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Readiness of Health Facilities to Provide Child Curative Care Services: Evidence Based on Bangladesh Health Facility Survey, 2014

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Abstract

Bangladesh is far away to achieve the target of sustainable development goal 3 (SDG 3). To reduce the child mortality, all sectors related to child health should be improved by taking appropriate actions. In this study, readiness of child curative care health facility services is explored. The readiness was not directly measured, it is measured based on the four domains of ten indicators following WHO guidelines. To create readiness index, equal weights are given to each domains of indicators and also to each indicators at each weighted domains for providing child curative care services. The major purpose of the study is to find out the determinants of readiness of health facilities to provide the child curative care services. The 2014 Bangladesh Health Facility Survey (BHFS) data have been used to serve the purpose. The ordinal logistic regression model with proportional odds assumption has been applied in the study. Type of facility, health provider status, division, qualification of health provider and basic amenities in facility are found to have significant effects on readiness index.

Keywords: Health Facility, Readiness, Ordinal Response, BHFS, Child Curative Care

I. Introduction

Globally, about 10 million children under the age of five years die each year due to the conditions that could be prevented or treated with access to simple, affordable medicines[1-3].Although the leading causes of child deaths are pneumonia (19%), diarrhoeal diseases (17%), neonatal severe infections (10%), malaria (8%), but these deaths can be reduced by providing immediate and exclusive breastfeeding, improving access to skilled health professionals for antenatal, birth and postnatal care, improving access to nutrition and micronutrients, improving access to water, sanitation and hygiene and providing immunizations[3,4]. Many parents, caretakers or guardians do not get enough facility to take treatment and consultations needed by their children. Some parents or guardians can afford the medicines, but these are often not available[5]. The lack of availability of medicines for children is a global problem[3]. A study showed that availability and accessibility of children's medicines are required to improve access to medicines for children[6]. In order to achieve the desired therapeutic outcomes for children, access to age appropriate and well tolerated drug formulations is essential[3,7]. However, access to appropriate medicines for children as well as readiness of health facility services on child curative care are the major challenges in the world[8].

To measure primary health care readiness throughout East and South Asia as well as sub-Saharan Africa, Service Provision Assessment (SPA) or health facility surveys have been conducted. In Bangladesh, SPA survey was named as Bangladesh Health Facility Survey (BHFS). To supplement the Bangladesh Demographic and Health Survey (BDHS) data by providing useful descriptive information on health system functioning and the utilization of health services at the national level, BHFS produces a surplus of indicators.

Normally, providers of child health facility services treat a sick child's most evident symptoms without conducting a full assessment of the child's health status or act to prevent further illness[1]. For this reason, the World Health Organization (WHO) along with other agencies developed the Integrated Management of Childhood Illness (IMCI) strategy[9,11], not only to conduct a full assessment of the child's current health along with possible underlying problems, but also to provide interventions, such as vaccination, that can prevent child's illness or reduce its progression. To assess the provision of child health services, the 2014 BHFS used the IMCI guidelines. These guidelines are derived based on two major components: (i) all sick children should be routinely assessed for main symptoms such as fever, cough, or difficult breathing, diarrhoea, ear pain or discharge, nutrition and immunization status, feeding problems etc.; and (ii) all children should be examined for general danger sign sthat indicate the need for immediate referral or hospital admission. In these cases, the facilities should always be ready to provide the child curative care services.

Bangladesh needs to reduce the neonatal and under-five child mortality to a great extent, since these rates are higher in Bangladesh. To fill up the target of Sustainable Development Goal 3 (SDG 3), Bangladesh should reduce neonatal mortality to below 12 per 1000 live births and under-5 mortality to below 25 per 1000 live births. But Bangladesh is still far away of achieving these targets as these rates are 23 and 38 per 1,000 live births, respectively in 2015[10]. It is well established that neonatal and child mortality can be reduced to some extent by improving child curative care services. The paper aims to demonstrate a method that can be used to explore readiness indices of health facilities for different services. The readiness of child curative care health facilities cannot be measured directly. To measure readiness indices, WHO definition was used in the study.The major aim of this study is to find out the key

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determinants of readiness index of child curative care health facilities and also to explore the prevalence rates of readiness index with respect to several background characteristics. To serve the purposes, BHFS-2014 data have been used in the study. The findings of the study could help government policy makers by taking some actions to the facility services to reduce the under-five child mortality as well as child mortality. Again, indices developed here could be used to control for readiness to provide child curative care at the nearest health facility level.

II. Data and Methods

Data

The 2014 Bangladesh Health Facility Survey (2014 BHFS) is the third survey of its kind in Bangladesh which is nationally representative. Information were collected from 1,548 health facilities throughout Bangladesh. The survey was conducted under the authority of the National Institute of Population Research and Training (NIPORT) of the Ministry of Health and Family Welfare (MOHFW), with funding from the Government of Bangladesh and the U.S. Agency for International Development (USAID).

This study has extracted data from the 2014 Bangladesh Health Facility Survey (BHFS).The 2014 BHFS is a cross-sectional study with a stratified random sample of 1,596 health facilities selected from all formal-sector health facilities in Bangladesh. The sample size for the BHFS was determined by a combination of census and random samples (census for DHs and MCWCs; random sample for other facility types). Finally, 1548 facilities were interviewed successfully.

In this study the facilities were taken which show the availability of curative care services for sick children. Thus, to serve the study purpose, 1452 facilities were selected in the study who declared that they have the availability of several components to provide child curative care services. Again, to avoid underestimation or overestimation problem in the estimates of prevalence rates of readiness of child curative care facilities among background characteristics of the facilities, the data have been weighted i.e. complex survey design has been setup in the study.

Outcome Variable

The WHO identifies specific tracers or items that facilities must have to be considered ready to provide child curative care. In assessing the overall service readiness of facilities to provide child curative care, this study used four domains often items provided by WHO tracer[11]. The domains along with the indicators are given in the Table 1.

As mentioned in earlier that readiness of health facilities to provide child curative care cannot be measured directly. It is measured based on the above WHO tracer indicators of 10 items. To measure readiness indices, WHO approach was used, where equal weights were given to each domains of indicators and also to each indicators at each weighted domains for providing child curative care services

Table 1. The domains along with several indicators for measuring child curative service readiness

Serial No.	Domain	Indicator/Item
1.	IMCI guidelines	national or other guidelines on IMCI available at facility
2.	IMCI trained staff	at least one provider received in-service training on at least some components of IMC
3.	Equipment	child scale
		thermometer
		growth chart
4.	Medicines	ORS
		zinc tablets/syrup
		amoxicillin syrup/suspension/dispersible
		paracetamol syrup/suspension
		mebendazole/albendazole

In the study, readiness on child curative care health facilities was the outcome variable. To make the outcome variable, at first, readiness indices or scores were created based on the above mentioned 10 indicators giving equal weights to each domain of indicators and then the distribution of readiness scores on child curative care health facilities was divided into three equal parts based on the quintiles. It is noted that, in the study, each indicator was created as binary variable assigning the values of 0 and 1, where 0 and 1 indicate that the health facilities do not met the criteria of tracer items and met the criteria of tracer items, respectively. The following expression can be used to calculate scores as

$$Z_i = \left(\frac{1}{m} \sum_{j=1}^{m} \frac{1}{p_j} \sum_{k=1}^{p_j} x_{ijk} \right) \times 100;$$

$$i = 1, 2, \ldots, n; j = 1, 2, \ldots, m; k = 1, 2, \ldots, p_j,$$

where Z_i is the score of i^{th}case (facility), m is the number of domains, $p_j$is the number of indicators in j^{th}domain, x_{ijk} is the value of k^{th}indicator in j^{th} domain for i^{th}case (facility), and n is the total number of cases (facilities). In the expression, the weight 100 was used to get the results of score in percentage. The above formula was developed based on the WHO definition of service readiness index[11,12]. Since the indicators are binary with the values of 0 and 1, the higher scores indicate that the facilities have higher service readiness. For example, if a health facility have a score of 100, it may say that the facility is fully ready to provide the service, or if a facility have a score of 70, the facility have 70% readiness to provide the service.

In the study, the facilities were classified into three categories based on the readiness scores. The facilities having the lowest 33.33% readiness scores have lower readiness;facilities of middle 33.33% scores have moderate readiness; and facilities of upper 33.33% scores have higher readiness to provide child curative care services. For the purpose of this study, we define the response variable as

$$Y_i = \begin{cases} 1,\ \text{Poor}(\text{if } Z_i \le p_{33} = 56.67) \\ 2,\ \ \text{Medium } (\text{if } p_{33} = 56.67 < Z_i \le p_{66} = 78.33, \\ 3,\ \ \ \text{High } (\text{if } Z_i > p_{66} = 78.33 \end{cases}$$

where Y_i is the ordinal response indicating health facility status of i^{th} facility.

Covariates

In the study, the six covariates were taken to explore the readiness of health facilities which provide child curative care services. The covariates are: division, location of facility, type of facility, health provider status, qualification of health provider and basic amenities in facility. The 2014 BHFS collected several types of health facilities. The types of facilities are (i) District Hospital (DH), (ii)Upazila Health Complex (UHC), (iii) Maternal and Child Welfare Center (MCWC), (iv) Union Health and Family Welfare Center (UnHFWC), (v) Union Health and Family Welfare Center (UnHFWC - Upgraded), (vi) Union Sub-center (UnSC) / Rural Dispensary, (viii) Community Clinic, (ix) NGO Clinic, (x) Privtate Hospital (with >20 beds) and (xi) NGO Hospital. For avoiding the complexity in interpretation, the type of facility was re-categorized into four categories in the study. The final categories are: 1. Public hospitals or clinics (combining (i) to (vi)), 2. Community Clinics, 3. NGO hospital or clinics (combining (ix) and (xi)), and 4. Private hospitals. Some facilities have the available health providers who may be specialists, MBBS doctors, medical officers or other health professionals. Again, some facilities do not have available health provider and in this case, to provide the health services, the facilities hired or seconded/deputed the health professionals in the facilities. Thus, in this study, health provider of facility was categorized into available and not available.The health providers of facilities have different health qualifications. The 2014 BHFS collected information on health qualification from health providers. Taking all health qualifications categories in the study is very difficult to analyze as well as to interpret. Thus, re-categorization is needed to handle this situation. Qualification of provider has been categorized into two categories in the study which are: specialist or MBBS and others (except specialist/MBBS). Every facility should have some basic amenities which may help for better health of patients. The BHFS collected information on several amenities from facilities. The nine amenities have been observed in the study. The amenities are: 1. separate latrine or toilet for female clients, 2. emergency transport, 3. computer with internet, 4. national electricity grid availability, 5. regular electricity, 6. improved water supply, 7. visual and auditory privacy, 8. client latrine, and 9. communication equipment. All of these amenities were considered as indicator variables (Yes/No). To reduce the dimensionality, the principal component (PC) analysis technique has been applied in the study. Since the first principal component has highest variation in explaining all the variables, first principal component has been considered to get a combined effect of all amenities. It is note that more dimensions or variables create complexity to analyze.The first PC does not give the observed values, but gives scores of combined effect of all amenities from facilities. The score variable is continuous, and the distribution of scores was divided into three equal parts based on quintiles. The lower part, middle part and upper part of scores were named as inadequate, moderate and adequate amenities, respectively. In the study, the score variable was also named as basic amenities in facility.

Statistical analysis

To check associations of several covariates with readiness of child curative care, the chi-square test has been used in the study. The p-value < 0.10 was considered as statistically significant in the study.

The ordinal logistic regression model assuming proportional odds assumption i.e. proportional odds model has been applied in the study. The model is used for ordinal response to get precise as well as efficient estimates of the regression coefficients. The previous studies most frequently used the ordinal logistic regression models for ordinal data[13-17]. There are several regression models in ordinal logistic regression, such as proportional odds model (POM), partial proportional odds model (PPOM), continuous ratio model (CRM).The proportional odds model is common and frequently used for ordinal data.

For a response variable Y_i with k categories and the $\tilde{x_i} = (x_{i1}, x_{i2}, \dots, x_{ip})'$, a vector of p explanatory variables, the proportional odds model can be written as

$$logit[P(Y_i \le j|\tilde{x})] = ln\left\{\frac{\sum_1^j P(Y_i = j|\tilde{x})}{\sum_{j+1}^k P(Y_i = j|\tilde{x})}\right\}$$

$$= \alpha_j + \sum_{k=1}^{p} \beta_k x_{ik},$$

$i = 1, 2, \dots, n;\ \ k = 1, 2, \dots, p; j = 1,2, \dots, k-1,$ where α_j is the j^{th} intercept and β_k is the k^{th} regression coefficient associated with x_{ik}[18]. It is to be noted that proportional odds model assumed that the effects of any covariates are consistent (proportional) across the different thresholds (thresholds is the splits between each pair of categories of ordinal response variable). For example, the effect of a covariate on readiness index (high versus medium and low) is same as the effect of that covariate on readiness index (rich and medium versus low).We have used the proportional odds model to get adjusted effects of several independent variables on readiness of child curative care health facilities in regression analysis. STATA 14 package has been used in the study to analyze the data.

III. Results

Table 2 showed the frequency distribution of the selected variables. About 28% of health facilities was highly ready to offer the child curative care services, whereas about 34% facilities had lower readiness on child curative care. Most of the interviewed facilities (about 92%) located in rural areas of Bangladesh which offer the child curative care services.

In the study the linear regression model has also been incorporated to compare the results with the results of proportional odds model.

Table 2. Frequency distributions of the variables included in the study

Variables	Percentage (N=1452)
Readiness Index	
Low	34.04
Medium	37.70
High	28.26
Location of Facility	
Urban	08.46
Rural	91.54
Type of Facility	
Public Hospital or Clinics	27.04
Community Clinics	65.37
NGO Hospital or Clinics	05.27
Private Hospitals	02.31
Health Provider Status	
Available	91.34
Not Available	08.66
Qualification of Health Provider	
Specialist or MBSS	07.56
Others	92.44
Basic Amenities in Facility	
Inadequate	35.24
Moderate	31.52
Adequate	33.23
Division	
Barisal	07.56
Chittagong	18.66
Dhaka	27.20
Khulna	12.82
Rajshahi	14.15
Rangpur	13.33
Sylhet	06.28

Again, among the facilities, only 2.31% and 5.27% were from private hospitals and NGO hospital or clinics, respectively, whereas about 65% facilities were from community clinics. More than 90% of health facilities had available health providers. Only 7.56% health facilities had specialists or MBBS doctors who provide health services. Since the score of basic amenities were equally divided into three equal parts, the percentages of facilities having inadequate, moderate and adequate basic amenities were almost same. More than one-fourth and one-sixth of health facilities located in Dhaka and Chittagong divisions, respectively, whereas only 6.28% and 7.56% facilities located in Sylhet and Barisal division, respectively, and the other divisions had almost equal number of facilities to offer the child curative services.

It was examined that all the selected covariates showed the significant associations with readiness index of child curative care health facilities (Table 3). Among urban facilities, about 35% facilities were highly ready to provide child curative care services, whereas 34.27% and 30.86% facilities had lower and moderate readiness, respectively to give the service. Again, among rural facilities, to provide the services of child curative care, more than one-third of facilities had lower or medium readiness, and less than one-third of facilities had higher readiness to provide the child curative care health services.

Table 3. Bivariate table showing the associations of the selected covariates with the child curative care readiness index

	Readiness Index			
Background	Low	Medium	High	p-value
Location of Facility				
Urban	34.27	30.86	34.87	0.079
Rural	34.03	38.25	27.73	
Type of Facility				
Public Hospital or Clinics	34.65	35.16	30.15	0.030
Community Clinics	33.05	39.54	27.41	
NGO Hospital or Clinics	32.76	32.94	34.30	
Private Hospitals	65.81	21.75	12.44	
Health Provider Status				
Available	31.26	39.07	29.67	<0.001
Not Available	61.85	24.01	14.14	
Qualification of Health Provider				
Specialist or MBSS	31.16	31.34	37.50	0.026
Others	34.26	38.18	27.56	
Basic Amenities in Facility				
Inadequate	36.38	40.54	23.08	0.093
Moderate	35.26	38.76	25.98	
Adequate	30.43	33.70	35.88	
Division				
Barisal	14.68	40.73	44.59	<0.001
Chittagong	37.39	44.38	18.23	
Dhaka	43.99	34.23	21.78	
Khulna	36.06	44.44	19.50	
Rajshahi	39.93	28.79	31.28	
Rangpur	14.30	39.54	46.16	
Sylhet	32.95	29.45	37.61	

Significance: p-value < 0.10.

Among Public hospitals or clinics, about 35% facilities had poor readiness, whereas about 30% facilities had higher readiness to give the services. Most of the community clinics had lower (33.05%) or moderate readiness (39.54%), whereas about 27% community clinics were highly ready to give the services. Among the NGO hospital/clinics, lower, moderate or higher readiness facilities were approximately equally distributed to give the child curative care services. Again, about two-third of private hospitals had poor readiness, and only 12.44% private hospitals were highly ready to provide the services. Among the facilities which did not have available health providers, most of the facilities had lower readiness, and only 14.14% facilities had higher readiness to provide child curative care services. Again, the available health provider facilities (29.67%) had much better higher readiness compared to their counterparts (14.14%). Similar finding was found in qualification of health providers. The facilities which had specialist or MBBS doctors (37.50%) were more likely to have high readiness compared to their counterparts (27.56%).The high readiness of child curative care facility services increased with the increase of basic amenities. The facilities which had adequate (35.88%) basic amenities were more likely to have high readiness compared to the facilities which had inadequate (23.08%) or moderate (25.98%) basic amenities. In Chittagong, Khulna and Dhaka divisions, only 18.23%, 19.50% and 21.78% facilities, respectively had high readiness, whereas more than 44% of facilities in Barisal and Rangpur divisions were highly ready, and more than 30% of facilities in Rajshahi and Sylhet divisions were highly ready to provide the child curative care services.

All variables were included in ordinal logistic regression model i.e. proportional odds model to find out the adjusted effects of the covariates on readiness index of child curative care facility services. Type of facility, health provider status, qualification of health provider, basic amenities in facility and division were significantly associated with readiness index (Table 4). There was no significant difference between rural and urban facilities in readiness to provide child curative care services [OR = 0.75, 95% CI: 0.42-1.34, p-value = 0.324].

Similar findings were found among public hospitals/clinics, community clinics and NGO hospitals/clinics (Table 4). The odds of an improvement to each of the next better service level is 90% less for the private facilities as compared to the public facilities [OR = 0.10, 95% CI: 0.05-0.21; p-value< 0.0001]. The facilities which had available health providers to provide health services were more likely to have high readiness compared to their counterparts [OR = 3.02, 95% CI: 1.51-6.04; p-value = 0.002]. Again, The facilities which had specialists or MBBS doctors for providing health services were more likely to have higher readiness to provide child curative care services compared to their counterparts [OR = 1.86, 95% CI: 1.13-3.06; p-value = 0.015]. The odds of having readiness was 67% more among the facilities which had adequate basic amenities compared to those facilities which had inadequate facilities [OR = 1.67, 95% CI: 1.04-2.66; p-value = 0.033], but no significant difference was found among the facilities having inadequate and moderate basic amenities [OR = 0.99, 95% CI: 0.66-1.50; p-value = 0.989]. Health facilities from Barisal [OR = 3.53, 95% CI: 2.05-6.05; p-value < 0.0001], Rangpur [OR = 3.54, 95% CI: 1.96-6.40; p-value < 0.0001] and Sylhet [OR = 1.88, 95% CI: 0.98-3.64; p-value = 0.059] divisions have higher odds of having high readiness in child curative care services compared to facilities from Dhaka division, respectively, but there was no sufficient evidence to establish the significant difference among the facilities of Dhaka, Chittagong, Khulna and Rajshahi divisions in readiness of the services.

Table 4. The odds ratios (OR) with 95% confidence intervals (CI) and p-values for the child curative care readiness index obtained from ordinal logistic regression analysis

Background	OR	95% CI of OR	p-value
Location of Facility			
Urban	1.00		
Rural	0.75	0.42-1.34	0.324
Type of Facility			
Public Hospital or Clinics	1.00		
Community Clinics	1.21	0.87-1.70	0.264
NGO Hospital or Clinics	0.73	0.42-1.26	0.257
Private Hospitals	0.10	0.05-0.21	<0.001
Health Provider Status			
Available	3.02	1.51-6.04	0.002
Not Available	1.00		
Qualification of Health Provider			
Specialist or MBSS	1.86	1.13-3.06	0.015
Others	1.00		
Basic Amenities in Facility			
Inadequate	1.00		
Moderate	0.99	0.66-1.50	0.989
Adequate	1.67	1.04-2.66	0.033
Division			
Dhaka	1.00		
Barisal	3.53	2.05-6.05	<0.001
Chittagong	1.17	0.72-1.92	0.520
Khulna	1.19	0.67-2.11	0.549
Rajshahi	1.56	0.80-3.02	0.192
Rangpur	3.54	1.96-6.40	<0.001
Sylhet	1.88	0.98-3.64	0.059
Intercepts			
$\widehat{\alpha_1}$	0.72		
$\widehat{\alpha_2}$	2.47		

Significance: p-value < 0.10.

Comparison of results obtained from linear regression and proportional odds models

In this paper, linear regression model has also been fitted to compare the results obtained from linear regression and proportional odds models. Before categorizing the readiness score variable, the score was continuous variable, and hence a linear regression model may be used to find out the determinants of readiness of child curative care health facilities. The results presented in Table 5 shows the estimated regression coefficients of the covariates for readiness score obtained from linear regression model. It is shown that all the covariates except type of facility have significant effects on readiness (Table 5). Based on results of both models (Table 4 and Table 5), it is said that both models give the similar results. Since the models give same results in the study, it is revealed that either linear regression model or proportional odds model can be used for index score response variable.

Table 5. The regression coefficients (β) with 95% confidence intervals (CI) and p-values for the child curative care readiness score obtained from linear regression analysis

Background	β	95% CI of β	p-value
Location of Facility			
Urban	Ref.		
Rural	-4.57	-11.32−2.18	0.184
Type of Facility			
Public Hospital or Clinics	Ref.		
Community Clinics	3.24	-0.75−7.22	0.111
NGO Hospital or Clinics	-2.57	-9.47−4.34	0.466
Private Hospitals	-25.1	-32.4−-17.6	<0.001
Health Provider Status			
Available	12.46	5.62−19.30	<0.001
Not Available	Ref.		
Qualification of Health Provider			
Specialist or MBSS	6.78	1.18−12.38	0.018
Others	Ref.		
Basic Amenities in Facility			
Inadequate	Ref.		
Moderate	0.61	-4.08−5.29	0.799
Adequate	6.82	1.17−12.46	0.018
Division			
Dhaka	Ref.		
Barisal	14.36	8.12−20.61	<0.001
Chittagong	1.14	-4.7−6.99	0.701
Khulna	2.19	-4.44−8.83	0.516
Rajshahi	4.49	-2.99−11.99	0.240
Rangpur	17.83	11.23−24.42	<0.001
Sylhet	8.16	1.67−14.66	0.014

Significance: p-value < 0.10.

IV. Discussion

This study assessed the associations of readiness index of child curative care health facility services with several covariates. It also found out the adjusted effects of the covariates with readiness index. All covariates were found to have significant association with readiness index in bivariate analysis, but only location of facility did not show the significant association in regression analysis. Private facilities were less likely to have high readiness compared to public hospitals/clinics. This might be due to fact that with the support from the government, public hospitals can arrange all the facilities necessary to provide quality health care services, but private hospitals cannot.

The health facilities with available health providers were more likely to have high readiness compared to the facilities with seconded/deputed health providers. This may happen due to the reason that available health providers are obedient and responsible to their duties, and they can provide child curative care services without any hesitations.

The facilities with qualified providers (i.e specialists or MBBS doctors) were more likely to have high readiness for giving child curative care services compared to their counterparts. The specialists or MBBS doctors are able to follow the IMCI guidelines, train the facility stuffs or collect appropriate medicines for child care in facilities.

Facilities having adequate basic amenities were more likely to have high readiness compared to facilities having inadequate basic amenities. There is no specific reason to explain this finding. There may have another factor, for which basic amenities showed the significant association with readiness index. It is assumed that if a health facility have adequate basic amenities, the facility is well decorated and hence it may have equipment or medicines or may follow IMCI guidelines on child curative care services.

Health facilities from Barisal, Rangpur and Sylhet divisions were more likely to have high readiness in child curative care services compared to facilities from Dhaka division, respectively. This could be due to regional differences in health services or in access to health information and health facilities.

Results of this paper do not demonstrate the cause-effect relationship since data used in this study was collected using a cross-sectional setup. Again, cluster effect was not considered to identify the factors of readiness index in child curative care services.

V. Conclusion

The study found the significant adjusted effects of the following variables with readiness index of child curative care health facility services: type of facility, health provider status, division, qualification of health provider and basic amenities in facility. The Private hospitals have significantly negative effects on readiness index to provide child curative care health services. Similarly, facilities having available health provider, adequate basic amenities, and facilities from Barisal, Rangpur and Sylhet divisions have significantly positive effects on readiness index to provide child curative care health services.

Government should monitor the private hospitals so that these facilities can follow IMCI guidelines properly. Managing authorities of the facilities should take necessary actions to ensure the adequacy of basic amenities.They should also strictly monitor the performances of seconded/deputed health providers.

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