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Rural Women Access to Nutritional Services: A Case Study Concerning Rural Women in Bangladesh

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Abstract

Equity of access to primary health services is critical for the most vulnerable and marginalized people in our societies. Despite global efforts to establish universal health care systems, women continue to be among society's most underserved citizens in both poor urban and rural settings. The main barriers may include economic, geographic, cultural, or institutional factors. Monitoring access inequalities to primary health care services is critical in providing policymakers with an evidence-based solutions more equity-oriented policies, programmes, and practices towards improving long and healthy life for all people in the society. The main purpose of the study was to explore what factors influence women's access to health services provided through government and civil society health programmes. It also examines the evolution of nutritional programs under government and civil society organizations in Bangladesh to provide insights on their design considerations to inform future design, deliver, and access of health care programmes by women in Bangladesh. Findings indicated that only 50% of rural women had access to health programmes. In addition, young and education women with high exposure to public awareness opportunities had more access health programmes. Further, health programme delivered through government and civil society design and delivery mechanisms reached out to more women. The study concludes that understanding women's circumstances and taking institutional design into account for operational effectiveness are crucial for the design and delivery of health services to rural areas, given these challenges.

Keywords: Nutrition programs, Extent of access, rural women, Bangladesh, Communication

1. Introduction

Access to adequate nutrition for rural women is critical for the health, good life, and the general well-being of the entire family, community, society, and nation. Stenberg et al. (2014) proposed a new global investment framework which suggests that investing in the health of women and children can lead to better health, social, and economic outcomes. When the people are healthy the economic growth is possible (WHO, 2001; Lorentzen et al., 2008). The literature argues that investment in health and strong health policies contribute to high economic growth and development (Jamison et al., 2013). Additionally, investing in women's health and nutrition has direct inter-generational transfer ability to access opportunities in development from mothers to children, youth, and adults (Bloom et al., 2015; Bhalotra & Rawlings, 2011). Thus, women's health is critical to the health and prosperity of future generations which translates to better educated and productive communities (Onarheim et al., 2016; Bloom et al., 2015).

Studies by the World Health Organization (2009) indicate that, in many countries in Asia including Bangladesh, women face persistent barriers in obtaining healthcare services and restricting their access to nutritious food due to prevalent discriminatory gender-based, low education, and domestic violence.

Rural women in Bangladesh have been experiencing high levels of food insecurity including nutritional deficiencies, undernutrition, and over-nutrition (Sheema et al., 2016). Ahmed et al. (2018) observed a high level of nutritional deficiencies among rural pregnant women of Bangladesh with the rate of anaemia being at 34.7%; iron deficiency at 27%, and Iron Deficiency Anaemia at 3.4%. The literature argues that high prevalence of overweight is (BMI 23–24.9 kg m2 = 17.7%) while obesity BMI 25 kg m2 = 26.2%) incidences among children under the age of five and women (Siddiquee et al., 2015; Ahmed et al., 2012). The changes in diets leading to overweight and obesity are attributed to rapid urbanisation, wealth disparities, more sedentary lifestyles, and adulteration of food which compromises the ability of women to control their weight (Biswas et al., 2019). FAO (2014) has observed that in Bangladesh, malnutrition is caused by a combination of several variables including low food consumption, poor food choices being made, food utilisation due to poor sanitation, sickness, and insufficient health care.

Efforts to address nutritional challenges in the country has led to the emergence of numerous health-related programmes with a focus on nutritional services. The government has undertaken policy reforms to ensure flexibility for both the public sector under the Department of Health (DoH) and the Private sector to provide health care services (WHO, 2015). Civil society such as World Vision, Care International, BRAC, ASA, and National Nutrition Services (NNS) have also been providing health services related to nutritional services targeting girls, women, and children.

The literature has examined the nutrition status and knowledge of rural women involved in the BRAC nutritional programme. However, there are limited studies exploring the factors that influence rural women's ability to access and benefit from nutritional programs services in Bangladesh. The existing literature lacks empirical insights on the factors that can enable or hinder rural women access to nutritional programmes under the public and civil society. Thus, this study focuses on organisation and women-specific factors that influence the ability of rural women to access nutrition programs implemented by the government and civil societies in Bangladesh. It answers the question: How can nutritional programmes be designed to ensure optimal services for rural women? The specific questions are as follows. What are barriers and enablers of women's ability to access public and civil society governed and managed nutritional programmes and services? What are the factors that influence the ability of rural women accessing nutritional programs and services? How can insights from organisational and women-specific factors help in designing efficacious nutritional programmes that are accessible to rural women?

1.1 Evolution of nutritional programmes in Bangladesh

According to the World Development Report on ‘Investing in Health’, health matters both intrinsically and instrumentally for a society's development (Bloom & Fink, 2014). Malnutrition affects around half of the world's population, particularly women (IFPR, 2016). Women are more prone to malnutrition than men because of their different physiological requirements, socioeconomic conditions, and psychological state especially during pregnancy or lactation (and reproductive years (Hossain et al., 2013; Islam et al., 2004). This problem is particularly common throughout South Asia. In Bangladesh, under nutrition among women is more common than in most developing countries (Osmani & Sen, 2003) with about 30% of women of reproductive age reporting malnutrition (Milton et al., 2010). The literature observes severe malnourished, underweight, and nourishment-related issues among pregnant women (Kavitha et al., 2011; Hasan et al., 2017).

Malnutrition of women can lower weight in new-born babies. Globally, out of the 20.6 million infants born with low birth weight (LBW) each year, 55% are found in rural Bangladesh (Kabir et al., 2020; Nisha et al., 2019). Hossain et al. (2013) found out that 20% of the rural pregnant women suffered severely malnourished and 54% suffered malnourished while only 21% were well-nourished. These studies argued that malnutrition and undernutrition is influenced by education, gender power, communication methods, poverty, and decision-making. In addition, food instability, poor diet, repeated illnesses, poor health care, excessive workloads, and gender inequity are attributed to maternal malnutrition (Ramachandran et al., 2006; Tirado et al., 2013).

This section examines and briefly discusses the various rural nutritional programmes under government (see 3.2), under civil societies (see 3.3), and then draws implications on the effectiveness.

1.1.1 Nutrition programs for rural women in Bangladesh

The Bangladesh Integrated Nutrition Program (BINP) was implemented from 1996 to 2002. It was the country's first significant community nutrition services programme. The services were provided through governments partnership with civil societies. The project implemented 61 Upazilas and reached around 16% of the rural population (Saha et al., 2015; World Bank, 2005). It presented an innovative model for using community-level structures for enhancing access to nutritional services. The involvement of civil societies helped to improve government’s understanding on provision of nutritional services to the last mile in areas where the government's institutional

arrangements and capacities have limitations in reaching and understanding the local context. However, the relationships between the government and civil were not always good as the former posed as a master of the latter. In addition, the governance had several levels of parallelism and duplication of roles and responsibilities which led to several services delivery redundancies including double funding and therefore wastage of the rather scarce development resources and community fatigue due to repetitive and overlapping activities (BINP, 2005; World Bank, 2005).

1.1.2 National Nutrition Programme (NNP) strategy

The National Nutrition Programme (NNP) strategy was implemented over the period 2004 to 2012 (Saha et al. 2015; Mbuya et al. 2015). It was formulated based on lessons learned from the BINP to enhance response to local nutritional needs. It was the biggest by the government and carried out by local non-governmental organisations (NGOs) and provided comprehensive nutrition interventions services to teenage girls, women, and children. However, the programme had several limitations that compromised its effectiveness. First, despite its solid design with customisation of the BINP to improve responses to local requirements, it only reached around 30% of the total population and thus, its effectiveness has been called into doubt (Nahar et al., 2009; BINP, 2005; World Bank, 2005). Secondly, the beneficiaries were not appropriately targeted, and the food supplements delivered to women and children were of poor nutrition quality. Thirdly, its accountability was below standard, and the monitoring and assessment methods were clearly inadequate. Fourth, the program did not address the requirements of children suffering from severe and acute malnutrition, and no cities with significant slum populations received any benefit. Based on these shortcomings, the programme was terminated by the government.

1.1.3 The Health, Population, and Nutrition Sector Development Programme

The Health, Population, and Nutrition Sector Development Programme was implemented over the period 2011-2016 (Ohno, 2015). It was designed to replace the NNP. It aimed to mainstream the nutrition services into the health system and to cover about 25% of the population. This initiative covered nearly twice as many (109) Upazilas (sub-district) in 2004 as Bangladesh Integrated Nutrition Programme (BINP) and included the Upazila (sub-district) under the latter programme. It was also designed to integrate lessons learned from the Health, Nutrition, and Population Sector Program (HNPSP) of NNP). At the time commencement of the programme the coverage area was reduced from 109 Upazila to instead cover 172 Upazilas (Sub-district). Nutritional activities were implemented through two separate operational plans, which is NNP-OP and MNS-OP. Under the NNP-OP, nutritional services were delivered under the government health institutions while under the MNS-OP nutritional services were delivered to the rural community through the health facilities.

However, the programme had several challenges that limited its effectiveness in helping women to access nutritional services leading to its closure in 2011 (Ahmed et al., 2012). First, only a limited set of nutrition activities was delivered through health facilities under the MNS-OP which are bureaucratically governed and managed thus leading to delays in service delivery. Second, there was a clear lack of coordination, duplication and parallelism among the multiple institutions and between the two operational modalities leading to operational redundancies and wastage of funds. Third, the NNP interventions were implemented through contracts with civil societies who have limited nutritional systems work and lack connections with health systems (Saha et al., 2015). Fourth, some Nutrition-related initiatives were carried out by non-aligned multiple ministries and development partners leading to high administrative overhead and challenges in coordination and monitoring challenges. Despite these challenges, the continuity of public health institutions has the advantages of ensuring sustainability in the delivery of nutritional service.

1.1.4 Rural nutritional programmes under Civil Society

The civil societies in Bangladesh have participated in the implementation of Nutritional programmes. In 1983, CARE Bangladesh designed and implemented the Rural Maintenance Programme (RMP) in 17 districts throughout Bangladesh, with two field offices (Mymensingh and Jessore) serving 8 and 9 districts, respectively (Roy et al., 2008). The aim was to improve the socio-economic and nutrition status of mothers and their children within the project operational area.

The World Vision Bangladesh (WVB) has been implementing maternal-child health and nutrition, education, livelihood, child protection, and Water, Sanitation and Hygiene (WASH) programmes. It has approximately 5 million children and 3.1 million adults across 27 administrative districts and 68 locations through 51 area programs and 15 grant-funded projects. In addition, the World Vision is implementing a USD 4.75 million Nutrition-Sensitive Value Chain Project (NSCVC) in Jamalpur district of Bangladesh (World Vision Bangladesh, 2018). It aims to empower 20,000 smallholder farmers and families in terms of nutritional and economic aspects. The programmes are supported by many development agencies including the government of Bangladesh, United Nations, and other international philanthropic organisations.

While nutritional programmes delivered by civil society are considered unsustainable due to fluctuations in donor funding and weak regulatory mechanism for expenditure, they demonstrate high efficiency due to the absence bureaucratically and competence of service delivery to community-based approaches to development.

1.1.5 Implications

The historical analysis on nutritional programmes modalities provides insights on the strengths and limitations of discrete and partnership between government and civil societies in provision of public services. Although the government has the advantage of having institutional structures with wide coverage and assured continuity in providing public services to rural women, they are often laden with bureaucratic redundancies, financial governance challenges, have unclear grievance redress mechanisms, and lack tactics for taking public services to the last mile. On the contrary, although civil societies have the tactics for taking public services to the last mile, they lack institutional structures and mechanisms for long-term provision of services. This is because they have no permanent sources of funding. While partnerships between government and civil society in the provision of public services may address some of these challenges, care is needed to ensure new challenges such as parallelism and duplication of efforts do not lead to double funding and wastage of the rather limited development resources and community fatigue.

2. Materials and Methods

This section briefly describes the research area, population, and sampling framework. It then presents the methods for data collection and analysis.

2.1 Research area, population, and sampling

This study was conducted in Jamalpur district of Bangladesh which is a flood prone area and vulnerable to food and nutritional security. This adversely affects vulnerable households. In response, Government Organizations (GOs) and Non-Government Organisations (NGOs), particularly Care International and World Vision have been implementing nutrition programs in the area since 1983. Figure 1 presents the study which consists of the two purposely selected villages, Deliopara and Charpara within 'Meshta' and 'Lakshirchar' unions respectively of Jamalpur Sadar Upazila (sub-district) within Jamalpur district. Jamalpur Sadar Upazila (sub district) has an area of 489.56 square, 102,579 households, and human population of 501,924 (male constituted 51.47% and 48.53% are female) and a density of 1,000 persons per square kilometre.

Table 1. Sampling framework

Unions	Villages	Area (sq.km)	Human population	No of women served by WV	Sample size (10%)
Lakhichar	Charpara	10.43	1147	520	52
Meshta	Deliopara	37.50	1650	485	48
Total					100

A sample of 100 women served by the WV were selected with the help of the organisation's manager (see Table 1). Data to assess women's access to nutrition programs was collected using Focused Group Discussions (FGDs) with 20 women and surveys with 20 women equally drawn from the two villages.

2.2 Measurement of the focus variable and data analysis

Analysis was done using a four-point score rating scale denoting the different level of access to nutritional programmes, that is, high access = 3, medium access = 2, poor access =1, and no access = 0. Thus, the possible score ranged from 0 to 30, with 30. The total score (TS) was calculated using equation 1 as proposed by Khalak et al. (2018).

$$TS = Thx3 + Tmx2 + Tlx1 + Tnx0 \quad (1)$$

Where,

TS = Total score

Th = Number of high access responders

Tm = Number of medium access respondents

Tl = Number of low access respondents

Tn = Number of no access at all respondents

The score was further analysed using Pearson's coefficient of product-moment correlation to investigate the link between the independent and focal variables (Eq. (2)).

Where,

The determinants of rural women's access to nutrition programs were calculated using multiple regression analysis (enter & stepwise). A stepwise regression analysis was conducted, using Equation 3, to quantify the individual contribution of component variables once unimportant variables are removed from the model (Khalak et al., 2018).

$$yi=\beta0 + \beta1X1+ \beta2X2+ \beta3X3+ \beta4X4+ \beta5X5+ \beta6X6+ \beta7X7+ \beta8X8+ \in i \quad \ldots\ldots(3)$$

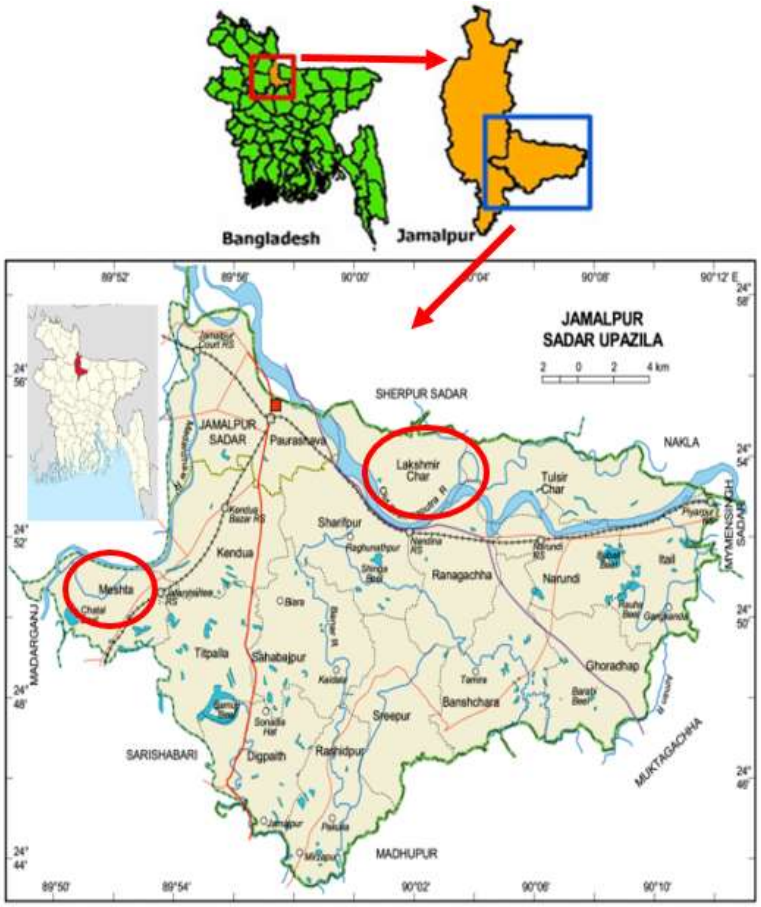

Figure 1. Map of research area

Where, yi = access of rural women, β0 = constant, X1 = age, X2 = education, X3 = family size, X4 = farm size, X5 = annual household income, X6 = organisational participation, X7 = communication exposure, X8 = training on importance of nutrition, and ∈i= Error term

3. Results and Discussion

This section discusses the findings from the study. It examines the level of access to nutritional services by women under the various nutritional programmes implemented by government and civil societies within the study area. Investigate the relationship between selected attributes of rural women and level of access to nutritional services. It then examines the factors and specific problems influencing women's access to nutritional services.

3.1 Extent of access to various nutrition programs in the study area

Figure 2 presents the findings on the level of women's access to nutritional programmes based on 10 modes of access to nutritional services. Findings indicated an access level ranging from 4 to 26 against the possible score of 0 to 30, an average score of 15.12, and a standard deviation of 1.98. It reveals that half (50%) of the respondents experienced high access to nutrition programs, 48% expressed poor access, and 2% report having moderate access to nutrition programs. Similar studies by Khalak et al. (2018) indicated that about 81% women experienced poor access to nutritional programmes. Study by Savari et al. (2020) observed that 20.93% of rural women experienced high participation while 72.55% reported moderate level of access and 6.52% indicated low levels of participation in nutrition programs.

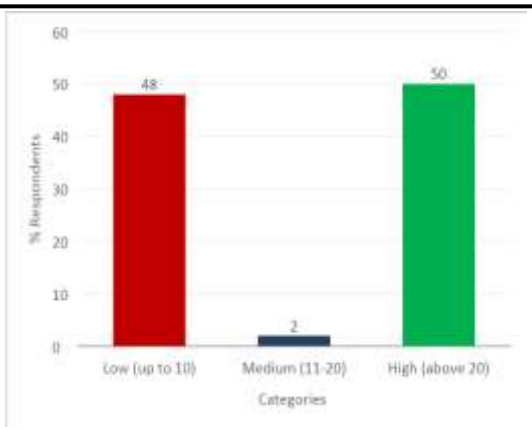

Figure 2. Rural women's overall access to nutrition programs (n=100)

The research observed that given that only half of women have been receiving nutrition services from related programmes, more efforts are needed in the design and implementation of nutritional programmes to ensure their effectiveness. Banik (2016) has observed that effectiveness of development programmes can be improved by strengthening the decision-making mechanism, ensuring financial accountability, and addressing structural barriers.

Table 2 presents the scope of nutritional services that women can derive from nutritional programmes. The access level score ranged from 188 to 290 against the possible range of 0 to 300. Access to awareness building' was the most accessed nutritional service with a score of 290. As reported by Ravi (2017) with reference studies in India, women's awareness about nutrition and diet is influenced by the strength of community support mechanisms. Wakefield et al. (2010) has argued that Mass media campaigns can directly and indirectly enhance awareness among rural women about health-related behaviour. Reber et al. (2020) observed that continuous medical education and multifaceted interventions have a high effectiveness in women's behavioural changes towards improved access to nutritional programmes and service.

In Bangladesh, field agents or representatives of nutritional programmes undertake door-to-door campaigns to create awareness among women on nutritional services. 'Group meetings' for women is the second highest effective mode, with a score of 281, for women to access nutritional services. Rodriguez-Ramirez et al. (2015) has noted that nutrition-related education conducted programmes agents under community-oriented sessions including home visits, group meetings, community centres are a powerful mode of improving women's access to nutritional programmes and services. Nutrition training was the third-ranked program with a score of 280. Such training helps women to develop the skills needed for optimising the gains from nutritional programmes and services. Suchitra (2018) argued that participation of rural women in training sessions has a substantial impact on their understanding about dietary practices. Food support with a score of 172 was the least effective mode of accessing nutritional programmes. Respondents argued that such food support programmes were poorly organised and managed thus, limiting women access to the programmes and services.

Table 2. The extent of access to various nutrition services

Sl. No.	Nutrition Programs	Extent of access						
		H(3)	M(2)	L(1)	N(0)	TS	M	RO
01	Awareness building	90	10	0	0	290	2.90	1
02	Group meeting	85	11	4	0	281	2.81	2
03	Nutrition training	84	12	4	0	280	2.80	3
04	Demonstration	81	11	7	1	132	2.72	5
05	Food support	10	70	14	6	177	1.77	10
06	Vegetable seed/Input support	56	42	2	0	254	2.54	6
07	Dietary consultancy	16	81	2	1	212	2.12	8
08	Distribution of booklet/leaflet	82	13	5	0	277	2.77	4
09	Improve health status of mother and children	50	46	1	1	243	2.43	7
10	Ensure child protection and care	10	74	10	6	188	1.88	9

Note: H= High; M=Medium, L=Low; TS= total score, M=Mean; and RO=Ranked Order

3.2 Correlation between the selected attributes of the rural women and their access to nutrition programs

The section investigates the relationship between women's characteristics and their access to nutritional programs. Table 3 presents the summary of findings from correlation analysis.

Table 3. Relationship between the selected attributes of respondents and their access to nutrition programs

Characteristics	Correlation coefficient 'r-values'	Tabulated values of r using 98 df	
		0.05	0.01
Age	-0.211*	0.197	0.256
Education	0.020		
Household size	0.074		
Farm size	0.466**		
Yearly family income	0.515**		
Organisational participation	0.722**		
Communication exposure	0.872**		
Training on nutrition	0.562**		

** The correlation at the 0.01 level is significant; * Correlation at the 0.05 level is significant (2-tailed)

The research examined 8 selected characteristics of rural women. The findings indicated that five (5) characteristics including farm size, yearly family income, organisational participation, communication exposure, and training on nutrition were positively correlated while three (3) including age, education, and household sizes were negatively correlated. This is supported by similar findings by Wei et al. (2019) which found out that access to nutrition programs declines as women age which can translate into increased malnutrition among older women. It is also notable that farm size plays an important role in ensuring women access adequate nutrition and balanced diets (Sibhatu & Qaim, 2018; Ochieng et al., 2017) As supported by Kabir et al., 2019 and French, et al., 2019 women with higher annual family income have better access to nutrition and balanced diets. Organisational participation supported women's access to nutrition programs which is supported by findings from study by Hossain et al. (2013). Communication exposure supports women's access to nutritional services by providing information through communication channels as also observed in other study by Alsop et al., 2005 and Blake et al., 2020. As similarly observed by Farnoush et al. (2013), nutrition training assists pregnant women to access nutrition programmes.

3.3 Factors affecting the rural women's access to nutrition programs

Table 4 presents the findings from multiple linear regression analysis on the factors affecting access to nutritional programmes. Four variables out of eight show relevance in influencing women's access to nutritional programmes: an F value of 55.206 and R2 value of 0.829. This implies that 83% of rural women's access to food programs can be explained by the combined impact of various explanatory variables. The findings indicate that age with the coefficient of (t = -1.953; p = 0.054), family size (t = 2.065; p = 0.042), organising capability (t = 2.419; p = 0.018) and communication exposure (t= 8.984; p= 0.000) had significant influence explaining women's access to nutrition programs.

Table 4. Multiple linear regression summary (n = 100) describing the focus variable

Model	Unstandardized Coefficients		Standardised Coefficients	t value	Sig.
	B	Std. Error	Beta		
(Constant)	-7.638	3.411		-2.239	0.028
Age	-0.118	0.061	-0.096	-1.953	0.054
Education	-0.207	0.154	-0.066	-1.348	0.181
Household size	0.723	0.350	0.095	2.065	0.042
Farm size	15.116	8.631	0.098	1.751	0.083
Yearly family income	0.057	0.043	0.076	1.331	0.187
Participation in organisation's activities	2.594	1.072	0.158	2.419	0.018
Exposure to communication channels	1.313	0.146	0.636	8.984	0.000
Training on nutrition	0.855	0.643	0.075	1.331	0.187
	R^2 = 0.83	F-value = 55.206			

Age had a negative coefficient implying that as women within the study progress in age, their ability to access nutrition programs decreases. Specifically, with a one unit increase in age, their access to these programs will diminish by 0.118. This implies that interest of women in nutrition declines with age. Khalak et al. (2018) reported a similar finding.

The family size of the respondents had a positive coefficient. An increase of one family member leads to an 0.723 increase in access to nutrition programs. This implies that an increase in family size leads to improved access nutrition programs. The more the interaction among family members the more the encouragement to access nutrition programs. Thus, a large family can clarify nutrition issues and the benefits from accessing existing nutritional programmes within the community. Savari et al. (2020) observed a similar relationship between household size and rural women's participation in a food security program.

The findings indicate that one unit increase in participation in organisation's programmes raises the women's access to nutrition programs by 2.594. This could be explained by the postulation that women are involved in the various social, cultural, and professional groups and activities they get connected with networks of other women who may share their experiences of benefits of other solutions, or who have alternative nutrition ideas and beliefs. These observations are consistent with the findings by Poddar et al., 2017 and Ruel, et al., 2018 who argued that exposure to communication has a positive and significant relationship with women's access to nutrition programs. One unit increase in communication exposure leads to 1.3 increase in women's access to nutrition programs within the study area which is consistent with findings by Feleke et al. (2016).

3.4 Stepwise multiple regression analysis

Table 5 presents the summary for the stepwise multiple regression analysis. The model comprises three variables, namely communication exposure, participation organisation activities, and family size. Together, the factors with (R2 = 0.801) can explain 80% of the variation in women's access to nutrition programs.

Table 5. Summary of stepwise multiple regression analysis (n = 100).

Model	Variables entered	Multiple R	Multiple R^2	Variation explained (percent)	Significance level
Constant + X_7	Communication exposure (X7)	0.872	0.761	76.1	0.000
Constant + X_7+ X_6	Participation in organisations activities (X6)	0.890	0.791	3.0	0.000
Constant + X_7+X_6+ X_3	Household size (X3)	0.895	0.801	1.0	0.000

Exposure to communication is the highest factor (R2 = 0.761) which explains 76.1% of the variation in rural women's access to nutrition programs. The implications are that the more the exposure to communication about nutritional programmes through media campaigns including Television, Radio, Newspapers, and Phones, the more the women can be aware and informed about the potential benefits and thereby, the more the access to the programme which is consistent with findings of Wegenast & Beck (2020) and Sheheli et al. (2023). Savari et al. (2020), Huka et al. (2023) and Aziz et al. (2020) found that communication channels and mode of education plays a significant role in improving rural women's participation in the food security program.

Participation in organisation activities is the second highest factor which explains 3.0% of the variation in rural women's access to nutrition programs. The implications are that participation in organisations activities can provide opportunities to improve clarity about the benefits of accessing nutrition programmes which is consistent with studies by Kabir et al. (2014).

Household size is the least variable factor that explains 1.0% of the variation in rural women's access to nutrition programs. According to Kabir et al. (2014) food security among rural women can be influenced by household size.

3.5 Problems of rural women in receiving nutrition services

Table 6 present scores and corresponding ranked order of the problems faced by rural women when accessing nutritional programmes within the study area. Women's lack of knowledge on nutrition programs, with a total score of 181, was the most critical issue limiting their access to nutritional services. Poor level of education led to poor understanding about the aims of the nutrition program and therefore, low access to related programmes. Most women respondents had poor knowledge of the various programs operational within the study area which is consistent with findings from similar studies by Uddin et al. (2021) and Amegah et al. (2018). About 77% of the women in the study area have only basic literacy skills limited to primary school education.

Lack of commitment among programme's service providers (TS= 180) was the second most critical problem faced by rural women when accessing nutritional programmes. Considering the geographical and infrastructure, and

organisational management challenges, most service providers operate under limited motivational and logical support systems which in turn hampers their service delivery and by extension the ease of rural women to access nutritional programmes.

Harassment of the women by services providers while accessing nutritional services was the least experienced problem (TS=31).

Table 6. Ranked order of rural women's problems in receiving nutrition services.

Type of problem	Level of problems				TS	RO
	H(3)	M(2)	L(1)	N(0)		
Lack of awareness about nutrition services	22	37	31	0	171	5
Poor knowledge of field agent	20	25	44	11	154	6
Non-cooperation with the agent	10	23	32	35	108	8
Agent bothering the women	0	0	31	69	31	10
Limited number of field agents	41	21	10	28	175	4
Lack of communication between women and agent	41	21	12	26	177	3
Lack of sufficient knowledge about the nutrition programs	30	39	13	38	181	1
Lack of commitment shown by the agent	34	29	20	17	180	2
Lack of interest in attending the nutrition programs	24	20	35	21	147	7
Poor behaviour of agent	0	11	29	60	51	9

Note: H=high, M=medium, L=low, N= not at all; RO= Ranked Order

4. Conclusion and Recommendation

Bangladesh is a delta country with varied vulnerabilities to flooding which influences food and nutritional security by access to services. As well, governance systems for food and nutrition are extremely weak, marked by lack of accountability and poor coordination among institutional arrangements for governing access to food and nutritional services delivery in the rural areas of the country. This paper has examined the historical trends and patterns in the implementation of public and civil society governed and managed nutrition programs. It concludes that the design of effective nutritional programmes that delivers enhanced and equitable nutritional services among rural women requires insights on how to optimise the strengths and minimise the weaknesses from typical in both public and civil society nutritional programmes. The design needs to address the challenges of public institutional bureaucracies, duplication, parallelism, wastage of funds and lack of proper coordination. Similarly, the design needs to address the regulatory and sustainability challenges common in civil society led nutritional programmes.

The analysis on the factors influencing rural women access to nutritional programmes reveals the range of variables with statistical significance. Specifically, findings indicate that awareness building, group meeting, nutrition training, and food support emerged significantly in influencing rural women's access to nutritional programmes and services. Notably, such factors as farm size, family's yearly income, organisational participation, communication exposure and training on nutrition strongly influence rural women's access to nutritional programmes and services. Household size, participation in organisation’s activities, communication exposure, lack of knowledge about nutrition programs, and low commitment by service providers had a strong influence on rural women's access to nutrition programs. The design and delivery of effective health programmes must consider both women-specific factors and institutional design considerations.

Recommendations for further studies

There is opportunity to pursue further research related to this issue. Some of them are listed below:

Future research should consider a broader geographical canvas to collect the diverse voices of women’s access to health care services offered by government and civil society health programs.

Additionally, research should consider documenting the barriers and challenges involved in accessing healthcare facilities. This would allow reaching viable solutions for improvement in the quality of health services conducive to the needs of local communities.

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