



Scientific Journal of Food Science & Nutrition

Research Article

Evaluation of Knowledge, Attitude and Practice about Hygiene and Nutrition among Adolescent Girls in Rohingya Refugee Camps in Bangladesh - ৯

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Submitted: **24 January, 2023**; Approved: **31 January, 2023**; Published: **02 February, 2023**

Citation this article: Islam Md. A, Sultana M, Islam Md. T. Evaluation of Knowledge, Attitude and
Practice about Hygiene and Nutrition among Adolescent Girls in Rohingya Refugee Camps in
Bangladesh. Sci J Food Sc Nutr. 2023 Feb 02; 8(1): 001-005. doi: 10.37871/sjfsn.id30

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ABSTRACT

The Rohingya refugee population especially adolescent girls in Bangladesh has become more vulnerable to under nutrition and hygiene practices because of their living, knowledge and environmental conditions. The study's objective was to provide an evaluation of the Knowledge, Attitude, and Practices (KAP) of Rohingya adolescent girls in Cox's Bazar refugee camps about nutrition and cleanliness. The research was cross-sectional in nature. Between November and December of 2022, 385 responses were collected for this survey. To evaluate demographic traits, knowledge, attitude, and practices, a questionnaire was developed. In addition to the KAP, the comparison is also shown based on demographic factors. The responses' KAP weren't good enough. Numerous variations between several factors were discovered. In conclusion, this study highlights the significance of nutritional literacy and hygienic practices that concentrate on behavioral changes as well as providing the Rohingya population in Bangladesh with a perfect meal.

INTRODUCTION

Adolescents are defined by the World Health Organization (WHO) as being between the ages of 10 and 19 [1]. Adolescence is a special time in a girl's life since it is a time of physical, cognitive, and psychological development [2]. It is predicted that at this time, a person will grow half of their adult body weight and one-fifth of their adult height [3]. Adolescence is a time of rapid growth, therefore it's important to focus on development and get enough nutrition during this time. Adolescents who receive inadequate nourishment may experience delayed development that affects subsequent generations [4]. Many of the primary causes of death in teenagers include risk factors for poor nutrition [5]. Compared to their peers, teenage females who are impoverished and have less education are more likely to be undernourished [6]. Adolescents who engage in unhealthy eating habits may have low nutritional status, therefore it's crucial to create effective interventions that are individualized to each individual and informed by the latest research [7]. Knowledge, attitude, self-efficacy, social support, intention, etc. are some examples of the social cognitive factors that influence eating behaviors [8]. There are approximately 1.8 billion adolescents worldwide; 90% of them live in low- and middle-income countries, and 125 million of them do so in conflict-affected regions [5,9]. Due to inadequate information and attention given to nutrition, the prevalence of undernutrition among teenage girls in South Asia has remained constant throughout time [10]. About 50% of people in Bangladesh have low Body Mass Indices (BMIs), and 25-27% of teenage girls in Bangladesh have anemia (Hb12 mg/dl) [11]. It is believed that 50% of adolescent females in Bangladesh consume less energy than they require, and a number of factors, including education level, socioeconomic status, income level, etc., are linked to this [12]. A nutritious diet with higher fibre can satisfy adolescent nutritional needs [13].

Cox's Bazar, Bangladesh, is currently home to a sizable number of Rohingya refugees who have poor access to water and sanitary facilities [14]. In Bangladesh, where there are 36 million people, adolescents make up more than one-fifth (23%) of the population [15]. The situation is similar for the Rohingya population currently residing in Bangladesh, where adolescents make up 20% of the total Rohingya population, or one-fifth of the population. For girls, the adolescence stage is important for a better future, including pregnancy and lactation. A healthy lifestyle thus requires understanding about diet. Adolescent girls' improved nutritional knowledge, attitudes, and behaviors will promote greater economic growth and healthier people [16].

Though adolescents are the most important and vulnerable segment of population, they have been largely ignored, and exclusive data pertaining to adolescent health are not widely available in

Rohingya scenario. In addition, data on nutritional knowledge of Rohingya adolescents in Bangladesh is even more difficult to find. There is a paucity of information about their nutritional knowledge, dietary practices and attitude. The aimed of these present study to investigate the hygiene, sanitation and nutrition-related knowledge, attitude and practice among urban adolescent girls in Bangladesh.

METHODS

Study design and participant selection

A cross-sectional study was conducted to assess the Nutritional knowledge, attitude, and practices of Rohingya adolescent girls in refugee camps of Cox's Bazar between November and December 2022. The only inclusion criterion was that the participants' age were 10-19 years. The selection of participant was door to door.

Sample size detection

The infinite population formula was used to calculate sample size $[S = (Z^2 \times P \times (1-P) \div M^2)]$. A 95% confidence level was used to calculate the Z-value (1.96). The population proportion (P) and margin of error (M) were calculated at the 50% (0.50) and 5% (0.05) levels, respectively. The sample was calculated 385. We took 385 samples for the study.

Study tools and data collection

For convenience, the KAP questionnaire was prepared in English. For readability and clarity, the questionnaire was pilot tested. For reliability, it was pilot tested for face validity before being entered into a spread sheet, cleaned, principal component analyzed, and revised for reliability. The survey was carried out with the assistance of 15 trained interviewers. After explaining the survey's purpose and design, the interviewers approached the respondents and conducted a face-to-face interview to complete the questionnaire. The first part of the questionnaire was used to collect demographic information, and the second part was used to evaluate respondents' KAP regarding nutrition and hygiene. The answering options in the knowledge section were a) No knowledge, b) Little knowledge, c) Medium knowledge and d) Good knowledge, whereas in the attitude section the options were a) Positive and b) Negative and in the practice section the options were a) Good and b) Bad. Percentage and frequencies are presented in the dataset.

Statistical analysis

Before importing to the Statistical Package for Social Sciences (SPSS) software (version 22.0), all data were entered on a master Microsoft Excel spread sheet. To assess the differences descriptive analysis table were made. At the same time for cross analysis Crosstab is used.

RESULTS

A total of 385 participants were enrolled in the study, all were female adolescent girls. Among them 227 girls' educational qualification was < class 5. Maximum participants' parents were illiterate. 255 participants' BMI was not in satisfactory level (Table 1).

Adolescent girls' hygiene practice was not good. Almost half of the respondents have little knowledge of hand hygiene. Others have no idea about hand washing. The knowledge about hand washing is increase according to the education level (Table 2).

Balance diet knowledge among the girls were not up to the mark. Maximum participants' have little knowledge about nutritional balance diet. The knowledge percentage increases according to their educational level (Table 3).

Knowledge about having water among the girls were not in satisfactory level. Maximum participants' have little knowledge about having proper amount of water in a day. The knowledge percentage increases according to their educational level (Table 4).

Knowledge about energy giving foods among the participants were little. Maximum girls were known little about the names of food which can give us energy (Table 5).

Knowledge about growth and nutritional supplements food among the participants were little. Maximum girls were known little about the names of food which help in our growth and give us nutritional supplements (Table 6).

Table 1: Demographic information.

Demographic Characteristics	Frequency	Percentage
Education of the Respondents		
Illiterate	109	28.3%
< Class 5	227	59%
Class 5-Class 10	49	12.7%
Education of the Respondents' Father		
Illiterate	277	71.9%
< Class 5	94	24.4%
Class 5-Class 10	14	3.6%
Education of the Respondents' Mother		
Illiterate	356	92.5%
< Class 5	22	5.7%
Class 5-Class 10	7	1.8%
Marital Status of the Respondent		
Married	192	49.9%
Unmarried	193	50.1%
BMI of the Respondents' Adolescent		
< 18.50	255	66.2%
18.50-24.99	130	33.8%
> 24.99	0	0%
Mean ± SD	18.12 ± 2.09	
Respondents' Age		
Mean ± SD	15 ± 1.65	
Range (Min-Max)	12-18	

Table 2: Respondents' knowledge about 5 steps of hand washing based on education.

Education of the Respondent	Knowledge about 5 Steps of Hand Washing			
	No Knowledge	Little Knowledge	Medium Knowledge	Good Knowledge
	Frequency (%)	Frequency (%)	Frequency (%)	Frequency (%)
Illiterate	66 (17.14)	43 (11.17)	0 (0)	0 (0)
< Class 5	62 (16.10)	144 (37.40)	21 (5.45)	0 (0)
Class 5-10	6 (1.56)	6 (1.56)	13 (3.38)	24 (6.23)

Table 3: Respondents' knowledge about balance diet based on education.

Education of the Respondent	Knowledge about Balance Diet			
	No Knowledge	Little Knowledge	Medium Knowledge	Good Knowledge
	Frequency (%)	Frequency (%)	Frequency (%)	Frequency (%)
Illiterate	57 (14.81)	52 (13.51)	0 (0)	0 (0)
< Class 5	30 (7.79)	145 (37.66)	44 (11.43)	8 (2.08)
Class 5-10	1 (0.26)	4 (1.04)	25 (6.49)	19 (4.94)

Table 4: Respondents' knowledge about having water based on education.

Education of the Respondent	Knowledge about Having Water			
	No Knowledge	Little Knowledge	Medium Knowledge	Good Knowledge
	Frequency (%)	Frequency (%)	Frequency (%)	Frequency (%)
Illiterate	52 (13.51)	57 (14.81)	0 (0)	0 (0)
< Class 5	15 (3.90)	137 (35.58)	67 (17.40)	8 (2.08)
Class 5-10	2 (0.52)	4 (1.04)	24 (6.23)	19 (4.94)

Table 5: Respondents' knowledge about energy giving foods based on education.

Education of the Respondent	Knowledge about Energy Giving Foods			
	No Knowledge	Little Knowledge	Medium Knowledge	Good Knowledge
	Frequency (%)	Frequency (%)	Frequency (%)	Frequency (%)
Illiterate	27 (7.01)	82 (21.30)	0 (0)	0 (0)
< Class 5	58 (15.06)	139 (36.10)	22 (5.71)	8 (2.08)
Class 5-10	2 (0.52)	8 (2.08)	19 (4.94)	20 (5.19)

Table 6: Respondents' knowledge about growth and nutritional supplements food based on education.

Education of the Respondent	Knowledge about Growth and Nutritional Supplements Food			
	No Knowledge	Little Knowledge	Medium Knowledge	Good Knowledge
	Frequency (%)	Frequency (%)	Frequency (%)	Frequency (%)
Illiterate	40 (10.39)	69 (17.92)	0 (0)	0 (0)
< Class 5	82 (21.30)	101 (26.23)	36 (9.35)	8 (2.08)
Class 5-10	2 (0.52)	8 (2.08)	20 (5.19)	19 (4.94)

Knowledge about disease preventive foods among the participants were very low. Maximum did not know the names of disease preventive foods (Table 7).

Most of the participants have positive attitude towards nutrition. They know well and have positive attitude according to their knowledge (Figure 1). But in some things which they do not know have negative attitude also (Table 8).

Practice level among the girls were not good. According to their knowledge and attitude there are not willing to practice in most cases (Figure 2). If their practicing level is good their nutritional condition would increase day by day (Table 9).

DISCUSSION

In this study we see maximum respondents are little educated. At the same time their maximum parents are illiterate. Higher educated persons are rare in this community. Now a days parents of the community are willing to send their children to go to learning centers. A study on the Rohingya people of Bangladesh discovered a higher rate of illiteracy among respondents (79.6%) [17].

In this community girls attitude on hygiene and knowledge about nutrition are not in satisfactory level. At the same time the supply of hygiene kit was not smooth in this community. Improved sanitation facilities, as well as very good knowledge, attitude and most importantly consistent and accurate practice of hygiene and sanitation methods, are critical for disease outbreak prevention and control [18]. A study was conducted recently on Rohingya people in the Cox’s Bazar camps regarding water, sanitation, and hygiene (WASH), and similar results were found in the overall knowledge scores. Author stated that more than 50% of the Rohingya refugees engaged in unsafe hygiene practices [19]. There are scarcities of hygiene and sanitation items inside the camps. Notably, about 88% of Rohingya people depend on external aid from UN agencies and other non-governmental organizations to meet their needs of daily living [20].

Finally, the practices among the adolescent girls on hygiene and nutritional knowledge is very poor. They are not properly aware of hygiene process. As caregivers are illiterate in this community so they are not careful to their children.

Table 7: Respondents’ knowledge about disease preventive foods based on education.

Education of the Respondent	Knowledge about Growth and Nutritional Supplements Food			
	No Knowledge	Little Knowledge	Medium Knowledge	Good Knowledge
	Frequency (%)	Frequency (%)	Frequency (%)	Frequency (%)
Illiterate	76 (19.74)	33 (8.57)	0 (0)	0 (0)
< Class 5	97 (25.19)	85 (22.08)	37 (9.61)	8 (2.08)
Class 5-10	8 (2.08)	4 (1.04)	17 (4.42)	20 (5.19)

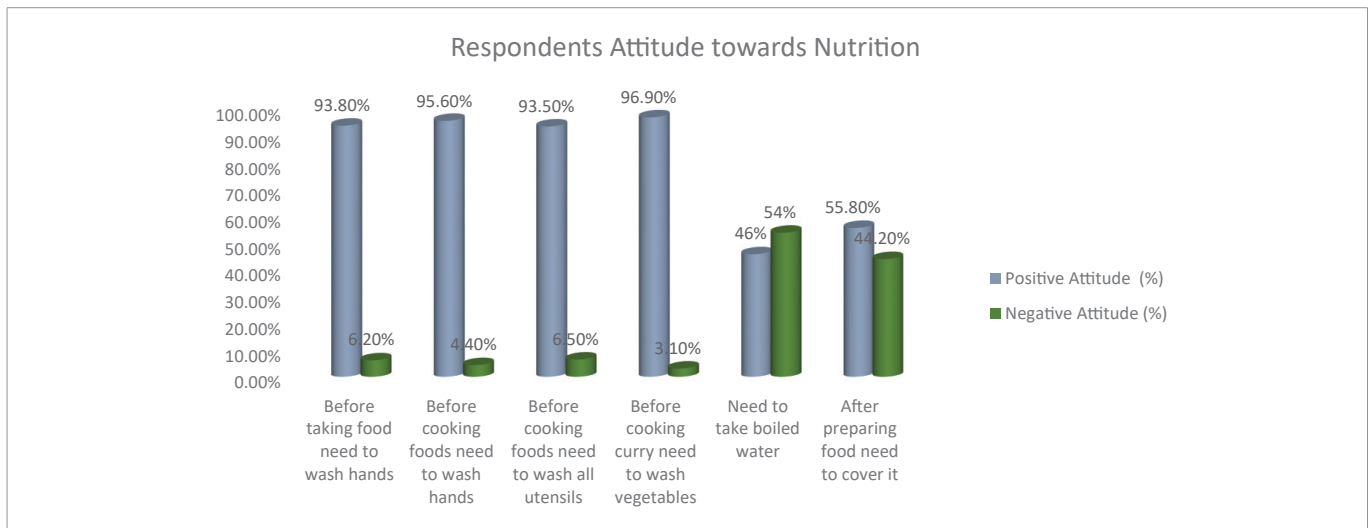


Figure 1: Bar diagram showing respondents attitude towards nutrition.

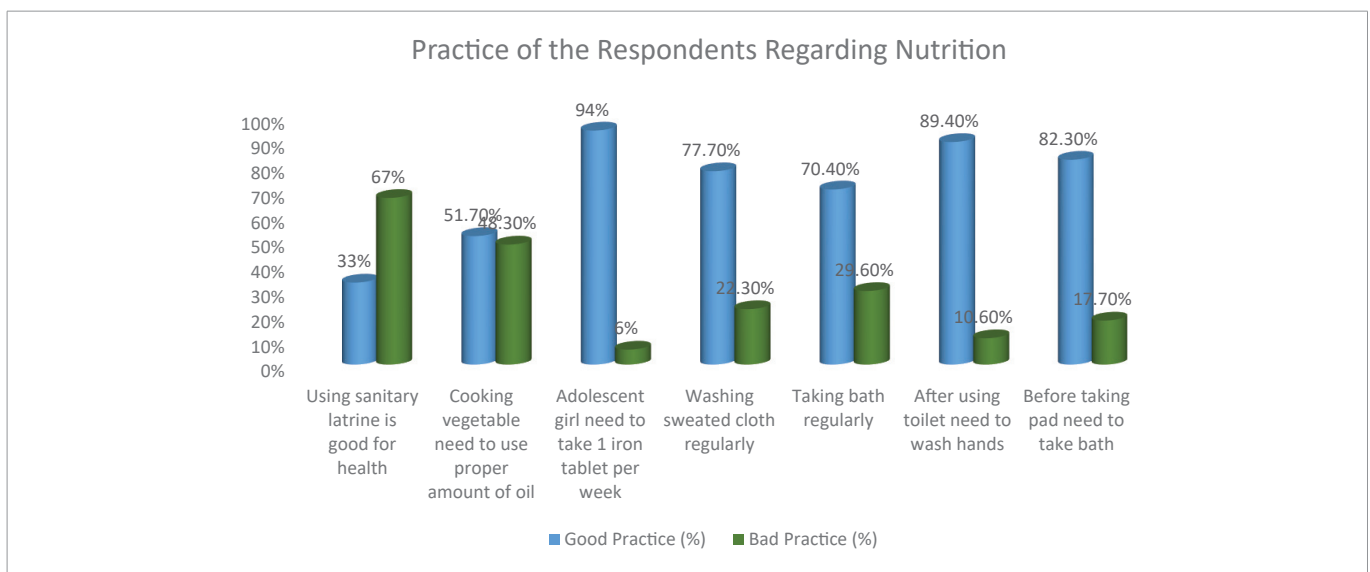


Figure 2: Bar diagram showing practice of the respondents regarding nutrition.

Table 8: Attitude towards nutrition.

	Positive Attitude Frequency (%)	Negative Attitude Frequency (%)
Before taking food need to wash hands	361 (93.8)	24 (6.2)
Before cooking foods need to wash hands	368 (95.6)	17 (4.4)
Before cooking foods need to wash all utensils	360 (93.5)	25 (6.5)
Before cooking curry need to wash vegetables	373 (96.9)	12 (3.1)
Need to take boiled water	177 (46)	208 (54)
After preparing food need to cover it	215 (55.8)	170 (44.2)

Table 9: Practice of the respondents regarding nutrition.

	Good Practice Frequency (%)	Bad Practice Frequency (%)
Using sanitary latrine is good for health	127 (33)	258 (67)
Cooking vegetable need to use proper amount of oil	199 (51.7)	186 (48.3)
Adolescent girl need to take 1 iron tablet per week	362 (94)	23 (6)
Washing sweated cloth regularly	299 (77.7)	86 (22.3)
Taking bath regularly	271 (70.4)	114 (29.6)
After using toilet need to wash hands	344 (89.4)	41 (10.6)
Before taking pad need to take bath	317 (82.3)	68 (17.7)

CONCLUSION

Rohingya refugees in Bangladesh are mostly vulnerable. Maximum Rohingya refugees are illiterate. In Myanmar they did not get chance to educate themselves. But In Bangladesh their children are getting the chance of educate themselves by the help of many NGOs and UN Bodies. They are now trying to scale up their generations. Among them adolescent girls' nutritional knowledge and hygiene attitude are increasing day by day. But still now their practicing level are not in the same phase. They need to practice according to their acquiring knowledge.

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