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Assessment of Rural Women's Access to Nutritional Programmes in Jamalpur District of Rural Bangladesh: A Comparative Study between World Vision Beneficiaries and Non-Beneficiaries

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Abstract

The main purpose of the study was to make a comparison between world vision beneficiaries and non-beneficiaries regarding access to nutritional programmes and others. A total of 100 rural women consisting of both beneficiaries (50) and non-beneficiaries women (50) were selected from Lakkhirchar and Meshta unions of Jamalpur sub-district following simple random sampling technique. Data were collected using an interview schedule and analyzed with a combination of descriptive statistics and inferential statistical technique. The findings indicated that beneficiaries of World Vision Beneficiaries (WVB) had high level access to nutritional programmes compared to non-beneficiaries. While no significant difference regarding nutritional status between the beneficiaries and non-beneficiaries of WVB considering the BMI indicator. Correlation analyses indicated that organizational participation of the beneficiaries and communication exposure and training on nutritional issues of non-beneficiaries showed significant positive relationship with their access to nutritional programmes. But other variables did not show any significant relationship for both cases. The non-beneficiaries women faced more problems compared to beneficiaries' women. Most of the non-beneficiaries women (62%) faced high level of problems while 90% of the beneficiaries' women faced low level of problems in receiving nutritional services. Unwillingness of the participants in nutritional programmes and lack of awareness on nutritional services identified as most severe problem for beneficiaries of WVB and non-beneficiaries in receiving nutritional services respectively. Despite having problems the rural women were very much enthusiastic and eager that could help policy makers to take necessary steps to increase the access in different nutritional programmes.

Keywords: BMI, access, nutritional status, beneficiaries, FGDs

1. Introduction

Nutrition plays an important role in improving human health. At least 45 million people of Bangladesh which is one-third of the total population of the country still live below the poverty line and a significant proportion of these live in extreme poverty, especially in rural areas where the poverty rate have reached 36 percent (FAO, 2014 ; BBS, 2015). Nutrition is intake of food, considered in relation to the body's dietary needs. Good nutrition- an adequate, well balanced diet combined with regular physical activity- is a cornerstone of good health. Poor nutrition can lead to reduced immunity, increase susceptibility to disease, impaired physical and mental development, and reduced productivity (WHO), (2019). Good nutrition is an important part of leading a healthy lifestyle. Combined with physical activity, diet can help to reach and maintain a healthy weight, reduce risk of chronic diseases, and promote overall health (BRAC, 2010).

Food security is generally assessed through three dimensions namely; food availability, food access and food utilization for nutrition. The concept of food security is more precise at individual level because the fundamental spirit of food security is ensured through individual-specific food requirements. Utilization of food is governed by a number

of factors such as people's food utilization, general health condition and the overall environment under which food is prepared and consumed (FAO, 2014).

About two-third of the rural people in the world are poor and food insecure and also have limited access to markets and services (WHO, 2019). Rural women from farming households in many countries are significantly smaller than 2 hectares (IFAD, 2018). Nutritional awareness refers to the knowledge and understanding of food and nutrition information that, when adopted and put into practice, can lead to improvements in nutrition outcomes. It is compulsory to improve nutritional status of the rural poor especially for the women and children of Bangladesh for achieving the Sustainable Development Goals. The rates of malnutrition in Bangladesh are among the highest in the world. More than 54% of preschool-age children, equivalent to more than 9.5 million children, are stunted, 56% are underweight and more than 17% are wasted (FAO, 2020). In Bangladesh, malnutrition is caused by a combination of factors including faulty food consumption, food utilization owing to poor sanitation, illness and inadequate health care (FAO, 2014). Many Government and Non-Government organizations are working for augmenting the nutritional status. Bangladesh has made noteworthy development since 1992 in boosting national food production, with food grain production having extended through fast adoption of agricultural technology, irrigation, improved infrastructure and transport linkages and imports. But, adulteration and contamination of food constitute a major public health concern in Bangladesh. Agriculture remains a primary source of energy and nutrients for the population. Accordingly, agricultural production systems including livestock and fisheries are being strengthened to contribute adequately and efficiently towards meeting the dietary and nutritional needs of the population. National Policies like Vision 2021, National Five Year Plans as well as sectoral plans have also prioritized Nutrition and Food Security as one of the important national issue. The sectors include health, food, agriculture, fisheries and livestock. Presently World Vision Bangladesh (WVB) is serving around 5 million children and 3.1 million adults with maternal child health and nutrition, education, livelihood, child protection and Water, Sanitation and Hygiene (WASH) projects under 27 administrative districts in 68 locations with 51 Area Programmes and 15 grant-funded projects (WVB, 2016). This organization is working to achieve sustainable well-being and build a brighter future for 5 million vulnerable children in Bangladesh by tackling causes and addressing effects of poverty, inequalities and injustices. WVB also engaged the private sectors, including corporations and foundations, non-governmental organizations and individuals (World Vision Bangladesh, 2018). This organization aims to achieve sustainable wellbeing and build a brighter future for 5 million vulnerable children in Bangladesh by tacking causes and addressing effects of poverty, inequalities and injustice (World Vision Bangladesh, 2016). Nutrition has been the focus of a number of programmes in Bangladesh. The Government policies ensured flexibility for the NGOs like BRAC, WVB and the private sector organizations in addition to Department of Health (DoH) to deliver health services independently or under mutual collaboration with the government sector (WHO, 2015). Among various local, national, and internationally recognized NGOs, BRAC, Association for Social Advancement (ASA), National Nutrition Services (NNS), Unnoyon Kendro, and WVB provide comprehensive nutrition interventions targeting adolescent girls, women, and children of rural Bangladesh along with DoH (FAO, 2014).

Alam, Roy and Tahmeed (2010) found that access of rural women is lowest and they do not have enough knowledge about nutrition. More than half of the respondents were not aware of the importance of taking extra nutrients. Catherine and Richard (2009) found that there was a need to undertake integrated programmes for addressing food insecurity and poor mental health for the population of rural, low-income women. UN Women (2016) found that empowerment of the women is a pre-requisite to fulfilling the vision of the Sustainable Development Goal that aim to end poverty and hunger, achieve food security and empower all women through access to nutritional and many other programmes. So far, no available study is undertaken in Bangladesh to determine women access to nutritional programmes and related issues. Therefore, the present study was undertaken to make a comparison between beneficiaries of WVB and non-beneficiaries. However, the specific objectives are to: determine extent of access to nutritional programmes, explore the relationship between selected characteristics of the respondents and their extent of access to nutritional programmes; and identify the problems faced by the respondents in receiving nutritional services.

2. Materials and Methods

Study area, population and sampling

The study was conducted in two villages namely Deuliabari and Charpara of Lakkhirchar union and Meshta union respectively, Jamalpur Sadar upazila (sub-district, Fig. 2) Jamalpur district (Fig. 1). The rural women who were taking services from the World Vision and other organizations for their nutritional improvement were the population of the study. A list of 1001 beneficiaries (500 beneficiaries of WVB and 501 non-beneficiaries) was collected through manager, world Vision of the concerned district. One hundred rural women (50 from WVB beneficiaries and 50 from

non-beneficiaries) which represent 10% of total population (for each category) were selected as sample of the present study using simple random method. Therefore, the sample size of the study was 100.

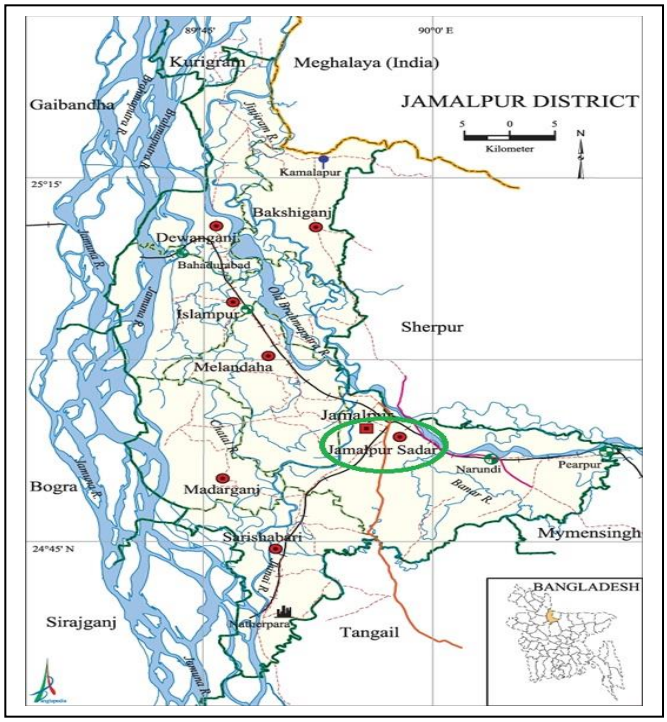

Figure 1. Map of Jamalpur District showing study

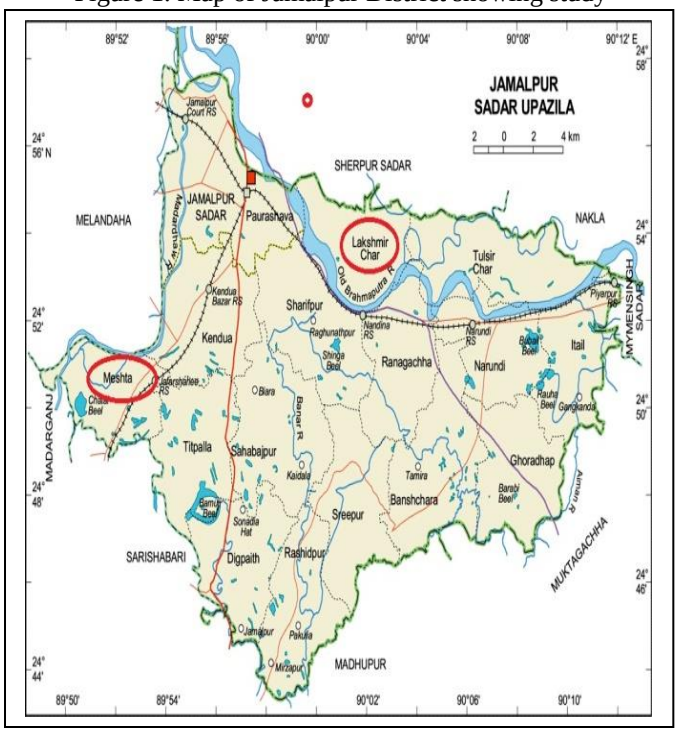

Figure 2. Map of Jamalpur sadar sub-district showing specific study area (red mark)

Data collecting instrument and methods

Data were collected using individual interview method from the respondents during October and November, 2019. But, Focus Group Discussion (FGD) method, Key Informant Interview (KII) methods were also used while preparing the questionnaire. Eight selected socio-economic characteristics of the respondents were considered in this study and these were also recognized as independent variables. Measurements of the independent variables are mentioned the Table 1.

Table 1. Measurement of the independent variables

Independents Variables	Measurements
Age	Year
Education	Year of schooling
Household size	No. of member
Farm size	Hectare
Annual Income	Thousand Taka
Organizational participation	Score
Communication exposure	Score
Training on nutrition	Days

Body mass index of a respondent was measured in terms of weight in kg and height in meter square. The respondent's weight was measured by weight machine in kg and height was measured by measuring tape in inch. Then it was converted in meter by multiplying it with 0.0254.

BMI=Weight (kg)/ Height (m^2)

If a respondent had

BMI value <18.5, she referred as underweight

BMI value 18.5-24.9, she referred as normal weight

BMI value 25-29.9, she referred as overweight

BMI value >30, she referred as obese

BMI value >35, she had death risk (Wikipedia, 2019)

Extent of access of rural women to nutritional programmes was the focus variable of the study. Ten nutritional programmes identified from FGDs and KIIs such as awareness building, group meeting, training, demonstration, food support, vegetable seed/input, dietary consultancy, distribute, booklet/leaflet, improve health status of mother and children, ensure child protection and care while measuring the focus variable. A four-point rating scale was used to measure the focus variable. Specific score was assigned based on the responses of the respondents on different questions such as '3', '2', '1' and '0' for 'high', 'medium', 'low' and 'no' respectively (Ahmed, 2007). Thus the total score on extent of access of rural women could range from '0' to '30', where '0' implies no access and '30' implies high access of rural women to nutritional programmes. Problems faced by the respondents in accessing nutritional services were measured by asking their opinion on the selected problems. A four point rating scale was also used for computing the problem score of a respondent. Each problem score of '3', '2', '1' and '0' was assigned to indicate extent of problem as 'high', 'medium', 'low' and 'not at all' respectively. The total problem scores were computed for each respondent by adding the scores for all the problems. To determine rank order the problems, Total score (TS) was computed. The possible range of problem score could range from '0' to '150', where '0' indicated no problems and '150' indicated highest level of problems for rural women in nutritional programmes

Data processing and analysis

SPSS (Statistical Package for Social Sciences) computer program was used to process all the collected information in computer. The socio-economic characteristics of the respondents were measured with descriptive statistics: mean, standard deviation (SD), and percentage. Descriptive statistics help to explain the characteristics and basic features of the respondents in a study (Fraenkel et al., 2012). Besides, to explore the extent of access of rural women to nutritional programmes, Pearson's Product Moment Correlation Co-efficient (r) was used (Ray and Mandal, 2004).

3. Results and Discussion

3.1 The socio-economic characteristics of respondents

Table 2 represents the socio-economic characteristics of the respondents. Among 100 women, near about cent percent (98%) young to middle aged while only 2% were found as old. Where, middle-aged people were more capable of managing their tasks as compared to others. Data revealed that among the respondent women more than half (55%) of them were illiterate, while about a quarter (23%) had primary level education and rest 22% had secondary level

education. It indicates the Women literacy rate of the study area was lower than the national rate of 71% (World Bank, 2018). Though education is the best weapon to learn nutritional knowledge and to improve personal and family nutritional status, however, illiteracy of the majority of the respondents was a limiting issue in this case. Table 2 shows that more than half (62%) of the respondents had medium sized family. While more than a quarter (26%) of them had small household size and only 12% of them had large household size. Distribution of the respondents according to their farm size are shown in Table 1 that shows that the highest proportion of the respondents (67%) fell into the category of marginal farm size, while one-third (33%) were in small farm size category.

Table 2. Salient features of personal characteristics of respondents

Characteristics	Categories	Respondents (n=100)		Mean	SD
		No.	Percent		
Age (Year)	Young (18-35)	37	37.0	40.30	8.13
	Middle age (36-55)	61	61.0		
	Old (>55)	2	2.00		
Education (Years of schooling)	Illiterate (0)	55	55.00	2.72	3.16
	Primary (1-5)	23	23.00		
	Secondary (6-10)	22	22.00		
Household size (No. of members)	Small family (2-4)	26	26.0	5.13	1.00
	Medium (5-6)	62	62.0		
	Large (>6)	12	12.0		
Farm size (Hectare)	Landless (up to 0.02ha)	0	0	0.18	0.06
	Marginal (0.021-0.2ha)	67	67.00		
	Small (0.21-.99ha)	33	33.00		
Annual household income (‘000’ BDT)	Low income (<100 BDT)	88	88.0	73.76	15.41
	Medium income (100-400 BDT)	12	12.0		
	High Income (>400 BDT)	0	0		
Organizational participation (scales scores)	No participation (0)	69	69.0	0.43	0.61
	Low (up to 6)	31	31.0		
	Medium (7-12)	0	0		
	High (above 12)	0	0		
Communication exposure (scales score)	Low (Up to 14)	50	50.0	12.87	4.33
	Medium (15-28)	50	50.0		
	High (above 28)	0	0		
Training (Days of training)	No training (0 day)	73	73.0	0.88	0.87
	Short (1-7)	27	27.0		
	Medium (8-15)	0	0		
	High (above 15)	0	0		

SD= Standard Deviation

Data presented in Table 2 shows that the highest proportion of the respondents (88%) had low annual household income, while 12% of them had medium income. However, there was no respondent with high household income. Thus, results revealed that most of the respondent women had low to medium annual household income. This result supports our research context because we considered women members from smallholder farm families as our study sample. The two-third (69%) of the respondents had no organizational participation while only less than one-third (31%) of the respondents had low extent of organizational participation. The findings indicated poor social involvement because in rural socio-cultural settings women rarely participate in various social programmes like different associations, clubs and committees. Besides, the half of the respondents (50%) had low communication exposure and rest (50%) of them had medium extent of communication exposure.

None of them belonged to high communication exposure category. Based on the type of respondents used in this study, we assume that most of the beneficiaries of WVB had high (50) communication exposure because they are directly involved in nutrition programmes and conduct more interactions to receive health care services than the non-beneficiary respondents. Data presented in Table 1 shows that the absolute majority of the respondents (73%) did not

get any training on nutritional issues, while more than a quarter (27%) of them got only short duration training on nutritional issues. However, none of the respondents received medium or long duration training on nutritional aspects.

3.2 Extent of Access to Nutritional Programmes of Beneficiaries of WVB and Non-Beneficiaries

Data presented in Table 3 shows that half (50%) of the respondents had high access to nutritional programmes and a significant portion (48%) of them had low access and only 2% of the respondents had medium access to nutritional programmes. This finding agrees with a similar study conducted by Khalak et al., (2018) where they found that 81% of rural women in Bangladesh had low access in receiving farm information. This study further revealed that 96% of non-beneficiaries' women had low extent of access and only 4% had medium extent of access to nutritional programmes in the study area. On the contrary 100% of the WVB beneficiaries had high extent of access to nutritional programmes in improving their nutritional status.

Table 3. Distribution of the respondents based on their extent of access to nutrition programmes

Categories	Respondents						Mean	SD	t-value
	Non-Beneficiaries (n=50)		Beneficiaries (n=50)		Pooled (n=100)				
	N	%	N	%	N	%			
Low (up to 10)	48	96	0	0	48	48	15.12	1.98	-49.74*
Medium (11-20)	2	4	0	0	2	2			
High (>20)	0	0	50	100	50	50			

SD= Standard Deviation

The computed 't'-value -49.74* of mean difference between beneficiaries of WVB and non-beneficiaries presented in Table 2 also confirms the significant difference. The computed 't'-value of 0.49.74 is higher than the tabulated value. Hence, there is significant difference between the beneficiaries and non-beneficiaries of the WVB regarding their access to nutritional programmes. It is now very much clear that WVB beneficiaries had relatively better extent of access compared to non-beneficiaries in different programmes. This is because the beneficiaries of the WVB received training, contacted with agent of the WVB to get advice about nutrition, and participated in regular group meetings compared to non-beneficiaries. This finding supported the studies conducted by Dunneram and Jeewon (2015) while indicated the reproductive age women access to Healthy Diet and Nutrition Education Programme and Elahi et al. (2018) stated the farmers access to agricultural advisory and financial services.

Table 4 indicated the rank order of the nutritional programmes based on the responses made by the beneficiaries and non-beneficiaries women. Awareness building got first rank for both beneficiaries and non-beneficiaries' women while, group meeting for beneficiaries and distribution of the booklet/leaflet for non- beneficiaries got second rank considering their access. Surprisingly, food support programme for both beneficiaries and non-beneficiaries' women got least rank order (10th) which supposed to be first rank as it is very much link to health nutrition. This is because of problems faced by the respondents in receiving services which are stated below (Table 8).

Table 4. Comparison between beneficiaries and non-beneficiaries' women based on their extent of access to nutritional programmes

Nutritional Programmes	WVB Beneficiaries		Non- Beneficiaries	
	Total Score	Rank order	Total Score	Rank order
Awareness Building	150	1	124	1
Group meeting	149	2	12	4
Training	139	4	16	3
Demonstration	132	5	4	6
Food support	86	10	0	10
Vegetable seed/Input	127	6	1	9
Dietary consultancy	107	8	2	7
Distribute Booklet/leaflet	141	3	90	2
Improve health status of mother and children	121	7	5	5
Ensure child protection and care	97	9	1	8

3.3 Nutritional Status of the Beneficiaries and Non-beneficiaries of WVB

For assessing the nutritional status of the respondents, the BMI value was measured. The BMI value of the respondents ranged between 14.66 to 35 with a mean of 21.90 and standard deviation of 3.21. Based on their BMI value the rural women in the study area were classified into five categories as underweight (<18.5), normal weight (18.5-24.9), overweight (25-29.9), obesity (30-35) and death risk (>35). Data presented in Table 5 reveals that 10% of the respondents were underweight, and most (78%) of the respondents had normal body weight. Furthermore, 12% of the respondents had overweight. However, none of the respondents were either obese or in death risk which really indicates a positive aspect of nutritional status of rural women. Weerasekara et al. (2020) found that among the reproductive age women in Srilanka, 43.5% were underweight, 33.5% were normal weight while 19.3% were overweight and only 3.8% were obese while Wolde et al. (2014) found that 66.8% of the respondents were healthy or normal weight, 28% were underweight and only 5.2% were overweight. Almost similar findings were observed by Islam et al. (2020).

Table 5. Comparative nutritional status of the beneficiaries and non-beneficiaries based on their BMI value

Categories	Respondents						Mean	SD
	Beneficiaries of WVB (n=50)		Non-beneficiaries of WVB (n=50)		Pooled (n=100)			
	N	%	N	%	N	%		
Underweight (<18.5)	7	14.0	3	6.0	10	10.0	21.90	3.21
Normal weight (18.5-24.9)	38	76.0	40	80.0	78	78.0		
Overweight (25-29.9)	5	10.0	7	14.0	12	12.0		
Obesity (30-35)	0	0	0	0	0	0		
Death risk (>35)	0	0	0	0	0	0		

SD= Standard Deviation

On the other hand, Table 5 also shows that among the beneficiaries of WVB, more than three-fourths (76%) had normal body weight, 14% were underweight, and 10% were suffering from overweight. But, among the non-beneficiaries of WVB, the majority (80%) of the women had normal body weight and only 6% were underweight. However, 14% of them were also suffering from overweight. There was none among the beneficiaries and non-beneficiaries of WVB having obese and death risk. The results of the study notice that the overall nutritional status of the women were relatively better. However, there is no significant difference regarding nutritional status between the beneficiaries and non-beneficiaries of WVB considering the BMI indicator (Table 6).

Table 6. Mean difference of BMI value between beneficiaries and non-beneficiaries

	Beneficiaries of WVB (n=50)		Non-beneficiaries of WVB (n=50)		t-value
BMI	Mean	SD	Mean	SD	
	21.93	2.46	22.25	2.57	.085NS

SD= Standard Deviation

The computed‘t’-value of BMI between beneficiaries and non-beneficiaries of WVB presented in Table 6 also confirms the insignificant difference between the BMI of beneficiaries and non-beneficiaries of WVB. The computed‘t’-value of 0.085 is less than the tabulated value. Hence, there is no significant difference among the beneficiaries and non-beneficiaries of the WVB regarding their nutritional status based on BMI value.

Results of correlation test

The coefficient of correlation (r) was used to test the null hypothesis regarding the relationship between two concerned issues and results of the correlation test is presented in Table 7.

Table 7. Comparative correlation between the selected socio-economic characteristics of the beneficiaries and non-beneficiaries and their access to nutritional programmes

Characteristics	Correlation co-efficient 'r-values' with 48 df (Beneficiaries)	Correlation co-efficient 'r-values' with 48 df (Non-beneficiaries)
Age	-0.023	-0.118
Education	0.176	-0.140
Household size	-0.034	-0.147
Farm size	0.102	0.015
Annual household income	0.021	0.039
Organizational participation	0.336*	0.008
Communication exposure	0.207	0.413**
Training on nutritional issues	-0.244	0.546**

** Correlation is significant at 0.01 level (2-tailed)*Correlation is significant at 0.05 level (2-tailed)

Pearson's Product Moment Correlation Co-efficient (r) was used to test the null hypothesis concerning relationships between any two variables. Out of eight variables of the beneficiaries, the relationships of one variable with their access to nutritional programmes found significant and seven were non-significant. Table 7 indicated that the organizational participation of the beneficiaries and their access to nutritional programmes showed significant and positive (r=0.336*) relationship. The beneficiaries having higher organizational participation were usually well informed about nutritional programmes provided by different organizations compared to the respondents with lower organizational participation. Hossain (2013) found that the farmers with higher organizational participation had better knowledge and information compared to the farmers with lower organizational participation, Gazi (2009) found significant positive relationship between organizational participation and capacity strengthening of rural women in conducting harvest activities of potato and Weerasekara et al., (2020) also found significant positive relationship between organizational participation and food and nutrition related knowledge and practices among reproductive age women in Srilanka.

On the other hand, out of eight variables of the non-beneficiaries, the relationships of two variables with their access to nutritional programmes were found to be significant and six were notsignificant. The relationship between communication exposure of the non-beneficiaries and their access to nutritional programmes showed significant positive (r=0.413**) relationship. The reason might be the non-beneficiaries with higher communication exposure were well known and having updated information about nutritional programmes than the respondents with lower communication exposure. So the respondents having higher communication exposure had better access to nutritional programmes. Nasrin (2015) found that rural women with higher communication exposure had better knowledge in household food utilization than the women with low communication exposure, Mandal (2011) found that farmers with higher communication exposure were well known about the extension activities of Krishi Gyan Samprosaran Kendra to improve their livelihoods compare to the farmers with low communication exposure, Billah (2013) found that smallholder farmers with higher communication exposure had better knowledge for the adaptation of farming practices in response to climate change and Weerasekara et al. (2020) found that the reproductive age women in Srilanaka with higher communication exposure had better food and nutrition related knowledge, attitudes, and practices comare to women with low communication exposure while Wolde et al. (2014) found no significant relationship between communication exposure and nutritional status of adolescent girls living in Southwest of Ethiopia and Uma (2004) found significant negative relationship between communication exposure and knowledge level of farm women regarding weaning foods.

The relationship between the respondents training on nutritional issues and their access to nutritional programmes was found to be significant and positive (r=0.546**). This might be because the non-beneficiaries with more training on nutritional issues had better knowledge and experience than the respondents with lower training on nutritional issues. So the respondents having higher training experience had better access to nutritional programmes than the respondents with lower training experience. Mandal (2011) also observed significant positive relationship between training exposure of the respondents and their access to extension activities of Krishi Gyan Samprosaran Kendra while Nasrin (2015) found no significant relationship between training exposure of the rural women and their contribution to household food utilization, Rahman and Begum (2009) found no significant relationship between training exposure and capacity strengthening of rural women in carrying out post-harvest activities of vegetables and fruits and Gazi (2009) found no significant relationship between training and capacity strengthening of rural women in conducting harvest activities of potato.

3.4 Problems Faced by the Beneficiaries of WVB and Non-Beneficiaries in Receiving Nutritional Services

Problems faced by the beneficiaries and non-beneficiaries in receiving nutritional services were measured considering 10 selected items of problem using a four-point rating scale. Data presented in Table 8 shows that overall, less than half (45%) of the rural women had low extent of problems in receiving nutritional services, while around a quarter (24%) had medium extent of problem and about one-third (31%) had high extent of problems in receiving nutritional services having a mean of 14.12 and SD of 7.47.

Table 8. Categorization of the respondents based on their problems faced in receiving nutritional services

Categories	Beneficiaries of WVB (n=50)				Non-Beneficiaries of WVB (n=50)				All (n=100)			
	N	%	Mean	SD	N	%	Mean	SD	N	%	Mean	SD
Low (1-10)	45	90			0	0			45	45.0		
Medium (11-20)	5	10	7.08	2.36	19	38	21.16	2.47	24	24.0	14.12	7.47
High (>20)	0	0			31	62			31	31.0		

SD=Standard deviation

Most of the WVB beneficiaries (90%) had low level of problems, while more than half (62%) of the non-beneficiaries had high level of problems in receiving nutritional services. So, the non-beneficiaries faced relatively more problems compared to beneficiaries in receiving nutritional services because of having low level of knowledge, lack of opportunity for organizational participation and inadequate information sources. Islam et al. (2020) found that 48.6% of women had faced medium level of problems, 41.4% women had faced high level of problems while 11% faced low level of problems in household food maintenance. Almost similar findings were also observed by Dunneram and Jeewon (2015) in case of women of reproductive age to participate in healthy diet and nutrition education program and Elahi et al., (2018) in case of farmers' access to agricultural advisory and financial services at farm level.

The total score for each problem has been calculated (formula given below) and to determine the intensity of the problem rank order was made according to their mean score which appears in Table 9. The observed range of the total score for WVB beneficiaries was varied between from 25 to 51 against the possible range from 0 to 150. Table 9 shows the total score, mean score and the corresponding rank order of the problems faced by beneficiaries of WVB.

TS = Ph x 3 + Pm x 2 + Pl x 1 + Pnx 0

Where,

TS = Total problem score

Ph = Number of women indicating high problem

Pm = Number of women indicating medium problem

Pl = Number of women indicating low problem

Pn = Number of women indicating no problem at all

Based on total problem score, problems were ranked out and placed in the Table 9.

Table 9. Rank order of the problems faced by the beneficiaries of WVB in receiving nutritional services
TS= Total Score MS= Mean Score and RO=Rank Order

Items of Problem	WVB Beneficiaries			Non-beneficiaries		
	TS	MS	RO	TS	MS	RO
Lack of awareness on nutritional services	38	0.76	3	141	2.82	1
Deficiency of knowledge of agent of the service providers	32	0.64	6	122	2.44	4
Non-cooperative behavior of agent of the service providers	28	0.56	7	121	2.42	5
Unwillingness of the participants in nutritional programmes	51	1.02	1	136	2.72	2
Unavailability of agent of the service providers	27	0.54	8	113	2.26	6
Lack of communication between participants and agent of the service providers	33	0.66	5	127	2.54	3
Lack of sufficient knowledge about the nutritional programmes	34	0.68	4	106	2.12	7
Lack of commitment of the agent of the service providers	26	0.52	9	96	1.92	9
Less interest to attend the programmes related to improving nutritional status	45	0.90	2	103	2.06	8
Poor behavior of the agent of the service providers	25	0.50	10	62	1.24	10

In the simple way, the statement having mean score of '3' indicates the 'highest' extent of problem of the respondents and the statement having mean score of '2' and '1'respectively indicate 'medium' and 'low' extent of problems. Table 8 shows the intensity of problems faced by the WVB beneficiaries based on their mean score. The mean score of the problems faced by WVB beneficiaries varies from 0.50 to 1.02 which indicates the low intensity of problems. 'Unwillingness of the participants' got the 1st rank among the problems faced by the beneficiaries of WVB in receiving nutritional services. 'Less interest to attend the programmes related to improving nutritional status' got the 2nd highest rank among the problems. 'Lack of awareness on nutritional services' got the 3rd rank followed by 'Lack of sufficient knowledge about the programmes' got 4th position based on problems faced by the WVB beneficiaries while, 'Poor behavior of the World Vision agent' stands last position among all the statements based on the extent of problems faced by the WVB beneficiaries.

In case of non-beneficiaries of WVB, the observed total score was varied between from 62 to 141 against the possible range from 0 to 150. To determine the intensity of each problem faced by non-beneficiaries mean score of each problem was measured. Table 8 shows the total score, mean score and the corresponding rank order of the problems faced by non-beneficiaries of WVB. In the simple way the statement having mean score of '3' indicates the 'highest' extent of problem of the respondents and the statement having mean score of '2' and '1' respectively indicate 'medium' and 'low' extent of problems.

The mean score of the problems faced by non-beneficiaries' ranges from 1.24 to 2.82 which indicates the extent of problems varies from 'low' to 'high'. It is evident from the Table 8 that 'Lack of awareness on World Vision services' got the 1st rank among the problems faced by the non-beneficiaries of WVB in receiving nutritional services. 'Unwillingness of the participants' got the 2nd highest rank among the problems. 'Lack of communication between participants and agent of the service providers' got the 3rd rank followed by 'Deficiency of Knowledge of agent of the service providers' got 4th position based on problems faced by the WVB beneficiaries while 'Poor behavior of the agent of the service providers' stands last position among all the statements based on problems faced by non-beneficiaries for getting access to nutritional programmes. So, it is evident from the Table 8 that non-beneficiaries' women faced comparatively more problems than beneficiaries in receiving nutritional services. And it is expected because, beneficiaries always have contact with their respected organization and getting different types of interventions including advisory services for the same compared to the non-beneficiaries. Islam et al. (2020) found that rural women faced more problems compared to urban women in case of household food maintenance and Dunneram and Jeewon (2015) found that women of reproductive age also faced problems to participate in healthy diet and nutrition education program.

4. Conclusion and Recommendations

Sufficient nutrition in human body is always a crucial indicator to keep healthy human body. Thus, numerous organizations have been working in this issue while World Vision Bangladesh is one of them. The finding of the study revealed that the beneficiaries of WVB had comparatively better access to nutritional programmes compared to non-beneficiaries' women. Therefore, it may be concluded that creditability of WVB is achieved through their good service and thus the beneficiaries of the study may have good faith, trust even satisfied for the same. Organizational participation, communication exposure and training on nutritional issues may be associated with the nutritional service which may affect the access of the. Therefore, it is concluded that these three variables may be considered as influential while taking a policy in this regard. Moreover, study identified the lack of information sources on nutritional issues, low level of organizational participation and lack of training for improvement of knowledge on nutritional issues and thus it said that these problems may be the hindrance of providing service to the beneficiaries. Therefore, government and non-government organizations may take appropriate initiatives like education, training, awareness building to increase the access of rural women in different nutritional programmes by motivating them so that they will be able to lead a healthy and prosperous life.

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