, children aged seven to fifteen were vaccinated against

tetanus and diphtheria (TD) (60). One of the largest diphtheria outbreaks was discovered in mid-2018, and 237500 children required the measles-rubella vaccine (61, 62). Some children were taking medication for fever or other illnesses such as diarrhea, dysentery, or skin problems at the time of the survey. These could be the result of a lack of adequate food or cleanliness. To provide health care, they had medication from the NGO health facilities located in the camp. They are capable of providing primary health care services. However, many people do not seek health services because they do not know where to find them or because they do not have male guardians to care for their children. They are given vaccinations or drugs for therapy at health care centers. Female health personnel would be needed in the camps, according to the mothers, because they would find it easier to communicate with female doctors or health workers.

Medication, Supplement, and Health Services:

42 percent of parents gave a positive reply that their children felt better after taking the drug, while 3.4 percent replied negatively. When asked about their children's access to health services, the parents stated that they were unaware of the camp's healthcare facility, and that the lack of male guardians also made it difficult to obtain assistance for the children. A survey also discovered that parents do not seek medical care since they had to wait longer than normal for a check-up and the doctors did not devote enough time to their children's examination (13). Furthermore, if the issue was an emergency, they had to overcome several obstacles posed by the authorities in order to get to the district hospital (13).

The host country was first overwhelmed by the camp's predicament, which included a lack of shelter, food, water, sanitation, and healthcare access for a large population (30). Later, UNICEF, UNHCR, Action Against Hunger, and other international non-governmental organizations (NGOs) assisted local organizations and the government in resolving the crisis (63). An effective intervention was required to address the high burden of health-related suffering among persons affected by the humanitarian crisis (64). However, in humanitarian situations, this may pose a number of difficulties. For starters, during the rainy season, soil erosion and landslides posed a significant barrier to children's access to healthcare. Service provider security is also a key concern. The refugee individuals at the camps intimidated field employees, according to a research (65). The bulk of healthcare facilities did not offer 24-hour treatment, and the referral system was disorganized (65). Due to a staffing shortfall, even referral patients did not receive adequate care (65). Furthermore, the positions of service providers were insecure because the majority of young doctors and nurses change professions frequently and lack sufficient training in humanitarian settings.

Education:

In Myanmar, there is a lack of access to education, as well as a high rate of school dropouts among the female children as they their puberty and it could also be seen in practice in Kutupalong refugee camps (66). Only about half of Rohingya children in pre-primary and elementary school have access to education, and only about a third of Rohingya adolescents have access to quality education and life-skills training options (37). The education or the school life was necessary for the children to help their mental state. It was found in different studies that 52% of the children had mental disorder. (67) According to the Save the Children Alliance Education Group (2001), education preserves the well-being develops learning opportunities, and supports the development of physical, social, emotional, and cognitive of children affected by conflicts and disasters (Sinclair, 2002, p. 23; Kamel, 2006, p. 4).

According to UNESCO, education aids children's psychological needs in times of conflict or calamity. It could also be used to protect and safeguard children in emergencies, as well as play a critical role in the reconstruction of the socioeconomic and cultural foundations of family, community, and national life, as well as for long-term development and peacebuilding (66). Various NGOs established Temporary Learning Centres (TLCs) to give basic education to children aged 14 and up. Volunteers from Bangladesh and the Rohingya community were sought to teach the Rohingya children. They did, however, face a number of obstacles. It was difficult to deliver instruction utilizing limited supplies of learning materials in their own tongue at first, because the Bangladeshi government prohibited the use of Bangali curriculum. There was a scarcity of skilled, experienced facilitators to deliver education. Furthermore, forming a homogeneous cohort to assist learning processes based on their educational demands proved tough (66).

Limitation of the study

The research is being carried out in selected Rohingya camps in Kutupalong, Cox's Bazar. The goal of the study is to determine the link between migration and other health hazards faced by Rohingyas. Despite all efforts to acquire relevant information, the study's findings, conclusions, and recommendations should be viewed in light of various limitations, including the fact that the study was limited to the selected Rohingya camps at Kutupalong and Cox's Bazar. As a result, the findings can't be applied to all Rohingya refugee camps. The children's parents were not particularly chatty. As a result, they were frequently rushed during interviews. The availability of sufficient time was critical, as it takes a long time to complete such a large project. Because the respondents were not particularly enthusiastic to respond, the amount of honesty in the inquiry may be impacted. Due to a lack of time, funds, and political upheaval, the sample size was tiny. Because of a shortage of time, significant information could not be gathered from the questionnaire.

Conclusion

This study provides a more comprehensive picture of the health risks faced by Rohingya refugee children in Bangladesh's Kutupalong camp. Young children were disadvantaged by socioeconomic circumstances and the situation in the settlements seemed to make the children more vulnerable to several infectious diseases. Various international NGOs and the Bangladesh government helped to alleviate their vulnerabilities by providing humanitarian and financial assistance. Therefore, several recommendations are given as a result of these findings: To completely comprehend the illiterates about WASH practices, a WASH awareness program for Rohingya refugees is essential; awareness programs must involve educated WASH representatives from the refugee community; and camps must have improved water supply and sanitation. Adequate health treatment, hygiene promotion, expansion of difficult-to-reach places, home visits to the required children or their families, and training of health staff are all required. Mental health services are also required in basic health care settings. Furthermore, in the event of an epidemic, quick response is required, and so organizations should pay greater attention to data collecting. Along with the government, the private sector should work to reduce children's health hazards and enhance their health status. All of these factors have the potential to protect this vulnerable young population's physical, mental, social, and spiritual well-being.

Declarations

Competing Interests:

The authors declare no conflict of interest.

Funding:

Author did not receive any funds to conduct the research.

Informed consent:

The respondents' informed agreement was obtained at the beginning of the study. It was their choice to participate, no one was forced to participate.

Ethical Consideration:

In November 2017, the University of Dhaka granted ethical approval for this investigation. The respondents' participation was completely voluntary, and they provided all of the data. The data, which was kept completely confidential, was only accessible to the researcher. The survey was conducted in the respondents' homes, and they were informed that none of their personal information would be utilized in any manner during the study. The data has not been changed or manipulated in any way.

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