



Determinants of health care seeking behavior of pregnant slums dwellers in Bangladesh

Most Nasrin¹, Md Nazirul Islam Sarker^{2✉}, Nazmul Huda³

Pregnancy is not itself a disease but a cause of mortality in developing countries. The aim of this study is to explore health care seeking behavior among pregnant women. A quantitative mixed qualitative approach has been adopted. One hundred twenty-nine pregnant women in various slums in Dhaka city have been interviewed to explore the determinants of healthcare seeking behaviors during pregnancy. The study reveals that only 3.1% women received four times antenatal visits which is recommended by WHO but rest 96.9% women received poor service than the standard level. This further explores that 83.7% of the women have ability to spend the treatment cost while 16.3% have no ability. The main reasons of no ability to spend the treatment cost are due to economic insolvency (45%), prohibition from husband (30%), family restriction and self-unwillingness (10%), and no income (5%). The majority (68.2%) of the women have chosen home as their delivery place while 10.07% in NGO clinic, 13.1% in community clinic and 4.6% in government hospital as their delivery place. The study also explores that the majority (47.3%) have chosen NVD as mode of delivery while 32% as NVD with episiotomy and 11.6% as C-section as their mode of delivery. The study suggests that a continuous healthcare development emphasizing pregnancy should be required to reduce the pregnancy related complexities and mortality rate.

INTRODUCTION

Pregnancy related complications are the major problems in most of the developing countries in the world from two decades. About 525,000 women have been died from the developing countries in every year due to pregnancy related complexities¹. In contrast, progress is very much slower in minimizing levels of maternal mortality and pregnancy and childbearing safer for women, despite being a central element of the Millennium Development Goals¹. The policy for betterment of the maternal mortality and health was started in 1992 but this policy came into force very recently through initiation of the National Strategy for Maternal Health². The policy enforces to provide an emergency obstetric care provision for ensuring betterment and safe motherhood through three delays framework like delays in making the decision to seek care, in reaching a medical facility and in receiving adequate treatment or management at the facility. Evaluation of the overall progress in improving maternal health in Bangladesh (and elsewhere) has been hampered by the absence of suitable data. Facility-based assessments provide a picture of the availability, functioning and caseloads of maternal health facilities, but only for the select minority of women who utilize such services³. In contrast, population-based surveys, such as the Demographic and Health Surveys (DHS), provide useful but generally limited data on basic aspects of maternal health behavior related to antenatal and delivery care. To address these information gaps, in 2001

the Bangladesh Maternal Health Services and Maternal Mortality Survey (BMMS) collected national data on the levels and causes of maternal and non-maternal mortality; women's experience with and perceived severity of maternal complications; utilization of services for antenatal, delivery, postpartum and emergency obstetric care; delays in seeking emergency obstetric care; and indicators of the use of maternal health services⁴.

In every year, about 303000 people dead globally due to the only cause of maternal and pregnancy problems, among them about 99% death occur in developing countries where Sub-Saharan Africa experiences about 66% and about 22% in South Asia⁵. Pregnancy is one of the major contributing factors for causing death, though it is not itself a disease. Population-based studies complement approaches that use facility-based process indicators especially in settings where most deliveries take place outside of health facilities by including respondents who do not seek treatment at facilities. A national strength of the BMMS is that its identities and quantities the specific delays in seeking emergency obstetric care from a sufficiently large sample to permit desegregation by types of complications⁶. A potential limitation of the BMMS and other retrospective studies is their reliance on women's self-reports regarding the occurrence and severity of obstetric complications⁷; most studies have shown that self-reports may have low correspondence with medically diagnosed morbidity. Thus, while the BMMS estimates of obstetric complications and morbidity should be treated with caution, such information is critical to assessing and understanding women's treatment-seeking behavior, which depends primarily on perceptions of these complications and their associated severity⁴. The value of future surveys similar to the BMMS would be enhanced by the concomitant collection of maternal health facility data in surrounding areas, and by more detailed data on maternal health care

¹Department of Graduate Nursing, Bangabandhu Sheikh Mujib Medical University, Bangladesh; Email: mostnasrinsw@bsmmu.edu.bd; ²School of Public Administration, Sichuan University, Chengdu 610065, People's Republic of China; Email: sarker.scu@yahoo.com; ³Department of Humanities, Bangladesh University of Engineering and Technology (BUET), Dhaka - 1000, Bangladesh; Email: hudasociology@hum.buet.ac.bd

✉Corresponding Author: School of Public Administration, Sichuan University, Chengdu 610065, People's Republic of China; Email: sarker.scu@yahoo.com; Contact: 86 13183813952

costs and women's perceptions of the access to and the quality of such health services⁸. Every minute of every day, somewhere in the world, a woman dies following pregnancy or pregnancy related complications.

Bangladesh is very much susceptible to maternal mortality especially at the time of pregnancy and child birth complications. In every year, about 11000 to 12000 female's death happen in Bangladesh². Maternal mortality rate is recognized as a global indicator of the status of women in a country. But maternal health status for many Bangladeshi women remains poor. Now a days, antenatal care coverage only 49% in Bangladesh which is very negligible⁹. Social and educational status of women is very low in Bangladesh. In fact, a large proportion of women do not know about ante natal care, how to seek care during pregnancy and some where socio-cultural barriers is important constraint for seeking care during pregnancy¹⁰. However, health services can only help when women are able to make use of them. When obstetric emergencies arise during pregnancy and delivery, health care seeking behavior can save thousands of mothers and newborns every year.

Though most of the government has a separate organ to care about the health of women but due to ignorance, may women do not take this facility. As a result, the target of the government is failed to achieve the goal. Pregnancy related complication is higher in Bangladesh, though government supposed to achieve it by 2016¹¹. Statistics shows that about 43% delivery happen outside healthcare facilities. Many studies have been done on the demographic and socio-economic characteristics of women and delivery cares in Bangladesh. However, most of the studies focus on factors of antenatal care or delivery care instead of assessing the determinants of maternal healthcare seeking behavior of women^{4,12,2,13}. But it is important to assess the determinants which can help to formulate the context specific policy and programmatic interventions and ultimately reduce the mortality rate in the developing countries. Dhaka is a capital of Bangladesh where thousands of slums are the only place to live the financially poor women. They are almost deprived of all kinds of basic services. Most of the women are illiterate, and not aware about their maternal health. Considering these circumstances, this study intends to assess the health care seeking behavior during pregnancy among the women slum dwellers in Dhaka city. This study will help the policy makers and related stakeholders how to help the pregnant women, where they will get the appropriate services.

METHODOLOGY

Study Design

The present study was adopted a quantitative oriented qualitative mixed approach. Data had been collected from selected slums in Dhaka city focusing married women with the age group of (15-45) years through purposive sampling procedures.

Sampling and data collection

Data was collected from some selected slums in Dhaka city. All married women of slum who have at least one child. The population size is 1290, among them 10% i.e. 129 women was selected as sample. Due to the limitation of time and cost, this study selected 10% sample from a total population of 1290 respondents. This kind of methodology used by some researchers^{13,14,15}. The study also considers religion, educational qualification and services experiences while conducting fieldwork. Purposive sampling was done for data collection. Semi- structured questionnaire was used as data collection instrument. Before finalizing the questionnaire, a pilot survey was conducted on 15 women to a selected number of respondents considering the background of the respondents. The pilot test was done to check whether the questions

were appropriate and the intended meanings are properly understood by the respondents. Upon completing the pilot test with the necessary revisions, corrections and modifications are made in the questionnaire to make it final for the data collection.

Data processing and analyze

After collection the data were checked & verified daily an audited for errors and inconsistencies. All the results were calculated with help of computer by using the SPSS-16 program. Data were presented according to the variable of the study showing parentage.

Ethical consideration

Any research should equally give due respect to ethical value. In the context of study, verbal approval from community leader & written consent from clients was taken for gathering data, which exposes them on health seeking behavior. The collected data was used for research study maintaining confidentiality & hoping it will not be harmful in their lives. This study was approved by supervisory and examination committee and ethical committee of ASA University Bangladesh, Department of Public Health, Dhaka, Bangladesh.

RESULTS

Socio-demographic information of the respondents

The study selects seven demographic characteristics for exploring their demographic status so that healthcare seeking behavior can be understood clearly. The selected characteristics are age, education, own occupation, husband's occupation, income, family size and family member as the core demographic characters since the women are living in the slum in Dhaka (Table 1). The highest number (39.7%) of the respondents comes from the age group of (20-24) years. While a considerable number (35.6%) of the respondents are belongs to the age group of (25-29) years, 14.6% below 20 years of old, 8.2% at age group of (30-34) years and only 1.9% as above 35 years of old.

The highest numbers (27.1%) of the respondent pass their primary education and a considerable number (25.6%) of the respondents can only read or write while 22.4% cannot read or write, 16.3% completed secondary education, 4.61% completed secondary education, 3.9% completed higher secondary education. The highest number of the respondents (37.9%) is garment workers while 33.3% housewife, 20.1% day laborer, and 1.6% government service holder, 5.4% NGO worker and 1.6% businessman. The data shows that 35.7% of the respondents have monthly family income of 12000 to 14000 taka while 8.5% have below 5000 taka, 17.8% have 6000 to 8000 taka, and 15.5% have more than 15000 taka. More than half (59.8%) of the respondents belongs to nuclear family. On the other hand, 31.3% of them are from joint family and 6.5% are from extended family members. Among one hundred and twenty-nine respondents, 49.6% have family members of 1 to 4 persons, 30.2% of the respondents have 5 to 7 persons, 12.4% have 8 to 10 persons and 7.8% of the respondents have more than 10 family members.

Information about health care seeking behavior

The selected information seeking behavior of the slum dweller women during pregnancy is determined under some of the indicators such as age at first pregnancy, number of children, duration between marriage and first conception, age of last child, physical work during pregnancy, intake of additional food during pregnancy, antenatal check-up, person who advice to take antenatal care (ANC), place of taking ANC, person providing ANC, times of taking ANC, taking TT during pregnancy,

Table 1 Socio-demographic characteristics of the Respondents

Socio-demographic characteristics	Category	Respondent number	Percentage (%)
Age	Less than 20 years	19	14.6
	20-24	51	39.7
	25-29	46	35.6
	30-35	11	8.2
	More than 35	2	1.9
Education	Primary	35	27.1
	Secondary	21	16.3
	S.S.C	6	4.6
	H.S.C	5	3.9
	Can only read or write	33	25.6
	Cannot read or write	29	22.4
Own occupation	House wife	43	33.3
	Day labor	26	20.1
	Govt. services	2	1.6
	N.G.O Services	7	5.4
	Garments worker	49	37.9
	Business	2	1.6
	Others	0	0
Husbands' occupation	Unemployed/depended	7	5.4
	Day labor	31	24.0
	Govt. services	0	0
	N.G.O Services	3	2.3
	Small business	47	36.4
	Rickshaw/van puller	23	17.8
	Garments worker	16	12.4
	Others	2	1.6
Income (tk)	<5,000 Tk.	11	8.5
	(6,000-8,000) Tk.	23	17.8
	(9,000-11,000) Tk.	29	22.5
	(12,000-14,000) Tk.	46	35.7
	>15,000tk.	20	15.5
Family size	Nuclear	77	59.8
	Joint	40	31.3
	Extended	9	6.9
	Others	3	2.5
Family member	(1-4) persons	64	49.6
	(5-7) persons	39	30.2
	(8-10) persons	16	12.4
	>10 persons	10	7.8

Source: Field survey

Table 2 Information seeking behavior of the women during pregnancy

Information seeking behavior	Category	Respondent number	Percentage (%)
Age at first pregnancy	<15 years	14	10.9
	(16-18) years	59	45.7
	(19-21) years	33	25.6
	(22-24) years	16	12.4
	>25 years	7	5.4
Number of children	One	39	30.2
	Two	44	34.1
	Three	21	16.3
	Four	17	13.2
	Above four	8	6.2
Duration between marriage and first conception	>1 year	12	9.3
	(1-3) years	92	71.3
	(3-4) years	16	12.4
	>4years	9	6.9
Age of last child	>1 year	19	14.7
	(1-3) years	55	42.6
	(3-5) years	33	25.6
	>5 years	22	17.05
Physical work during pregnancy	Yes	52	40.6
	No	77	59.4
Intake of additional food during pregnancy	Yes	94	72.6
	No	35	27.4
Antenatal check-up	Yes	111	86.4
	No	18	13.6
Person who advice to take	Self-willingness	46	41.07

ANC	Husband	34	30.3
	Relatives	14	7.1
	Others	18	16.1
Place of taking ANC	Govt. hospital	43	33.3
	NGO clinic	12	9.3
	Satellite clinic	6	4.6
	Pharmacy	17	13.1
	Private hospital	7	5.4
	Homeopath	13	10.1
	Others	12	9.3
Person providing ANC	Doctor	62	48.1
	Pharmacist	14	10.8
	Nurse/paramedics	29	22.5
	Others	7	5.4
Times of taking ANC	One time	13	10.1
	Two times	59	45.7
	Three times	36	27.9
	Four times	4	3.1
	More than four times	0	0
Taking TT during pregnancy	Yes	124	96.4
	No	5	3.6
Taking number of TT doses during pregnancy	One time	70	54.6
	Two times	59	45.4
Bearing the treatment cost	Yes	108	83.7
	No	21	16.3

Source: Field survey

Table 3 Challenges facing during taking healthcare facilities of the Respondents

Challenges of taking healthcare facilities	Category	Respondent number	Percentage (%)
Reasons of not bearing the treatment cost	Self-unwillingness	2	10
	No body accompany me	1	5
	Prohibited by husband	6	30
	Economical insolvency	9	45
	Familiar restriction	2	10
	Others	0	0
Place of last delivery	Govt. hospital	6	4.6
	NGO clinic	13	10.07
	Private hospital	5	3.9
	Home	88	68.2
	Satellite	17	13.1
	Others	0	0
Mode of last delivery	NVD	61	47.3
	NVD with episiotomy	42	32
	C-section	15	11.6
	Others	11	8.5
Complication during last delivery	Yes	14	10.9
	No	115	89.1
Experience of any still birth	Yes	5	4.2
	No	124	95.8
Conduction of delivery by whom	Doctor	17	13.4
	Nurse	28	21.6
	TBA	70	54.3
	Relatives	11	8.4
	Others	3	2.3
Place of still birth/abortion treatment	Govt. hospital	17	13.3
	NGO clinic	22	16.9
	Satellite clinic	33	25.5
	Pharmacy	38	29.8
	Private hospital	7	5.4
	Homeopath	3	2.5
	Others	9	6.6
Having knowledge on maternal mortality	Yes	99	76.4
	No	30	23.6
Having knowledge on cause of maternal mortality	Excessive hard work during pregnancy	16	12.4
	Frequent child birth	29	22.5
	Lack of ANC	48	37.2
	Physical relation during pregnancy	12	9.3
	Don't know	24	18.6

Source: Field survey

taking number of TT doses during pregnancy and bearing the treatment cost (Table 2). Among the total respondents 45.7% become pregnant at 16 to 18 years old and only 5.4% become pregnant for first time at their 25 years age or more, 10.9% of them become pregnant at less than 15 years old and 12.4% at 22 to 24 years old.

About 34.1% of the respondents have two children, 6.2% have more than four children, 30.2% have one child, and 13.2% have four children. The majority (71.3%) of the respondents having been pregnant during 1-3 years after their marriage and 6.9% became pregnant after more than four years of their marriage, 9.3% became pregnant within one year of the marriage and 12.4% having been pregnant during (3-4) years after marriage. Among the 129 respondents, 14.7% respondents have the last child having below 1-year age while 42.6% having 1.3 years, 25.6% having 3-5 years child. About 40.6% of the respondents are doing during physical work during pregnancy and the rest of them (59.4%) are not doing physical work during pregnancy. The majority (72.6%) of the respondents take additional food during their pregnancy. On the other hand, 27.4% of them do not take additional food during pregnancy. It shows that 86.4% of the respondents take antenatal check-up and 13.6% did not check-up. About 30.3% of the respondents took advice from the husband to take ANC, on the other hand, 41.07% took self willingly, 7.1% by taking advice of their relatives and 16.07% took from other persons.

Among the total respondents, 33.3% have taken ANC from public hospital while 9.3% from NGO clinic, 4.6% from satellite clinic, 13.1% from pharmacy, 5.4% from private hospital, and 9.3% from others sources of treatment. From all the respondents, 48.06% have taken ANC from doctor while 10.8% from Pharmacist, and 22.5% from nurse/paramedics. Among them about 45.7% of the respondents have taken ANC two times while 10.07% one time, 27.9% three times and 3.1% four times. Almost all respondents (96%) have taken Tetanus Toxoid (TT) during their pregnancy and the other have not taken TT during their pregnancy. More than half (54.6%) of the respondents take only one dose of TT injection and the rest of them (45.4%) take two doses of TT injection. The majority (83.7%) of the respondents can spend their treatment cost while 16.3% cannot spend. Among the total women, 45% could not spend the treatment cost because of economic insolvency; 30% for prohibition by their husband; 10% for family restriction and self-unwillingness, and 5% having no income source.

Challenges of taking healthcare facilities

The study identified some indicators of facing challenges during taking healthcare facilities such as reasons of not bearing the treatment cost, place of last delivery, mode of last delivery, complication during last delivery, experience of any still birth, conduction of delivery by whom, place of still birth/abortion treatment, having knowledge on maternal mortality and having knowledge on cause of maternal mortality (Table 3). The majority (68.2%) of the respondents have chosen home as their delivery place while 10.07% NGO clinic, 13.1% satellite and 4.6% have chosen public hospital as their delivery place.

The data shows that 47.3% have chosen natural vaginal delivery (NVD) as mode of delivery, 32% chosen NVD with episiotomy, and 11.6% C-section as their mode of delivery. The majority (89.1%) of the respondents are not face any complication during last delivery whereas 10.9% facing complication. The majority (95.8%) of the respondents are not experienced any still birth while 4.2% having experience. More than half (54.3%) of the respondents argues that TBA/Dai is conducted their last delivery whereas 13.4% getting doctor's help during last delivery. A considerable number (21.6%) of the respondents reply that nurse is

conducted their last delivery while 8.4% getting help from relatives are conducted their last delivery and 2.3% from another person.

Among the total women, 29.8% women have taken treatment of abortion at pharmacy, 13.3% public hospital, 16.9% at NGO clinic, 25.5% at community clinic, 5.4% at private hospital and 2.5% at homeopathy chamber. The majority (76.4%) of the respondents knows about maternal mortality and other 23.6% does not know. About 37.2% of the respondents used to know 'lack of ANC' is the causes of maternal mortality of the respondent while 22.5% know as 'Frequent child birth', 18.6% having no knowledge on the causes of maternal mortality and 12.4% know as 'Excessive hard work during pregnancy' is the causes of maternal mortality.

DISCUSSION

The main purpose of this study is to analyze the healthcare seeking behavior of slum dwellers women in Bangladesh in order to determine the present status of healthcare of pregnant women for identifying the gap from standard level. The findings and recommendations from this study will be helpful for policy makers, practitioners, general people for understanding, designing and monitoring of healthcare program in future. The study reveals that only 3.1% women received four times antenatal visits which is recommended by WHO but rest 96.9% women received poor service than the standard level. Among them, about 45.7% of the respondents have taken ANC two times while 10.07% one time, and 27.9% three times. Similar result found by ¹⁶ in a study in Tanzania on maternal healthcare. In west Africa, only 23% women received maternal health care¹⁷. Among the total respondents, 33.3% have taken ANC from public hospital while 9.3% from NGO clinic, 4.6% from satellite clinic, 13.1% from pharmacy, 5.4% from private hospital, and 9.3% from others sources of treatment. Almost all respondents (96%) have taken Tetanus Toxoid (TT) during their pregnancy and the other have not taken TT during their pregnancy. More than half (54.6%) of the respondents take only one dose of TT injection and the rest of them (45.4%) take two doses of TT injection. The majority (83.7%) of the respondents can spend their treatment cost while 16.3% cannot spend. Among the total women, 45% could not spend the treatment cost because of economic insolvency; 30% for prohibition by their husband; 10% for family restriction and self-unwillingness, and 5% having no income source. It is due to the low economic accessibility of slum women⁹. Among the 129 respondents, 14.7% respondents have the last child having below 1-year age while 42.6% having 1.3 years, 25.6% having 3-5 years child. About 40.6% of the respondents are doing during physical work during pregnancy and the rest of them (59.4%) are not doing physical work during pregnancy. The physical work during pregnancy is very difficult but the slum women are sometimes bound to do work for earning money and unavailability of helping hand ¹⁸. The majority (72.6%) of the respondents take additional food during their pregnancy. On the other hand, 27.4% of them do not take additional food during pregnancy. It shows that 86.4% of the respondents take antenatal check-up and 13.6% did not check-up. About 30.3% of the respondents took advice from the husband to take ANC, on the other hand, 41.07% took self willingly, 7.1% by taking advice of their relatives and 16.07% took from other persons.

The healthcare situation is improved due to intervention of the government in some arenas like duration between marriage and first child, physical work during pregnancy, intaking additional food, antenatal checkup, taking advice from various sources, taking TT during pregnancy but some indicators show below standard level such as received ANC visit, inability to spend for taking treatment. The study

also analyzes the challenges regarding taking healthcare facilities during pregnancy such as reasons of not bearing the treatment cost, place of last delivery, mode of last delivery, complication during last delivery, experience of any still birth, conduction of delivery by whom, place of still birth/abortion treatment, having knowledge on maternal mortality and having knowledge on cause of maternal mortality. The study reveals that the majority (68.2%) of the respondents have chosen home as their delivery place while 10.07% NGO clinic, 13.1% satellite and 4.6% have chosen public hospital as their delivery place. Majority of the slum dwellers choose home for delivery place because of a high-level cost in the private hospital and little opportunity in the public hospital. The study also explores that 47.3% have chosen natural vaginal delivery (NVD) as mode of delivery, 32% chosen NVD with episiotomy, and 11.6% C-section as their mode of delivery. Most of the slum dwellers are migrated from rural areas, so they choose NVD as a best way for their health and financial ability¹³. The trend is changing day by day in the other dwellers in the city. The recent trend is C-section advised by practioners¹⁹. The majority (89.1%) of the respondents are not face any complication during last delivery whereas 10.9% facing complication. The majority (95.8%) of the respondents are not experienced any still birth while 4.2% having experience. More than half (54.3%) of the respondents argues that TBA/Dai is conducted their last delivery whereas 13.4% getting doctor's help during last delivery. A considerable number (21.6%) of the respondents reply that nurse is conducted their last delivery while 8.4% getting help from relatives are conducted their last delivery and 2.3% from another person. Islam et al.⁵ also identified some challenges during pregnancy such as low accessibility, sincere cooperation from practioners, unavailability of expert manpower, inability to spend for treatment, and insufficient service providers.

The study also assesses the demographic profile of the slum dweller women healthcare seekers and reveals that 39.7% of the respondents belongs to the age group of (20-24) years. While a considerable number (35.6%) of the respondents are belongs to the age group of (25-29) years, 14.6% below 20 years of old, 8.2% at age group of (30-34) years and only 1.9% as above 35 years of old. Among the total respondents 45.7% become pregnant at 16 to 18 years old and only 5.4% become pregnant for first time at their 25 years age or more, 10.9% of them become pregnant at less than 15 years old and 12.4% at 22 to 24 years old. The majority of the women (45.7%) belongs to a minor group (16 to 18 years) who does not have sufficient knowledge on pregnancy complications. So, government and related organization should be given emphasize on this minor group to improve the health and reduce mortality⁵. The highest numbers (27.1%) of the respondent pass their primary education and a considerable number (25.6%) of the respondents can only read or write while 22.4% cannot read or write, 16.3% completed secondary education, 4.61% completed secondary education, 3.9% completed higher secondary education. There is a positive relation between mother's education with safe pregnancy which means that the more educated women are more conscious about their pregnancy health. The highest number of the respondents (37.9%) is garment workers while 33.3% housewife, 20.1% day laborer, and 1.6% government service holder, 5.4% NGO worker and 1.6% businessman. However, mother's employment is also related to the maternal health. A good profession of slum dwellers helps to take care themselves but most of them are garment workers that means they are working from morning to night at least twelve hours but others are day laborer and NGO workers. The results of the education and employments are consistent with the research results of other regions^{16, 20-25}.

There is a limitation in this study. The study only assesses the healthcare seeking behavior of slum dwellers but not comparing with other city dwellers. But this study focuses the slum dwellers who are the most vulnerable community in the city but no other study focuses the women slum dwellers that means it is first of its kind which assess almost all indicators of health caring seeking behavior of slum dwellers during pregnancy to recommend the policy implications for betterment of the community.

Policy implications

The findings of the study suggest the following policy for enhancing public health services for pregnant women which secure them and reduce the mortality.

1. Women's health care seeking behavior includes women's education, employment opportunities, and basic healthcare services. It is also important to know what kind of education, employment, and health care facilities can have the greatest impact on the status of women and their perception of health care seeking behaviors in slum areas.
2. Because of the relation of those components, A rigorous effort to improve women's health care seeking behavior through education, work opportunities, and health care within an integrated framework which can have positive impacts on the improvement of the women on health care seeking behavior during pregnancy in Dhaka City. Therefore, this study recommends the following three important measures:
3. Education for all slum women needs to be ensured for increased knowledge and awareness of pregnancy and childbirth;
4. Income-generating work opportunities need to be created for women so that they can be financially independent to make decisions and to seek better health care services; and
5. Basic healthcare facilities need to be available in slum areas of Dhaka city so that women do not have to depend on non-qualified providers such as *kobiraj* and drugstore salespersons.

CONCLUSION

The aim of this is to explore health care seeking behavior among pregnant women living in slums of Dhaka, Bangladesh. The study reveals that only 3.1% women received four times antenatal visits which is recommended by WHO but rest 96.9% women received poor service than the standard level. Among them, about 45.7% of the respondents have taken ANC two times while 10.07% one time, and 27.9% three times. This study also reveals that 83.7% of the women have ability to spend the treatment cost while 16.3% have no ability. The main reasons of no ability to spend the treatment cost are due to economic insolvency (45%), prohibition from husband (30%), family restriction and self-unwillingness (10%), and no income (5%). The majority (68.2%) of the women have chosen home as their delivery place while 10.07% in NGO clinic, 13.1% community clinic and 4.6% in government hospital as their delivery place. The study also explores that the majority (47.3%) have chosen NVD as mode of delivery while 32% as NVD with episiotomy and 11.6% as C-section as their mode of delivery. The study suggests that a continuous healthcare development emphasizing pregnancy should be required to reduce the pregnancy related complexities and mortality rate. The findings and recommendations from this study will be helpful for policy makers, practitioners, general people for understanding, designing and monitoring of healthcare program in future.

REFERENCES

1. Haider MR, Qureshi ZP, Khan MM. Effects of women's autonomy on maternal healthcare utilization in Bangladesh: Evidence from a

- national survey. *Sex Reprod Healthc.* 2017;14:40–7.
2. Ahmed N. Some Determinants to Reduce Maternal and Child Mortality in Bangladesh. *IOSR J Nurs Heal Sci Ver II.* 2015;4(3):2320–1940.
 3. Rai S, Misra P, Upadhyay R, Anand K, Kant S. Public health approach to address maternal mortality. *Indian J Public Health.* 2012;56(3):196.
 4. Sarker AR, Sheikh N, Mahumud RA, Sultana M. Determinants of adolescent maternal healthcare utilization in Bangladesh. *Public Health.* 2018;157:94–103.
 5. Islam MM, Masud MS. Health care seeking behaviour during pregnancy, delivery and the postnatal period in Bangladesh: Assessing the compliance with WHO recommendations. *Midwifery.* 2018;63(March):8–16.
 6. Tsala Dimbuene Z, Amo-Adjei J, Amugsi D, Mumah J, Izugbara CO, Beguy D. Women'S Education and Utilization of Maternal Health Services in Africa: a Multi-Country and Socioeconomic Status Analysis. *J Biosoc Sci.* 2017;1–24.
 7. Koenig MA, Jamil K, Streatfield PK, Saha T, Al-Sabir A, El Arifeen S, et al. Maternal Health and Care-Seeking Behavior In Bangladesh: Findings from a National Survey. *Int Fam Plan Perspect.* 2007;33(02):075–82.
 8. Osamor P e, Grady C. Women's autonomy in health care decision-making in developing countries: a synthesis of the literature. *Int J Women's Heal.* 2016;8:191–202.
 9. Pulok MH, Sabah MNU, Uddin J, Enemark U. Progress in the utilization of antenatal and delivery care services in Bangladesh: Where does the equity gap lie? *BMC Pregnancy Childbirth.* 2016;16(1).
 10. Ahmed S, Creanga AA, Gillespie DG, Tsui AO. Economic status, education and empowerment: Implications for maternal health service utilization in developing countries. *PLoS One.* 2010;5(6).
 11. Pervin J, Moran A, Rahman M, Razzaque A, Sibley L, Streatfield PK, et al. Association of antenatal care with facility delivery and perinatal survival - a population-based study in Bangladesh. *BMC Pregnancy Childbirth.* 2012;12(1):1.
 12. Khanam R, Creanga AA, Koffi AK, Mitra DK, Mahmud A, Begum N, et al. Patterns and determinants of care-seeking for antepartum and intrapartum complications in rural Bangladesh: Results from a cohort study. *PLoS One.* 2016;11(12):1–17.
 13. Aktar S. Health Care Seeking Behavior for Safe Motherhood: Findings from Rural Bangladesh. *Bangladesh e-Journal Sociol.* 2012;9(2):57–70.
 14. Smith, M. H. A Sample/Population Size Activity: Is it the sample size of the sample as a fraction of the population that matters? *J. Stat. Educ.* 2004; 12.
 15. Siddique, M. K. Bin et al. Socioeconomic status & health seeking behavior of rural people: a cross sectional study in fatikchhari, Chittagong. *MOJ Public Heal.* 4, 127–131 (2016).
 16. Larsen A, Exavery A, Phillips JF, Tani K, Kanté AM. Predictors of Health Care Seeking Behavior During Pregnancy, Delivery, and the Postnatal Period in Rural Tanzania. *Matern Child Health J.* 2016;20(8):1726–34.
 17. Taylor YJ, Laditka SB, Laditka JN, Huber LRB, Racine EF. Associations of Household Wealth and Individual Literacy with Prenatal Care in Ten West African Countries. *Matern Child Health J.* 2016;20(11):2402–10.
 18. Islam A. Health System in Bangladesh: Challenges and Opportunities. *Am J Heal Res.* 2014;2(6):366.
 19. Simkhada B, Van Teijlingen ER, Porter M, Simkhada P. Factors affecting the utilization of antenatal care in developing countries: Systematic review of the literature. *J Adv Nurs.* 2008;61(3):244–60.
 20. Prasetyo B, Damayanti HE, Pranadyan R, Habibie PH, Romdhoni AC, Islami D. Maternal mortality audit based on district maternal health performance in East Java Province , Indonesia. 2018;7(1):61–7.
 21. Khresheh R, Almalik M, Owies A, Barclay L. Implementation of a childbirth preparation program in the maternal and child health centres in Jordan. *Midwifery.* 2018;61:1–7.
 22. Akeju DO, Oladapo OT, Vidler M, Akinmade AA, Sawchuck D, Qureshi R, et al. Determinants of health care seeking behaviour during pregnancy in Ogun State, Nigeria. *Reprod Health.* 2016;13(1).
 23. Babalola S, Fatusi A. Determinants of use of maternal health services in Nigeria - Looking beyond individual and household factors. *BMC Pregnancy Childbirth.* 2009;9:43.
 24. Adjwanou V, LeGrand T. Does antenatal care matter in the use of skilled birth attendance in rural Africa: A multi-country analysis. *Soc Sci Med.* 2013;86:26–34.
 25. Tabrizi J S, Farahbakhsh M, Bazargani H S, Saadati M, Golestani M, Zakeri A. Health Services Utilization and Responsiveness: A comparison of Slum and Non-slum Regions in Tabriz, Iran. *Med Sci.,* 2018, 22(94), 577-582

Article Keywords

Antenatal care, pregnancy, delivery care, NVD, Bangladesh

Authors' contributions

Most Nasrin has contributed from research design to draft writing. Md Nazirul Islam Sarker and Nazmul Huda revised the draft. All authors checked the final manuscript and approved for publication.

Disclosures about potential conflict of interests

All the authors declare that there is no potential conflict of interest among the authors.

Financial support

This study did not receive any financial support for the research or publication of this article.

Article History

Received: 20 September 2018

Accepted: 10 November 2018

Published: January-February 2019

Citation

Most Nasrin, Md Nazirul Islam Sarker, Nazmul Huda. Determinants of health care seeking behavior of pregnant slums dwellers in Bangladesh. *Medical Science*, 2019, 23(95), 35-41

Publication License



This work is licensed under a Creative Commons Attribution 4.0 International License.

General Note



Article is recommended to print as color digital version in recycled paper. *Save trees, save nature*