Original Article

IAHS Medical Journal
Volume 05 Issue 02 December 2022; 62-66

Antenatal Care Practice and Reasons for Spontaneous Vaginal Delivery at Homein Rural Bangladesh : A Synopsis

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ABSTRACT

Background: *In the last decade Bangladesh has made significant progress in reducing maternal and child mortality. Still, spontaneous vaginal delivery at home and neglected Antenatal Care (ANC) practice is evident among women of reproductive agein the rural communities.Home delivery assisted by skilled attendants has not reached the expectation. Present study was aimed to evaluate the status of antenatal care practice and the underlying causes of preference of for spontaneous vaginal delivery at home among the rural people.*

Materials and methods: *A descriptive cross-sectional study was conducted over a period of one year (January 2019 – December 2019) in selected villages of Feni and Chattogram district. 312 respondents, who were married women in reproductive age (15 – 49 years) and had at least one delivery experience, were interviewed face-to-face by using of a pre-tested mixed questionnaire. Collected data were presented and analyzed by SPSS version-23 software.*

Results: *Majority 67.95% of the respondents attended hospital or clinic for ANC while 32.05% of them didn't perform it. 68.60% respondents preferred spontaneous vaginal delivery at home and only 31.40% of them preferred institutional delivery. The respondents 51(23.83%) didn't prefer institutional delivery due to financial matter.*

Conclusion: *Adequate coverage of ANC yet remains poor and women's attending these services had faced significant gaps in the content of ANC in rural Bangladesh. To reduce maternal mortality, access to health facility for pregnant mothers and inclusion of skilled birth attendants, strengthening the health system is necessary to make birth safer for both mothers and newborns.*

Key words: ANC practice; Cultural factors; Spontaneous vaginal delivery.

Introduction

Bangladesh has a long history of practice of spontaneous vaginal delivery at home. Traditionally, babies in Bangladesh are delivered at home with the assistance of birth attendants or elderly women of the community. Despite substantial progress in primary health care over the last decades, in rural Bangladesh, only 18 % of women made at least 4 Antenatal Care (ANC) visits. Coverage of skilled attendance at birth is 36 % in rural areas.[1]

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Date of Submission : 12th October 2022
Date of Acceptance : 9th November 2022

Systemic supervision (Examination and advice) of a woman during pregnancy is called antenatal care. The primary aim of antenatal care is to achieve at the end of a pregnancy a healthy mother and a healthy baby. Pregnancy related complications are the leading causes of death and disability for women between the ages of 15-49 in developing countries.[2] About 136 million women give birth each year and around 1.4 million women experience near-miss events, 9.5 million experience other complications and 20 million suffer from long-term disabilities.[3] Promisingly, utilization of ANC has been increasing steadily throughout the past decades, with 86% women worldwide now attending at least one ANC contact and 62% receiving at least four ANC contacts between conception and birth.[4] However, even as ANC utilization has increased over the past two decades, the content and quality of this care have fallen under increased scrutiny, as poor-quality compromises the potential benefits of care.[5]

The Government of Bangladesh was committed to achieve MDG-5 (Millennium Development Goal) by reducing the Maternal Mortality Ratio (MMR) to 143 deaths per 100,000 live births by 2015 and increasing skilled attendance at birth to 50% by 2016.[6] But achieving the MDG-5 (Millennium Development Goal) target of 50% skilled attendant by 2016 remains a great challenge, especially in rural areas of Bangladesh.

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Presently maternal mortality rate: 176 deaths/100,000 live births (2015 est.).[7] spontaneous vaginal delivery at home is still thepopular traditionin Bangladesh, 62.2% of total births still take place at household level and 48.2% children are born with the help of a traditional birth attendant. Less than one-third of women giving birth were attended by doctors.[8] The underlying cause of spontaneous vaginal delivery at home were views of elders including mother-in-law in decision making about delivery, An important related issue that was raised focused on the social constraints of obtaining treatment from male doctors, The issue of inability to pay for a facility-based delivery was consistently cited reason by all of the respondents for preferring spontaneous vaginal delivery at home. Other factors found in this study were illiteracy, religious belief, limited access of women in decision making in the family, fear regarding caesarean delivery etc.[9]

With the new targets set out in the Sustainable Development Goals (SDGs) aiming to reduce maternal and newborn deaths to unprecedented levels and the ambitious 'Survive, Thrive, Transform' agenda of the Global Strategy for Women's, Children's and Adolescent's Health, ensuring the quality of Maternal and Newborn Health (MNH) services, including ANC, is as important as ever.[10] Although Bangladesh has made significant progress in reducing maternal and child mortality in the last decade, childbirth assisted by skilled attendants has not increased as much as expected. Birth attendance by SBAs is considered as the "Single most important determinant in preventing maternal deaths."[11] Keeping pace with the SDG targets and national strategies different government and non-government organizations and donors have been implementing health interventions to reduce maternal mortality, particularly among the poor by providing proper ANC care and promoting safe institutional delivery. This low maternal health service utilization is also affected by a shortage of health work force especially in rural areas.[12] The objectives of this study were to identify the status of Antenatal Care Practice and to explore the reasons why rural reproductive women prefer spontaneous vaginal delivery at home.

Materials and methods

This descriptive cross-sectional study was conducted at following villages: South Jailoskor of Silonia union of Dagonbhuiya Upazila in Feni district, Shuchakradandi village in Patiya Upazila of Chattogram, and west Kharandwip and Soyedpur Village of Sreepur-Kharandwip Union of Boalkhali Upazila of Chottogram, Bangladesh. Ethical approval was taken from Research Cell and the Ethical Review Committee of Chittagong Medical College. Three hundred and twelve (312) married women of reproductive age i.e., (15-49) years old, who had at least 1 delivery experience were included. All nulliparous married woman of reproductive age and women who were unable to participate due to illness were excluded. Sampling technique was convenient type of non-probability sampling. The study was carried out during the period from 1st January, 2019 to 31st December, 2019. Prior to the study pre-testing of questionnaire was carried out among 45 women of village Motobi in Laxmipur district on July 2019 through personal contact that is more than 10% of estimated sample size. Some new fields like "Complication during pregnancy", "Complication managed by" etc. were added in the data collection form. Data collection were conducted after taking verbal consent of the respondents assuring them on safety and harm due to participation in this research work. All data were collected by the researcher by face to face interview with a pre-tested questionnaire for minimizing errors. Data were processed and analyzed by computer software SPSS version 23 and expressed in frequency, percentage and mean standard deviation. Independent sample test were used to analyze continuous variables and categorical variables were compared by Chi-square test. $p<0.05$ at 95% level of confidence were considered as statistically significant.

Results

Mean age of the enrolled subjects of the study was 29.33 ±6.052 years. Among the respondents 96.79% were housewife, 39.74% were educated up to primary level, only 3.1% were graduate and 59.62% were from middle class family [Table I].

Table I Socio-demographic characteristics of the patients (n-312)

Variables	Frequency		Percentage (%)
Age (Mean ± SD) years	29.33 ±6.052		
Occupation	House wife	302	96.79
	School Teacher	1	0.32
	NGO	1	0.32
	House keeper	6	1.92
	Advocate	2	o.64
Educational status	Illiterate	64	20.51
	Primary	124	39.74
	SSC	86	27.65
	HSC	28	8.98
	Graduate	10	3.21
Socioeconomic status	Lower class	38	12.18
	Middle class	186	59.62
	Upper class	88	28.20

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Regarding antenatal care practice, 67.95% respondents attended hospital or clinic. Among them, 28.77% went to different NGO based hospitals. Among different antenatal activities 79.25% (168) respondents had taken vaccines, 52.36% had done routine investigations as prescribed only 37.74% respondents went for regular check-up [Table II].

Table II ANC practices and complications during pregnancy (n-312)

Variables		Frequency	Percentage (%)
ANC visit (n=312)	Yes	212	67.95
	No	100	32.05
ANC centers (n=212)	NGO hospital	61	28.77
	UHC	56	26.41
	Doc. chamber	39	18.39
	Maternity clinic	29	13.68
	Govt. hospital	13	6.13
	Private hospital	13	6.13
	Others	1	0.49
ANC activities (n=212)	Routine investigation	101	47.64
	Medication	111	52.36
	Vaccination	168	79.25
	Regular check-up	80	37.74
	Personal hygiene	96	45.28
Complications during pregnancy (n=312)	Yes	113	36.22
	No	199	63.22
Common complications (n=113)	HTN	25	22.12
	Edema	25	22.12
	PET	4	3.53
Treatment provider for complication management	MBBS doctor	72	63.76
	HA	1	0.88

The majority of the respondents of this study (68.59%) preferred home delivery and only (31.41%) of them preferred institutional delivery. From them, most of the respondents (23.83%) didn't prefer institutional delivery due to financial matter. Among them 58.41% respondents were assisted by skilled birth attendants (SBA) during spontaneous vaginal delivery at home [Table III].

Table III Delivery practices and reasons for spontaneous vaginal delivery at home (n-312)

		Frequency	Percentage (%)
Preference for delivery place (n=312)	Institutional delivery	98	31.41
	Home delivery	214	68.59
Reasons for preference of spontaneous vaginal delivery at home (n=214)	Financial matter	51	23.83
	Family decision	49	22.89
	Superstition	43	20.09
	Fear	28	13.08
	Presence of male doctors	15	7.00
	Husbands will	9	4.20
	No attendance	6	2.80
	Ignorance	5	2.34
	Others	7	3.27
Attendance of SBA during spontaneous vaginal delivery at home (n=212)	Yes	124	58.41
	No	89	41.59

67.95% respondents had ANC visit. A significantly higher proportion of antenatal visit was seen in middle class (74.19%) respondents ($p_{0.013}$). For regular ANC, educational and socio-economic status has played a significant role ($^{p.001}$) [Table IV].

Table IV Preference of ANC visit based on socio-economic status and literacy (n-312)

Socio-economic status	Performance of ANC visit		p Value
	YES (n=212) (67.95%)	NO (n=100) (32.06%)	
Lower Class (n=88)	50 (56.81%)	38 (43.19%)	p=0.013
Middle class (n=186)	138 (74.19%)	48 (25.81%)	
UpperClass (n=38)	24 (63.16%)	14 (36.84%)	
Education	YES (n=212) (67.95%)	NO (n=100) (32.06%)	p Value
Illiterate (n=36)	14 (38.89%)	22 (61.11%)	
Primary (n=81)	23 (28.39%)	58 (71.60%)	
SSC (n=65)	22 (33.85%)	43 (66.15%)	p=0.001
HSC (n=22)	14 (63.64%)	8 (36.36%)	
Graduate And above (n=8)	7 (87.5%)	1 (12.5%)	

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68.59% respondents had spontaneous vaginal delivery at home and remaining 31.41% had hospital delivery of child. Preference spontaneous vaginal deliveryat home was higher in lower class (77.28%) respondents ($p_{0.013}$). On the other hand, regarding preference for delivery place, educational and socio-economic status has played a significant role ($p=0_{.000\text{-}0.013\ respectively}$) [Table V].

Table V Preference for delivery site based on socio-economic status and literacy (n-312)

Socio-economic status	Preference for delivery site		p Value
	Hospital (n=98) (31.41%)	Home (n=214) (68.59%)	
Lower Class (n=88)	20 (22.73%)	68 (77.28%)	p=0.013
Middle class (n=186)	63 (33.87%)	123 (66.13%)	
Upper Class (n=38)	15 (39.48%)	23 (60.53%)	
Education	Hospital (n=98) (31.41%)	Home (n=214) (68.59%)	p Value
Illiterate (n=64)	8 (12.5%)	56 (87.5%)	
Primary (n=124)	32 (25.81%)	92 (74.19%)	
SSC (n=86)	38 (44.19%)	48 (55.81%)	
HSC (n=28)	13 (46.43%)	15 (53.57%)	p=0.000
Graduate and above (n=10)	7 (70%)	3 (30%)	

Discussion

In Bangladesh, improvement of maternal health is not just a social and moral necessity, it is an economic imperative. Indicators related to safe motherhood suggest that the progress is slow in crucial areas of reproductive health.[13] In the present study, the mean age of the respondents was 29.33 years, SD=6.052 with range from 15-49 years. Nearly (39.74%) of the women had received education up to primary/equivalent or less, most of them were housewives and (59.62%) respondents belonged to middle class. Meherunessa Begum found in her study that 44.6% women were between 21-25 years of age, 54.7% were literate and 56.6% were housewives andmost of the respondent (89%) took antenatal care.[14] This study represents that 67.95% pregnant women visited hospitals or clinic for ANC and most of them visited NGO based hospital for ANC service. A study conducted by Dr. Farzana Mehjabin, In the year 2014, revealed that 53% respondents received ANC service from Upazila Health Complex and 47% respondents received ANC service from non-govt. organizations.[15]

A community based house-hold survey conducted by Abu BS in two sub-districts of Netrokona reveals 25% of women attended regular antenatal check-up with only 11% initiating ANC in first trimester.[16] In comparison this study found 37.74% women underwent regular check-up.

Among the respondents 68.59% underwent spontaneous vaginal delivery at homeand rest 31.41% underwent institutional delivery. Among the respondents who performed spontaneous vaginal delivery at home, 23.83% did not go for institutional delivery due to financial matter, 22.89% due to family decision. Mehrunnesa B. found 80.5% of the respondents prefer spontaneous vaginal delivery at home and in most cases 40.3% decision were taken by either husband or mother in law.[14] Regarding preference for delivery site, there was a significantly higher proportion home delivery in lower class (77.28%) respondents. Present study shows, in case of spontaneous vaginal delivery at home 58.41% were assisted by skilled birth attendant. Preference for delivery site there was a significantly higher proportion of ANC visit in hospital delivery (87.76%) respondents. Among them preference for delivery site and ANC visit has significant association ($p_{0.000}$). According to preference for delivery place, 70% respondents were graduated and above had performed hospital delivery and majority of the illiterate respondents (87.50%) had done spontaneous vaginal delivery at home.

Limitations

Though the overall sample size was 312 but the samples representing different villages were relatively small. Since the sampling was done conveniently there could be some selection bias.

Conclusion

In Bangladesh, MMR rate is considerably high. So it is very important to perform research like this and to explore measures for reducing MMR. This community survey brought important facts about spontaneous vaginal delivery at homeand ANC care among villagers. This survey revealed that still most of the female population prefers spontaneous vaginal delivery at homein the villages. The existing health facilities in Bangladesh need some effort to improveand synchronize the quality of ANC in rural areas to maximize the health benefits of mother and new born.

Recommendations

In the light of this research work, the researcher recommended a nationwide large-scale study to explore the scenario in real world to establishing a declared chain of command in rural community to address the situations of the pregnant women and married women in reproductive age who had at least one delivery experience.

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Disclosure
All the authors declared no competing interests.

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