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Nutritional status of Rohingya under-5 children in Jamtoly Rohingya camp

Rashid Md Haroon[1]*, Muiz Uddin Ahmed Choudhury[2], Avijit loha[3], Zannatul Ferdous[4],
Kazi Farah Nasrin[5], Md. AB Siddique[6], Meri Nath[7] and Md. Akhtaruzzaman Shaika[8]

[1]International Centre for Diarrheal Disease Research, Bangladesh (ICDDR'B), Mohakhali, Dhaka-1212, Bangladesh.
E-mail: haroon9330@gmail.com

[2]Assistant Professor, Department of Community Medicine, Jalalabad Ragib Rabeya Medical College, Sylhet, Bangladesh.
E-mail: drlizujmc@gmail.com

[3]Medical Officer, DGHS, Dhaka, Bangladesh. E-mail: avijit.loha@gmail.com

[4]Assistant Professor, Children, Preventive and Community Dentistry, Dhaka Dental College, Dhaka, Bangladesh.
E-mail: snigdha1079@gmail.com

[5]Lecturer, Update Dental College, Dhaka, Bangladesh. E-mail: farahnasreen99@gmail.com

[6]Department of Microbiology, Jahangirnagar University, Savar, Bangladesh. E-mail: subsiddique@yahoo.com

[7]Senior Staff Nurse, Upazila Health Complex, Sonagazi, Feni, Bangladesh. E-mail: merinath2@gmail.com

[8]Fellow, USAID, Dhaka, Bangladesh. E-mail: dr.shaikat23@gmail.com

Abstract

Introduction: About one million Rohingya people had fled to Cox's Bazar Bangladesh after experiencing massive atrocities in their homeland Rakhine state of Myanmar. Rohingya people deprived of adequate food supply, education, and health care; resulting in malnutrition rate was very high among their children. **Objective:** Aim of this study to assess the nutritional status of 1-60 months, Rohingya children. **Method:** A total of 470 participants were enrolled by a purposive sampling method from patients attending the hospital. Weight-for-height Z-score was calculated based on the 2006 World Health Organization growth standards guideline. Moderate acute malnutrition and severe acute malnutrition have defined as weight-for-height Z-score between –2 SD to –3 SD and <-3 SD respectively. **Result:** Out of all, 282 (60.0%) belonged to the age group of <2 years, the mean age was 2.16 years (SD, 1.40) and 251 (53.4%) was male. The prevalence of moderate acute malnutrition and severe acute malnutrition were 25.1% and 18.5% respectively. The prevalence of acute malnutrition was significantly different compared to the sociodemographic factor particularly in age and sex (p-value <0.05). **Conclusion:** Prevention of malnutrition among the refugee is one of the strategic plans of several types of UN agency and National organizations. Despite these efforts, this problem persists.

Keywords: *Rohingya refugee, Children, Nutrition status*

1. Introduction

A catastrophic humanitarian crisis caused by violence, persecution and mass atrocities in their homeland Rakhine state of Myanmar, the Rohingya people had no choice but fled to Cox's Bazar, Bangladesh. An

estimated 738,805 Rohingya people have crossed the border since August 25, 2017. Out of which, 18.5% belonged to 0-4 years age group (UNHCR, 2019). Rohingya people are the most persecuted Muslim minorities in the world. In 1982, the Citizenship Act was introduced, Rohingyas were not given full and associated citizenship, even though the Rohingya community have lived in that country since 1799 (Mahmood *et al.,* 2017; and Landry and Tupetz, 2018). They were devoid of basic needs such as education, health care, employment and freedom of movement. The malnutrition rate among Rohingya children was already above the World Health Organization's emergency thresholds. However, the nutritional status of Rohingya children has significantly deteriorated due to the long journey towards Bangladesh and the living condition in camps (UNICEF, 2019). Poor nutrition is the leading cause of infectious diseases and ultimately results in a greater economic burden to the community (Jesmin *et al.,* 2011).

2. Methodology

To assess the nutritional status of 1-60 months Rohingya children, we have conducted this study in the Dreamers Hospital G Block, Jamtoli, Cox's Bazar (Figure 1), from 1st October through December 31, 2018. A total of 470 participants were enrolled by a purposive sampling method from patients attending the hospital for receiving health service. Weight and height were measured using standard procedures. Weight-for-height Z-score was calculated based on the 2006 World Health Organization growth standards guideline (WHO 2006). Moderate acute malnutrition defined as Weight-for-height Z-score between –2SD and –3SD. Severe acute malnutrition was defined as weight-for-height Z-score less than –3SD. Pearson χ^2 test was used to compare. Two-sided tests were considered significant at a p-value of less than 0.05.
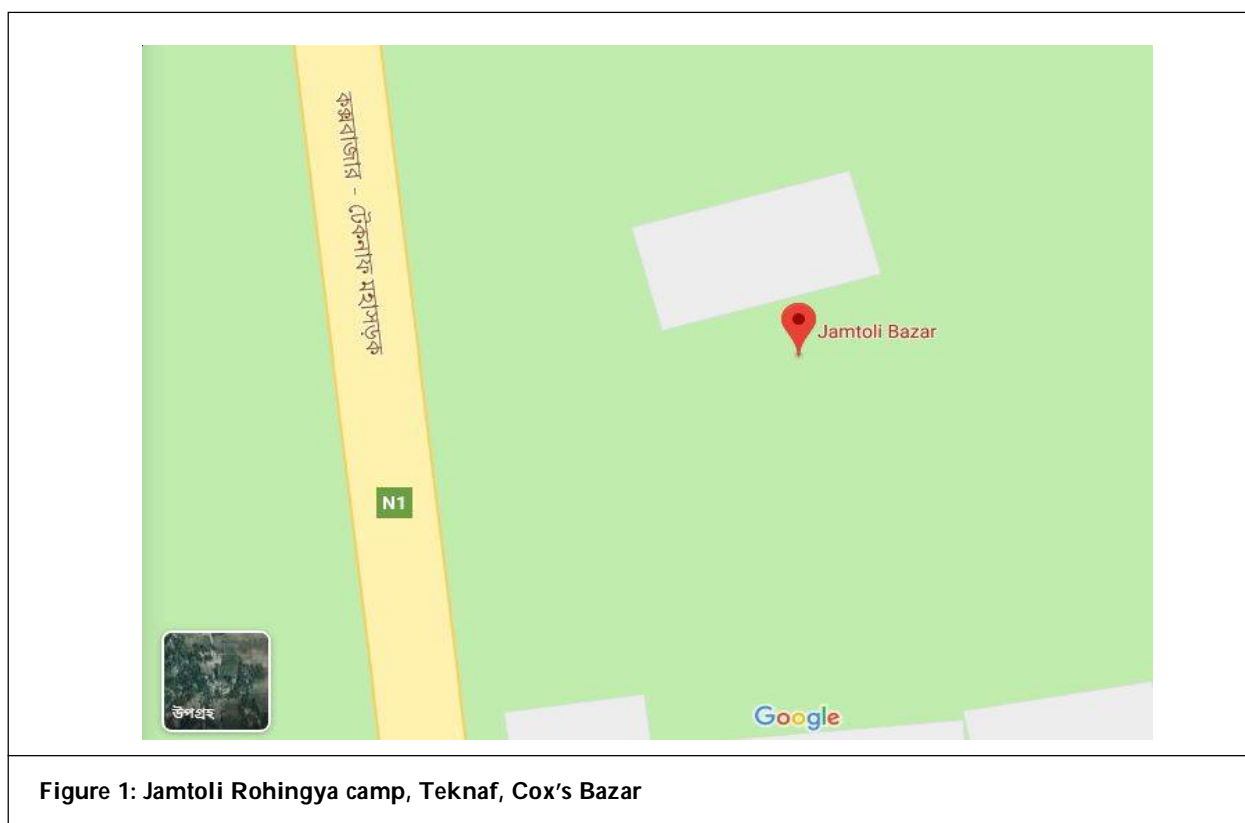

Figure 1: Jamtoli Rohingya camp, Teknaf, Cox's Bazar

3. Result

Of these 470 children aged 1-60 months, included 282 (60.0%) belonged to the age group of <2 years; the mean age was 2.16 years (SD, 1.40) and 251 (53.4%) were males. The prevalence of moderate acute malnutrition and severe acute malnutrition as assessed by weight-for-height Z-score were 25.1% and 18.5% respectively. The prevalence of acute malnutrition was significantly different compared to the sociodemographic factor particularly in age and sex (p-value <0.05) (Table 1). However, Stunting status usually referred to as chronic under-nutrition (growth retardation) represents a measure of long-term effects of malnutrition (Cogill, 2003). Conversely wasting status usually referred to as acute under-nutrition which represents the short-term effects of malnutrition (Nguefack-Tsague *et al.,* 2013).

Table 1: Association between sociodemographic factors and nutritional status				
Nutritional status	**Weight-for-height *z*-score**			***p*-Value**
	Normal	**Moderate Acute Malnutrition**	**Severe Acute Malnutrition**	
Age of participants				
Below 1 year	107(40.4%)	23(19.5%)	17(19.5%)	0.001
1 to 2 years	76(28.7%)	35(29.7)	24(27.6%)	
2 to 3 years	41(15.5%)	29(24.6%)	21(24.1%)	
3 to 4 years	30(11.3%)	13(11.0%)	15(17.2%)	
4 to 5 years	11(4.2%)	18(15.3%)	10(11.5%)	
Total	**265(100%)**	**118(100%)**	**87(100%)**	
Sex of participants				
Female	105(39.6%)	57(48.3%)	57(65.5%)	0.001
Male	160(60.4%)	61(60.4%)	30(34.5%)	
Total	**265(100.0)**	**118(100.0)**	**87(100.0)**	

4. Discussion

Among the participants of Rohingya children in Jamtoli refugee camp, the prevalence of moderate acute malnutrition and severe acute malnutrition was found to be 25.1% and 18.5% respectively; whereas the WHO emergency threshold of 15% (UNHCR, 2019). This result is consistent with previous researches and surveys at Refugee camps. Last year Leidman *et al.* (2018) reported the prevalence of Global acute malnutrition and severe acute malnutrition were 24.3% and 7.5% respectively. IOM reported in *The Independent News* (2019) the prevalence of Global acute malnutrition and severe acute malnutrition were 24.3% and 7.5% respectively among the Rohingya children age between 6 to 59 months in October 2017 in Kutapalong Registered Refugee Camps. United Nations reported in Voice of America news up to 25% of under-5 Rohingya children are suffering from acute malnutrition (VOA 2019). Milton *et al.* (2017) reported 13% was Global acute malnutrition and 52–57% stunting in Rohingya children aged 6–59 months in 2015 in the two registered UNHCR camps. Poor nutritional status of children has been associated with insufficient household income and low education level of caregivers and large household size and the high number of children (Zarei *et al.*, 2011). Prevention of malnutrition among the refugee is one of the strategic plans of different organizations such as UNHCR, ACF, UNICEF, Save the Children, etc. Despite the efforts, the problem persists among the residing in refugee camps. Poverty, poor sanitation, food beliefs, and cultural practices are important determinants of malnutrition. However, household food insecurity as well as living environment associated with poor sanitation which could adversely affect the health and nutritional status of the children.

5. Conclusion

In this study, the prevalence of moderate acute malnutrition and severe acute malnutrition was above the World Health Organization's emergency threshold level. Some organization has tried to the prevention of malnutrition among the Rohingya refugee. Despite these efforts, this problem persists. The nutritional status of Rohingya children have associated with low income, low education level of parents, and large family size and the high number of children. We suggest needing a multisectoral approach for the prevention of malnutrition.

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