Original Research Article

Decision Making Capacity and Constraints Faced by Rural Women while Seeking Maternal and Child Health Care Services in Northeastern Bangladesh

ABSTRACT

The aim of the study was to determine the association between rural women's decision-making power and the constraints faced by them while seeking Maternal and Child Health care services in northeastern Bangladesh. The study sample consisted of 150 mothers living in northeastern Bangladesh who had accessed institutional MCH care services during their pregnancy, childbirth and the postpartum period. Data were collected through a structured questionnaire using simple random sampling technique from January-April, 2018 and analyzed using descriptive statistics, decision making index and constraints facing indexing method through SPSS and Microsoft Excel. The study results showed that, decisions about treatment-seeking, consultation with the doctor during the prenatal and postnatal period, institutional birth preference and use/not use of contraceptives was always taken by the husband because the index was closer to the weighted value 200. But while making decisions about purchasing household daily needs, medicines, taking the first child or having more than two children, both husband and wife participated equally. On the other hands, constraint facing index showed that lack of medicine and vaccination, unhealthy environment and unprofessional behavior of the clinic's people with CFI 651, 316 and 304 respectively, were the most commonly faced constraints by the rural women which discouraged them to seek institutional MCH care services. Though rural women were not completely suppressed in the northeastern region of Bangladesh, healthcare-seeking decisions were completely under the supervision of the men of families. Along with the socio-economic barriers, unprofessionalism, unavailability and mismanagement of the offered services also discouraged them to access institutional MCH care services. Awareness building among the rural people, especially in the recipients of this service along with Government and policy maker's intervention to ensure a better quality of MCH care services can change the scenario of MCH care-seeking attitude of rural women in northeastern Bangladesh.

Keywords: *Maternal and Child Health (MCH) care services; Decision making capacity; Constraints; Northeastern Bangladesh; Rural women; Sylhet region*

1. INTRODUCTION

Maternal health refers to the health of women during pregnancy, childbirth and the postpartum period. While motherhood is often a positive and fulfilling experience, for too many women it is associated with suffering, ill-health and even death [1]. Maternal health is a not only health but also social and development issue since it has tremendous impact on the child health and economy of families and healthcare system [2]. In Bangladesh, nearly one-fourths of total population lives below poverty level and households' out-of-pocket payments share over two-thirds of Total Health Expenditure. Moreover, over 55% of the total female populations are in age group 15-49 years with a total fertility rate of 2.3 and high maternal mortality rate [3]. However, the country has achieved noteworthy progress in terms of reducing MMR by three-quarters by 2015, as a part of its meeting the Millennium

Development Goal [4]. Still the strong patriarchal structure and cultural barriers of society could be attributed for poor health status of women in family and society [5]. It is evident that low utilization of maternal healthcare services is one of the major contributing factors of the high maternal morbidity and mortality in developing countries [6]. Previously many studies have attempted to explore the barriers to the utilization of maternal health services, some from demographic, economic [7, 9, 10] and some from sociocultural and behavioral perspectives [7, 8, 11, 12]. Apart from the socioeconomic aspects, there is also a growing number of study emphasizing the role of women's decision making autonomy on maternal health service utilization and pregnancy outcomes [13, 14]. In the perspective of Bangladesh however, involvement of husbands/partners in decision making is particularly important because most families are male-headed and it is also the male figures who usually play the dominant role in important household decision making such as income expenditure and healthcare-related movement [14]. In South Asian countries including Bangladesh, gender discrimination and inequality remains a widespread phenomenon across various walks of life such as decision-making autonomy, intra-household resource allocation, property rights and access to healthcare [15, 16]. Women autonomy is restricted by social and cultural factors in the rural areas in Bangladesh because of decision taking in context specific dominancy by man. Especially in the northeastern region of Bangladesh, patriarchy is very dominant than other as here the community people are very sensitive about religious norms and cultures. There women have less or no decision making capacity. They cannot take emergency decision or hesitate to take decision related to maternal and child care services, education and other aspects of daily life. Educational backwardness, superstitions and conservative attitude restricts women to receive MCH care from male service providers. Antenatal care appointments among the women of northeastern region of Bangladesh are less (51.8%) than national women (67.3%), which is a huge gap [17]. Within the household structure, the decision to select the birth attendant has been found to rest predominantly with husbands and guardians (in 70% cases). For treatment of female diseases or gynecological problems other than pregnancy, a vast majority of women (65%) usually do not seek any medical care, with husbands bringing medicine in a reported 7.7% of cases [18]. There is a very few studies which describe this exact scenario of decision making incapability of rural women of this region particularly. The major concern of this study was to minimize the knowledge gap and attract policy maker's attention to improve the situation of northeastern women while seeking MCH care services. Women's autonomy is a multidimensional concept which conveys a set of discrete components or phenomena essential for ensuring that women can exercise their rights with full potential and participate in decision making, whether it is about household decisions or healthcare-seeking. Therefore, this study was conducted to determine the association between women's decision making power and the constraints faced by them while seeking MCH services in northeastern Bangladesh.

2. MATERIAL AND METHODS

2.1 THE STUDY AREA:

Sylhet district is located in the northeastern part of Bangladesh with a total area of 3,452.07 sq. km. [19]. Women of Sylhet region were less aware than national women in receiving MCH care. Comparatively, a higher proportion of national women (30.1%) received postnatal care than and women of Sylhet (25.7%) [17]. Five major upazilas of Sylhet district - Sylhet Sadar, Dakshin Surma, Golapganj, Bishwanath and Fenchuganj were selected and five different villages from the upazilas - Shahpur, Jalalpur, Fulbari, Chandripur and Gilachhara were respectively chosen using simple random sampling technique to collect data in consideration with the time and budget.

2.2 SAMPLING PROCEDURE AND SAMPLE SIZE

The study was conducted based on primary data which employed both qualitative and quantitative methods. The target population of this study were women with at least one child of their own who had accessed institutional MCH care services at least for once during their pregnancy, childbirth and the postpartum period. A multi-stage sampling technique was used. In the first stage, simple random sampling technique was used in selecting five upazilas out of twelve in whole Sylhet district. In the second stage, one village from each upazila, thus five villages were selected randomly. Finally, the third stage involved random selection of 30 MCH care service recipients from each village following lottery method of simple random sampling technique giving a total sample size of 150 women. The basic inclusion criteria were: 1) Relatively backward women having poor lifestyle, 2) Relatively cooperative to talk about these sensitive issues. Data was collected from both primary and secondary sources from January to April, 2018. According to the enlisted data of Directorate General of Family Planning, during the data collection period, 48414 women had accessed different types of maternal and child healthcare services in Sylhet district out of which 150 women were selected which constituted 0.31% of the total population. Due to the limitation of time and budget, it was not possible to collect data from the total population. Selected sample recipients were interviewed following individual in-depth interview method and observation through a structured questionnaire

2.3 ANALYTICAL TECHNIQUES

Descriptive data on the socio-economic characteristics of rural women were presented as percentage and mean. To evaluate the contribution of women in decision making, following method of decision making index was carried out. A woman participates in a given decision when she alone or jointly with someone else, especially husband, makes the decision. The index was defined as the number of decisions a woman participates in. For each decision, scoring was determined by the following way:

Xi=**1**= if the decision was taken by Women alone,
Xi=**2**= if the decision was taken by Men in the family,
Xi=**3**= if the decision was taken jointly by Men and Women in the family,
Xi=**4**= if the decision was taken by the parents-in-laws or other family members.

The functional specification of decision making capacity was determined by

$$DI = \sum WiXi/n \qquad [20]$$

Where, **i** = 1, 2, 3 and 4 = Number of decision criterion and **W** = Weight
Each of the decision criterions carried equal weight such as 100 for simpler calculation. Here results were ranged from 100 to 400. Where, 100 meant full participation or freedom of making choice for women. On the other hand, 200 meant no participation or freedom in decision making. Score 300 indicated the combined decision making compatibility of both husband and wife. If the score was 400, it indicated that there was no involvement of them in decision making process. Lastly, a summation of all decision were shown by a simple average where the weights were same. The closer the index score was to the weighted value 300, the greater the indication of gender equity in decision-making.

For determining the constraints faced by the rural women, the constraint facing indexing method was used, which was computed using the following formula,

$$CFI = (C_h \times 3) + (C_m \times 2) + (C_l \times 1) + (C_n \times 0) \qquad [21]$$

Where, **CFI** = Constraint Facing Index;

$\mathbf{C_h}$ = Percentage of respondents having severe constraints;

$\mathbf{C_m}$ = Percentage of respondents having significant constraints;

$\mathbf{C_l}$ = Percentage of respondents having insignificant; and

$\mathbf{C_n}$ = Percentage of respondents having constraints not at all.

All analyses were carried out using the SPSS (Statistical Package for Social Science) for Windows (Version – 22, SPSS, Inc., Chicago, IL, USA) and Microsoft Excel, 2013.

2.4 ETHICAL APPROVAL

A written consent was obtained from all the women after explaining the purpose and method of the study, and guarantee was given for privacy of answers. After a questionnaire on socio-demographic characteristics was filled by the researcher using a face-to-face interview, it was expected that the questions on sensitive issues would be answered by the women themselves.

3. RESULTS AND DISCUSSION

3.1 SOCIO-ECONOMIC CHARACTERISTICS OF THE RESPONDENTS

An effort has been made to describe briefly some of the basic socio-economic characteristics of the respondents because these characteristics have a significant influence on overall experiences they have faced while making decisions about seeking MCH care services. The summary statistics of these characteristics are presented in Table 1. It shows that the highest proportion (41.99%) of the sampled respondents were in middle-aged (25-34) group with mean age 27.83 years and most of them had a large family size (55.33%).

Maximum (44.67%) women had only primary level of education with a mean value of 3.97. The vital proportion (40.67%) of their husbands also had only primary level of education. Education is an important variable while making decisions about accessing health care facilities. From this table, it is evident that, both the recipients and their husbands had a low level of educational qualification which ensured low level of awareness about health related issues. About half of the total population (43.34%) had an inadequate level of family income with a mean value of 0.76. It was evident from the responses that, the women with lesser number of children had more accessibility to MCH care services. Most of the interviewed women (31.33%) had only one child of their own.

Table 1 also shows, most of the respondents (64%) said that their home is very far from the nearest MCH care centers of their respective areas with a mean value of 0.36. 52.67% women of the total population said that, they do not get any family cooperation while accessing MCH care services with a mean value of 0.47. Also unavailable female doctors in MCH care centers was an alarming issue. Due to conservativeness, most of the women hesitated to access the maternal services from a male doctor. Majority (59.33%) of the women with a mean value of 0.41 said that, unavailable female doctor was a factor which affected their accessibility to institutional MCH care services.

Table 1. Distribution of rural women by socio-economic characteristics of the respondents

Variables	Percentage	Mean
Age		
Young (15-24)	40.0	
Middle (25-34)	41.99	27.83

Old (Above 34)	18.01	
Family Size		
Small (2-6)	8.0	
Medium (7-10)	36.67	
Large (≥11)	55.33	
Family type categories		
Joint family	92.0	
Nuclear family	8.0	
Recipient's Education		
Illiterate	28.0	
Primary	44.67	
Secondary	20.67	3.97
Higher secondary	5.33	
Graduation	1.33	
Husband's Education		
Illiterate	19.33	
Primary	40.67	
Secondary	26.67	5.74
Higher secondary	9.33	
Graduation	4.0	
Family income		
Adequate	19.33	
Relatively adequate	37.33	0.76
Not Adequate	43.34	
Number of living children		
1	31.33	
2	26.67	
3	25.33	2.33
4	11.33	
5	5.34	
Distance		
Very far	64.0	0.36
Near	36.0	
Family cooperation		
Yes	47.33	0.47
No	52.67	
Availability of female doctor		
Available	40.67	0.41
Not available	59.33	

Source: Field Survey, 2018

3.2 DECISION MAKING CAPACITY OF RURAL WOMEN WHILE SEEKING MATERNAL AND CHILD HEALTH CARE SERVICES

Women's decision-making autonomy is closely linked to maternal and child health outcomes, with empowerment of women and gender equity being recognized as the cornerstones of effective health programs. There is now growing evidence of gender differences in utilization of health care services globally, and these differences can exist at any stage of health care delivery chain from decision making for healthcare-seeking to effect or quality of care being provided [22]. This is the reason because of measuring the decision making capacity of women in healthcare-seeking was necessary to assess the accessibility of MCH care services of rural women which was the main purpose of the research. Women decision

making index while seeking MCH care services were analyzed and presented in table 2. Here, eight major decisions regarding the household and health care were targeted and indexed on the basis of the responses of interviewed rural women. These eight major decisions were: 1) Treatment-seeking for yourself (respondent), 2) Purchasing household daily needs, 3) Purchasing medicine, 4) Consultation with doctor during prenatal and postnatal period, 5) Institutional birth preference, 6) Use / Not use of contraceptives, 7) Taking first child and 8) Taking more than two children.

According to the represented results presented in Table 2, decisions about treatment-seeking for the recipients were always taken by the husband, because the index value was 222.667 which is closer to the value 200, which was the weight assigned to the husband category. Similarly the decisions about consultation with doctor during prenatal and postnatal period, institutional birth preference and use / not use of contraceptives were almost made by men. Because the index value for each decision was respectively 244.667, 238.667 and 206.0, which were closer to the value 200, that was the weight assigned to the husband category.

On the other hand, while making decisions about purchasing household daily needs, purchasing medicine, taking first child and taking more than two children, both husband and wife participated equally. Because the index value for each stated decisions were respectively 277.333, 260.0, 273.333 and 300.667, which were closer to the value 300, which was the weight assigned to the category where husband and wife took decision together. This was a great sign of initiating women autonomy in some of the household matters. But the fact was also unavoidable that, women personally did not have right to take any decision on herself. For every single aspect, she either had to listen to her husband or to make some decisions with his consent, because he acted as a superior in it. That means, in the case of MCH care-seeking, women did not have the capacity to take decision for herself without the consent of husband and for maximum cases, husband individually took the decision which was a negative sign for the rural women of northeastern Bangladesh.

A comparative study showed that, the number of husbands controlling and implementing everything in the family in Bogra was three times higher than that in Rajshahi. This indicated that a positive change in the family domain is yet to emerge in Bogra. In slums there were more conservative than those in Rajshahi. On the other hand, half of respondents from Shapahar reported that their husband was the sole person in controlling and implementing everything relating to family matters. The number of women directly involved in controlling and implementing family business in Shapahar, was very insignificant compared to that in either Bogra or Rajshahi. The most interesting finding was that 38% of respondents from Shapahar reported that both husband and wife shared household matters together, whereas this figure was significantly low in Bogra (1.6%) and in Rajshahi (6.6%) [23].

Within the household structure, the decision to select the birth attendant has been found to rest predominantly with husbands and guardians (in 70% cases). For treatment of female diseases or gynecological problems other than pregnancy, a vast majority of women (65%) usually did not seek any medical care, with husbands bringing medicine in a reported 7.7% of cases. In this study, the authors group the responses of fear of ‘medical intervention’, ‘evil spirits’, ‘shame’, and ‘delivery at home’ as all rooted in the specific cultural background of the women – although they comment that the percentages of Muslim and Hindu women refusing referral are similar, which seems to confirm finding that religion played little part in decision-making capacity of women while seeking MCH care services [18].

Compared with women who decided on their healthcare alone, those who decided jointly with husband/partner had higher likelihood of using all three types of services (except for

antenatal visits among rural women). However, women could decide large household purchases alone had higher likelihood of attending at least four antenatal visits. Similar association was observed for utilization of postnatal care among women in rural but not urban areas [4].

Table 2: Decision Making Index of Rural Women in accessing MCH care

Decisions	Respondent (1)	Husband (2)	Both (3)	Parents-in-law or other family members (4)	Value	Decision Making Index
1. Treatment seeking for yourself	29	80	19	22	222.667	**Husband**
2. Purchasing household daily needs	1	74	33	42	277.333	**Both**
3. Purchasing medicine	7	76	37	30	260.0	**Both**
4. Consultation with doctor during prenatal and postnatal period	22	62	43	23	244.667	**Husband**
5. Institutional birth preference	21	79	21	29	238.667	**Husband**
6. Use / Not use of contraceptives	27	89	34	0	206.0	**Husband**
7. Taking first child	0	69	52	29	273.333	**Both**
8. Taking more than two children	0	63	23	64	300.667	**Both**

Source: Field Survey, 2018

3.3 CONSTRAINTS FACED BY THE RURAL WOMEN WHILE SEEKING MATERNAL AND CHILD HEALTH CARE SERVICES

Table 3 shows the constraints faced by the rural women while seeking MCH care services in Northeastern Bangladesh. This was estimated by using organized questionnaire. A four-point rating scale was used for computing the constraint score of a respondent. After analyzing all the facts while visiting the studied areas and observing the responses of the recipients of the MCH care services, eleven commonly faced problems were identified which were the major of all the other constraints. These constraints were: 1) Objection from the parents-in-law, 2) Lack of cooperation of husband, 3) Had to go far for accessing the service, 4) Nobody to accompany, 5) Did not get good doctor / Family Welfare Visitor, 6) Lack of female doctors, 7) Lack of medicine and vaccination, 8) The clinic's people were not well behaved, 9) Lack of proper accommodation facility, 10) Irregular treatment and 11) Unhealthy environment.

Table 3 disclosed that, lack of medicine and vaccination with CFI 651 was ranked as first. From the study area, it was found that, 70% of the total interviewed population severely faced the problem of deficiency of medicines and vaccines required by them and their children. Besides they mentioned that, money was charged to them several times unfairly for these services. Because of that reason, they decided to spend their hard earned money to the private MCH care service centers to get better quality services. Only 13% recipients did not face such kind of problem at all. Unhealthy environment with CFI 316 was the second

most faced constraint. The hygiene status of the MCH care centers holds a great importance in attracting more women to come and receive services. Not only MCH care, but also every type of health care system require a healthy and hygienic environment. Attitudes and behaviors of maternal health care providers influence healthcare-seeking and quality of care. Bad behavior of clinic's people with CFI 304 was ranked as third most faced problem. In the study, 52% women got an unexpected level of behavior from the service providers. Irregular treatment with CFI 286 and not getting good doctor or Family Welfare Visitor with CFI 271 were the fourth and fifth problem respectively. Absenteeism of the doctors and service personnel was a mentionable reason behind this issue. The sixth problem was lack of proper accommodation facility with CFI 269 which discouraged rural women to seek MCH care services. Recently Government is making MCH care centers with better accommodation capacity. But how much development is reaching to the rural and backward areas of Bangladesh is the biggest question right now.

Table 3 also shows that the lack of female doctors with CFI 252 was the seventh constraint faced by northeastern Bangladeshi women. Due to the conservativeness and religious boundaries, most of the women of that region felt discomfort while talking about maternal issues to a male doctor and preferred female doctors to resolve their problems. During some previous years, the appointment of female doctors in this service has increased a lot. Still for some reasons, women of rural areas feel some deficiency of female doctors in their nearest MCH care centers. From service providers, it was heard that, many female doctors were unwilling to work in such remote and backward places. Most of them were urban facing.

Objection from the parents-in-law was also a hidden but serious constraint ranked eighth with CFI 224. In almost every family, the recipient lived with their parents-in-law. Most of them were surrounded by superstitions and conservativeness, illiterate and not aware about the benefits of provided services in Maternal and Child Health care centers. As a result, they believed more in traditional birth attendants rather than skilled doctors in MCH care centers. In most of the families, the parents-in-law held a strong position of themselves. Due to lack of decision making capacity, most of the women had to depend on the decisions of their husbands or parents-in-laws. Distance from the MCH care center was also mentioned as a problem by the recipients. Women had to go far to access the service was ranked as ninth constraint with index value 215. Recipients had nobody to accompany them while going to healthcare centers to access MCH care services and thus ranked it as tenth constraint with CFI 206. Lack of cooperation of husband with CFI 174 was ranked as the last constraint. Thought lack of decision making capacity, most of the women had the support of their husbands while accessing institutional MCH care which was a positive sign. Increased awareness was the only affecting factor behind it. It was found that, rural women of northeastern region of Bangladesh were already suffering from lack of decision making capacity because of the socio-economic barriers. Along with those problems, the MCH care sectors were also unable to provide their services to the recipients at a satisfactory level which discouraged them to seek institutional MCH care services.

Table 3: Ranking of the constraints faced by rural women using Constraint Facing Index

Constraints	Severe (*3)	Significant (*2)	Insignificant (*1)	Not at all (*0)	Total CFI	Value	Rank
1. Objection from the parents-in-law	63	3	29	55	150	224	**8**
2. Lack of cooperation of husband	31	21	39	59	150	174	**11**
3. Had to go far for	56	8	31	55	150	215	**9**

accessing the service							
4. Nobody to accompany	43	21	35	51	150	206	**10**
5. Did not get good doctor / Family Welfare Visitor	64	31	17	38	150	271	**5**
6. Lack of female doctors	62	17	32	39	150	252	**7**
7. Lack of medicine and vaccination	205	10	16	19	150	651	**1**
8. The clinic's people were not well behaved	77	23	27	23	150	304	**3**
9. Lack of proper accommodation facility	56	35	31	28	150	269	**6**
10. Irregular treatment	72	22	26	30	150	286	**4**
11. Unhealthy environment	72	41	18	19	150	316	**2**

Source: Field Survey, 2018

Availability of drugs, medical supplies and family planning commodities is almost a constant problem in many public health facilities throughout the length and breadth of Bangladesh. While part of the problem lies with lack of effective supply chain management, lack of funds (or timely release of available funds) to pay for supplies is also a serious problem. Shortage of logistics in most public health care centers, especially at the Upazila Health Complexes and district hospitals is a common phenomenon. Often essential drugs and family planning commodities meant for free distribution to patients and users are pilfered and sold to the private sector vendors [24]. For births occurred between 1992-96, 75% of mothers received at least one Tetanus Toxoid (TT) injection during pregnancy [25], while by 1995-99, the proportion had increased to 81% [26]. At health facilities, communication tended to be more two-way if a woman had a familial relationship or friendship with the health worker [27].

As reported in a study, 90% of patients who had visited qualified private and unqualified practitioners were satisfied with their behaviors and attitudes towards them. Only 66% were satisfied with government service providers. It was also found that government officials behaved roughly with patients who came from poor socio-economic background. Overall quality of EmOC (Emergency obstetric care) in all public health centers except the medical college hospital was poor. The worst quality was found at upazila level [23]. The Bangladeshi Ministry of Health has stated that the quality of maternal health services provided by government institutions is below expectations. It suffers critically from a large number of problems, such as shortage of medical equipment, dearth of doctors/nurses/technicians, unhygienic physical environment, scarcity of power and water, pilferage of drugs and medicines and irregularities in the management system [28].

In a study, it was found that many mothers during their pregnancy took precautionary measures against evil spirits. Younger mothers seemed less likely to believe these explanations, at times ignoring their elder's advice about correct behavior, which could lead to restrictions placed on women's movements by relatives [29]. Women were saying that there was nobody to look after other children if the mother left the household. 18 of the 52 women agreed that transportation problems affected their decision [30]. Lack of female doctors lower the pregnancy support. Female workers from NGO providing delivery services were found to still choose to deliver their own children at home, most of them mentioning factors such as family pressure, sudden onset of labor, distance from the clinic, and transport as the reasons for giving birth at home [31].

4. CONCLUSION AND RECOMMENDATIONS

Women are still rundown of their own freedom to get decision making for herself or children when desired healthcare required. Reaching gender equality is a slow process, since it challenges people to change many cultural practices and thoughts and it takes far more than changes in law or stated policy to change practices in the home, community and in the decision-making environment. In this study, several decisions were analyzed and a concluding remark could be drawn as, in northeastern region of Bangladesh, women were not completely suppressed. They were given a certain level of power to express their thoughts and opinions in household matters. But the healthcare-seeking decisions for rural women were completely under the supervision of men of the family. It was also evident that, along with the socio-economic barriers, several constraints and mismanagement of the offered services also discouraged rural women of northeastern Bangladesh to access institutional MCH care services. Among them the deficiency of medicines and vaccines was the main problem faced by them. Besides unhealthy environment and unprofessional behavior of the service providers were also the major constraint according to them. In this regard, the respondents put forward a number of suggestions to overcome the aforesaid constraints which will improve their access capacity of MCH care services, health condition of their children along with themselves and in turn help to improve the livelihood standard. Proper support and initiative from the government and other cooperative bodies can ensure proper development. As a key indicator of gender equality, women's decision-making power measures the level of women's involvement in decision making regarding consumption and expenditures, reproductive choices, and other decisions. South Asian women are greatly excluded from making decisions and have limited access to and control over resources. Women's lack of decision making ability can be attributed to poor utilization of MCH care services. Identification of the determinants of poor participation of women in decision making for health care can help countries develop programs and policies to improve gender inequalities in health care especially maternal healthcare-seeking.

5. LIMITATIONS

Our study has several limitations. During the study, data were collected via personal statements. Due to regional differences, the results cannot be generalized to the whole country. Finally, the research design of the study limits conclusions about causality for some findings.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Munshi, Rakesh, Sang-Hyop Lee. Child immunization in Madhya Pradesh, National Family Health Survey subject reports. Number 15, IIPS, Mumbai, India 2000. 2000.

2. Kerber KJ, Graft-Johnson JEd, Bhutta ZA, Okong P, Starrs A. Continuum of care for maternal, newborn and child health: from slogan to service delivery. Lancet 2007; 370: 1358-1369.

3. NIPORT. Bangladesh maternal mortality and health care survey, 2010. 2012.

4. Bishwajit G, Feng D, Tang S, Yaya S, He Z, Udenigwe O, Sharmistha G, Feng Z. Women's decision-making autonomy and utilisation of maternal healthcare services: results from the Bangladesh Demographic and Health Survey. BMJ Journals 2017; 7(9).

5. UNICEF 2000. The state of the world's children, UNICEF, New York. 2000.

6. Prata N, Sreenivas A, Vahidnia F, Potts M. Saving maternal lives in resource poor settings: facing reality. Health Policy 2009; 89: 131-148.

7. Titaley CR, Hunter CL, Heywood P. Why don't some women attend antenatal and postnatal care services: a qualitative study of community members' perspectives in Garut, Sukabumi and Ciamis districts of West Java Province, Indonesia. BMC Pregnancy Childbirth 2010; 10: 61.

8. Islam N, Islam MT, Yoshimura Y. Practices and determinants of delivery by skilled birth attendants in Bangladesh. Reprod Health 2014; 11: 86.

9. McNamee P, Ternent L, Hussein J. Barriers in accessing maternal healthcare: evidence from low-and middle-income countries. Expert Rev Pharmacoecon Outcomes Res 2009; 9: 41–8.

10. Amin R, Shah NM, Becker S. Socioeconomic factors differentiating maternal and child health-seeking behavior in rural Bangladesh: A cross-sectional analysis. Int J Equity Health 2010; 9: 9.

11. Deo KK, Paudel YR, Khatri RB. Barriers to utilization of antenatal care services in Eastern Nepal. Front Public Health 2015; 3: 197.

12. Akeju DO, Oladapo OT, Vidler M. Determinants of health care seeking behaviour during pregnancy in Ogun State, Nigeria. Reprod Health 2016; 13: 32.

13. Ganle JK, Obeng B, Segbefia AY. How intra-familial decision-making affects women's access to, and use of maternal healthcare services in Ghana: a qualitative study. BMC Pregnancy Childbirth 2015; 15: 173.

14. Story WT, Burgard SA. Couples' reports of household decision-making and the utilization of maternal health services in Bangladesh. Soc Sci Med 2012; 75: 2403–11.

15. Fikree FF, Pasha O. Role of gender in health disparity: the South Asian context. BMJ 2004; 328: 823–6.

16. Bishwajit G, Sarker S, Yaya S. Socio-cultural aspects of gender-based violence and its impacts on women's health in South Asia. 2016; 5: 802.

17. Abdullah MS. Antenatal and Postnatal Health Care Seeking Behavior of Indigenous Women: A Study of the Patro Community in Sylhet. Master thesis, Department of social relation, East West University, Dhaka, Bangladesh. 2015.

18. Haider SJ. Baseline survey of communication program for reducing maternal mortality and violence against women. Research and Evaluation Associates for Developments (READ), Dhaka. 2000.

19. BBS. Statistical Yearbook of Bangladesh. Bangladesh Bureau of Statistics. Ministry of planning, Government of the people's republic of Bangladesh. 2016.

20. Fatema K. Bargaining Power of Women in Intra-household Decision Making and their Participation in Farm and Non-farm Activities: Evidence from Bangladesh, MS thesis submitted to Department of Agricultural, Food and Environmental Policy Analysis. Rheinische Friedrich–Wilhelms –Universität Bonn, Germany. 2017.

21. Afrad MSI. Farmer's attitudes towards vegetable cultivation in Dumki Upazila of Patuakhali district. M.S thesis, submitted to Department of Agricultural Economics, Bangladesh Agricultural University, Mymensingh. 2002.

22. Upul Senarath, Nalika Sepali Gunawardena. Women's Autonomy in Decision Making for Health Care in South Asia. Asia-Pacific Journal of Public Health 2009; 21(2): 137-143.

23. Banik BK. Barriers to Access in Maternal Healthcare Services in the Northern Bangladesh. South East Asia Journal of Public Health 2016; 6(2): 23-36.

24. Anwar Islam, Tuhin Biswas. Health System in Bangladesh: Challenges and Opportunities. American Journal of Health Research 2014; 2(6): 366-374.

25. Mitra, Al-Sabir SNA, Cross AR, Jamil K. Bangladesh Demographic and Health Survey 1996-1997. Dhaka and Calverton, Maryland: National Institute of Population Research and Training (NIPORT). Mitra and Associates, and Macro International, Inc. 1997.

26. National Institute for Population Research and Training (NIPORT), Mitra and Associates, Bangladesh and MEASURE DRS, ICF International, USA. Bangladesh Demographic and Health Survey, Preliminary Report 2011. 2012.

27. Pell C, Meñaca A, Were F, Afrah NA, Chatio S, Manda-Taylor L, Hamel MJ, Hodgson A, Tagbor H, Kalilani L, Ouma P, Pool R. Factors affecting antenatal care attendance: results from qualitative studies in Ghana, Kenya and Malawi. PLoS One 2013; 8(1): 537-547.

28. Bangladesh Ministry of Health and Family Welfare August 2000: Health Policy. Dhaka Bangladesh Ministry. 2000.

29. Goodburn EA, Gazi AR, Chowdhury M. Beliefs and practices regarding delivery and postpartum maternal morbidity in rural Bangladesh. Studies in Family Planning 1995; 26(1): 22-32.

30. Bremmer M, G Van Den Broek. Refusal for referral among pregnant women in the MCH-FP area Matlab: July 1993 - July 1994. Student Report, University of Amsterdam. 1995.

31. Afsana K, Rashid SF. The challenges of meeting rural Bangladeshi women's needs in delivery care. Reproductive Health Matters 2001; 9(18): 79-88.