Original Research Paper

Volume-9 | Issue-7 | July - 2019 | PRINT ISSN No. 2249 - 555X

Community Medicine

BIRTH PREPAREDNESS AND COMPLICATION READINESS AMONG ANTENATAL WOMEN ATTENDING THE MATERNITY HOSPITAL IN AN URBAN SLUM OF A METROPOLITAN CITY.

Dr. Bharatbhushan B. Telang — Senior Resident, Department of Community Medicine, LTMMC & GH, Sion, Mumbai.

Dr. Yasmeen K. Kazi* — Associate Professor (Addl), Department of Community Medicine, TNMC & BYL Nair Ch. Hospital, Mumbai. *Corresponding Author

ABSTRACT

BACKGROUND: Birth preparedness and complication readiness is the process of planning for normal birth and anticipating the actions needed in case of an emergency. It is also a strategy to promote the timely use of skilled maternal care, especially during childbirth, based on the theory that preparing for childbirth reduces delays in obtaining this care. Therefore, the aim of this study is to assess the birth preparedness and complication readiness among the antenatal women attending the maternity hospital in an urban slum.

METHODS: Cross sectional study amongst the antenatal women attending the maternity hospital in an urban slum. All the antenatal women registered during the last three months i.e. from September to November were included in the study. Data was entered in Excel sheet and Chi Square test was used for analysis.

RESULTS: Out of 126, 39% (49) knew about early registration of pregnancy, 37% (46) knew about minimum no of antenatal visits essential, 30% (38) knew about financial assistance under JSY scheme, 42% (53) knew about free transportation under JSY scheme, 78% (98) of the women had identified skilled birth attendant for the delivery, 54% (68) had saved money for expenses during the delivery. The overall BPCAR index recorded as 51%. The awareness was more among the Multiparas compared to Primiparas.

KEYWORDS : BPCAR index, birth preparedness and complication readiness, JSY.

INTRODUCTION:

Globally, maternal mortality remains a public health challenge, it fell by nearly 44% over the past 25years, to an estimated 216 maternal deaths per 100000 live births in 2015, from an MMR of 385 in 1990. In 2015, the annual number of maternal deaths decreased by 43% from approximately 532000 in 1990 to an estimated 303000, while the global lifetime risk of a maternal death reduced from 1 in 73 to 1 in 180. The global maternal deaths in 2015 were more in Developing regions accounting approximately 99% (302000) of which Sub-Saharan Africa alone accounted for roughly 66% (201000), followed by Southern Asia (66000). Nigeria and India were estimated to account for over one third of all maternal deaths worldwide in 2015, with an approximate 58000 maternal deaths (19%) and 45000 maternal deaths (15%) respectively.[1]

Birth preparedness and complication readiness (BPACR) is a comprehensive package aimed at promoting timely access to skilled maternal and neonatal services, promoting active preparation and decision making for delivery by pregnant women and their families. Every pregnant woman could face a risk of sudden and unpredictable life-threatening complications that could end in death or injury to herself or to her infant. BPACR is a relatively common strategy employed by numerous groups implementing safe motherhood program in the world.[2]

Birth preparedness and complication readiness plan is recommended for all pregnant women as it is difficult to predict which pregnancy, delivery or post delivery period will experience complications; BPACR strategy encourage women to be informed of danger signs of obstetric complications and emergencies, choose a preferred birth place and attendant at birth, make advance arrangement with the attendant at birth, arrange for transport to skilled care site in case of emergence, saving or arranging alternative funds for costs of skilled and emergency care, and finding a companion to be with the woman at birth or to accompany her to emergency care source.[2] A study was conducted to find the birth preparedness and complication readiness among the women attending the antenatal clinic at the maternity hospital situated in an urban slum area of a metropolitan city.

AIM:

To study the birth preparedness and complication readiness among antenatal women attending the maternity hospital in an urban slum of a metropolitan city.

OBJECTIVES:

1. To find out socio demographic profile of the antenatal women attending the maternity hospital situated in study area.
2. To study their awareness about factors associated with birth preparedness and complication readiness.
3. To assess association among these factors with their socio demographic profile.
4. To give recommendation based on these factors.

METHODOLOGY:

We conducted a facility based cross-sectional study among antenatal women attendees at a Maternity Hospital in an urban slum attached to the field practice area of the parent Medical College.

A total of 126 pregnant women who attended antenatal clinic of the Maternity Hospital were serially included in the study. On an average, 42 new cases attend the antenatal clinic every month. It was intended to carry out the study for a period of 3 months from September to November. Hence all pregnant women who attended the antenatal clinic for the first time during the study period were included and therefore no sampling was done.

A pre-tested, semi-structured, interview schedule was prepared. The schedule included questions regarding identification data, socio-demographic profile, details about antenatal care practices, preferred place of delivery, knowledge of danger signs during pregnancy, labor and puerperium, identification of place or personnel for delivery, and arrangement for money and transport.

The study was approved by institutional ethical review board. After taking an informed written consent, the women were interviewed.

BPACR was measured using a series of questions including knowledge about danger signs, planning for transport, place, and delivery by skilled birth attendant, financial management, and outcome.

BPACR index was calculated by a set of indicators. These indicators are quantifiable and expressed in percentage of women having specific characteristics.

BPACR index has been developed by the Johns Hopkin Bloomberg School of Public Health and has been used in many studies conducted worldwide including India.

BPACR index was calculated from the following indicators:

1. Percentage of the women who knew about key danger signs of pregnancy (severe bleeding, pain in abdomen, swelling of face

and hands, reduced fetal movements, leakage per vagina, blurring of vision etc).
2. Percentage of the women who knew about financial assistance provided by government in Janani Suraksha Yojana (JSY).
3. Percentage of the women who knew about transportation provided by government in JSY.
4. Percentage of the women who availed Antenatal Care (ANC) in 1st trimester by skilled provider.
5. Percentage of the women who identified skilled birth attendant for delivery.
6. Percentage of the women who identified mode of transportation.
7. Percentage of the women who saved money to pay for expenses.

BPACR index was calculated as ΣIndicator/7

Data were entered and analyzed in Statistical Package for the Social Sciences (SPSS) version 20.0. Descriptive statistics were used to describe the distribution of all variables. Bivariate analysis using Chi-square was used to examine the association between each independent variable and BPACR indicators.

RESULTS:

A total of 126 women participated in our study with no refusals.

I) SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS:

1. AGE GROUP:

SR. NO.	AGE GROUP	HINDU	MUSLIM	CHRISTIAN	TOTAL
1.	18-25 YEARS	28	50	01	79
2.	26-35 YEARS	11	35	01	47
	TOTAL	39	85	02	126

Majority of the antenatal women belonged to Age-group of 18-25 years i.e. 79 (62.70%) and remaining 47 (37.30%) were from age-group of 26-35 years.

2. RELIGION:

SR. NO.	RELIGION	NO. OF RESPONDENTS	% AGE
1.	HINDU	39	30.95%
2.	MUSLIM	85	67.46%
3.	CHRISTIAN	02	01.59%

Majority 85 (67.46%) of the respondents belonged to Muslim community while 39 (30.95%) were Hindu & 02 (01.59%) belonged to Christianity.

3. EDUCATION:

SR. NO.	EDUCATION LEVEL	NO. OF RESPONDENTS	% AGE
1.	ILLITERATE	2	1.59%
2.	PRIMARY	77	61.11%
3.	SECONDARY	47	37.30

Majority 77 (61.11%) of the respondents had completed upto their Primary Education, 47 (37.30%) upto Secondary and only 02 (01.59%) were illiterates.

4. SOCIO-ECONOMIC CLASS:

SR. NO.	SOCIO-ECONOMIC CLASS (B. G. PRASAD)	NO. OF RESPONDENTS	% AGE
1.	CLASS I	02	1.59%
2.	CLASS II	20	15.87%
3.	CLASS III	32	25.40%
4.	CLASS IV	71	56.35%
5.	CLASS V	01	00.79%

Majority of the respondents belonged to Socio-economic Class IV 71 (56.35%), followed by 32 (25.40%) from Class III according to Modified B.G. Prasad Classification.

II) BIRTH PREFERENCE FOR A PARTICULAR CHILD BY ANY OF THE FAMILY MEMBER:

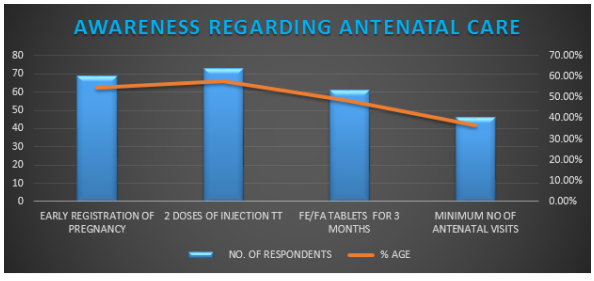
SR. NO.	BIRTH PREFERENCE BY ANY OF THE FAMILY MEMBER	NO. OF CHOICES	% AGE
1.	MALE	03	02.38%
2.	FEMALE	05	03.97%
3.	NO ANY PREFERRED CHOICE	118	93.65%

We have also asked the respondents about a particular birth preference by any of the family member i.e. Grandparents, Parents and other relatives. Majority 118 (93.65%) of the respondents were happy with any birth outcome only 8 (6.35%) had wished about a particular sex of the child with Female 05 (03.97%) were preferred more than Male 03 (02.38%) child.

III) KNOWLEDGE OF ANTENATAL WOMEN ABOUT:

SR. NO.	KNOWLEDGE ABOUT	NO. OF RESPONDENTS	% AGE
1.	EARLY REGISTRATION OF PREGNANCY	69	54.76%
2.	DOSES OF INJECTION TT	73	57.94%
3.	FE/FA TABLETS FOR 3 MONTHS	61	48.42%
4.	MINIMUM NO OF ANTENATAL VISITS	46	36.50%

Of the total 126, only 69 (54.76%) were knowing about early registration of pregnancy, only 73 (57.96%) were knowing about 2 doses of Injection TT, only 61 (48.42%) were knowing about FE/FA tablets to be taken for at least 3 months, only 46 (36.50%) were knowing about minimum number of antenatal visits essential.



IV) BPACR INDEX:

SR. NO.	BPACR INDICATOR	NO. OF RESPONDENTS	% AGE
1.	FINANCIAL ASSISTANCE UNDER JSY SCHEME	38	30.15%
2.	FREE TRANSPORTATION UNDER JSY SCHEME	53	42.06%
3.	WHO IDENTIFIED SKILLED BIRTH ATTENDANT FOR DELIVERY	98	77.78%
4.	MONEY SAVED FOR EXPENSES IN DELIVERY	68	53.96%
5.	KNOWLEDGE ABOUT KEY DANGER SIGNS OF PREGNANCY	17	13.50%
6.	ANTENATAL WOMEN WHO AVAILED ANTENATAL CARE (ANC) DURING 1ST TRIMESTER BY A SKILLED PROVIDER	103	81.74%
7.	WOMEN WHO IDENTIFIED A MODE OF TRANSPORTATION DURING DELIVERY	73	57.94%

BPCAR INDEX = ∑ INDICATORS÷7
= 357.17/7
= 51%

Of the total 126 respondents, only 38 (30.15%) were having knowledge regarding Financial assistance provided under Janani Suraksha Yojana (JSY), 53 (42.06%) were having knowledge regarding free transportation by Govt., but unaware about the fact that it is provided under JSY scheme. 98 (77.78%) of the antenatal women identified a skilled birth attendant for their delivery, 68 (53.96%) of the antenatal women saved money for expenses during the pregnancy and delivery. Only 17 (13.50%) had knowledge regarding key danger signs during pregnancy. 103 (81.74%) had availed antenatal care (ANC) during 1st trimester by a skilled provider. 73 (57.94%) of the respondents identified a transport vehicle during the pregnancy. The overall the BPACR Index was calculated as 51%.

V) FACTORS ASSOCIATED WITH BIRTH PREPAREDNESS AND COMPLICATION READINESS:

1. ASSOCIATION BETWEEN LITERACY AND OTHER VARIABLES:

SR. NO.	INDICATOR	TILL PRIMARY	ABOVE PRIMARY	CHI SQUARE	'P' VALUE
1.	KNOWLEDGE REGARDING KEY DANGER SIGNS	00.00%	36.20%	33.031	0.00001
2.	FINANCIAL ASSISTANCE UNDER JSY	22.80%	42.60%	5.467	0.019
3.	FIRST ANC VISIT WITH A SKILLED ATTENDENT	77.20%	89.40%	2.914	0.08

There was significant statistical association between literacy (Educational level) and Knowledge regarding the key danger signs in pregnancy, with chi square value of (33.031) and 'P' value of (0.00001). Also there was statistical significance between education level and knowledge about financial assistance provided under Janani Suraksha Yojana (JSY) scheme.

2. ASSOCIATION BETWEEN AGE-GROUP AND OTHER VARIABLES:

SR. NO.	INDICATOR	18-25 YEARS	26-35 YEARS	CHI SQUARE	'P' VALUE
1.	MONEY SAVINGS	44.30%	70.20%	7.963	0.005
2.	KNOWLEDGE REGARDING DANGER SIGNS OF PREGNANCY	07.60%	23.40%	6.310	0.012
3.	MINIMUM NO. OF ANC VISITS	26.60%	53.20%	9.001	0.003
4.	FREE TRANSPORT UNDER JSY SCHEME	30.40%	61.07%	11.863	0.001
5.	TRAVEL ARRANGEMENTS	49.40%	29.80%	4.636	0.031

There was statistical significance between Age-group and money saving with age group of 26-35 years was having more (70.20%) knowledge than the age group of 18-25years [chi square value of 7.963 and 'P' value of 0.005]. Similarly there was statistical significance between Age-group and Knowledge regarding key danger signs during pregnancy [Chi square value of 6.310 and 'P' value of 0.012], minimum no. of ANC visits [Chi square value of 9.001 and 'P' value of 0.003], free transport under JSY scheme [Chi square value of 11.863 and 'P' value of 0.001] & travel arrangements [Chi square value of 4.636 and 'P' value of 0.031].

DISCUSSION:

- Majority 79 (62.70%) of the respondents belonged to age-group of 18-25 years and remaining 47 (37.30%) belonged to age group of 26-35 years.
- Religion wise Muslims 85 (67.46%) were in majority over Hindus 39 (30.95%) and Christian 2 (1.59%).
- 79 (62.70%) had completed education till primary and remaining 47 (37.30%) had completed till secondary.
- Majority 71 (56.35%) of them belonged to socio-economic Class IV according to modified B. G. Prasad classification.
- Birth preference by any of the family members was observed to be very low i.e. only 8 (6.35), that is majority of the respondents were happy with any of the pregnancy outcome, which is a welcome sign for improving the sex-ratio.
- The overall BPACR index was calculated to be 51%, which is more than the study conducted in the JHANSI, UTTAR PRADESH where it was calculated as 46.4%[3] and it is more than the study conducted in DELHI where the BPACR index was calculated as 41%[4].
- The study also showed statistical significance between Age- group and knowledge about key danger signs during the pregnancy, money saved for the expenses during the delivery, free transportation under JSY scheme, minimum number of ANC visits essential and travel arrangements.
- There was also statistical significance between the Literacy and knowledge regarding the key danger signs during the pregnancy, first ANC visit with a skilled attendant and financial assistance under Janani Suraksha Yojana (JSY) scheme.
- This shows education and experience are the key factors for the birth preparedness and complication readiness (BPACR), the process of planning for normal birth and anticipating the actions needed in case of an emergency.

CONCLUSION:

- The overall birth preparedness and complication readiness was low among the antenatal women attending the maternity hospital in this urban slum, so there is a need to raise awareness among the antenatal women regarding the various components of the birth preparedness and complication readiness index, so as to give a safe pregnancy result for all the antenatal mothers.
- Antenatal care follow up was found to have statistically significant association with birth preparedness and complication readiness. Therefore, health professionals during antenatal care should give due emphasis on birth preparedness and complication readiness plan to improve access to skilled and emergency obstetric care.

RECOMMENDATIONS:

- Since the knowledge about BPACR indicators is less among those who are from younger age-group (18-25 years) and from lower education group, there is need to target these groups.
- Implementation of free and compulsory education to girls in urban slums is needed.
- Early counselling and awareness about BPACR indicators should be increased among the antenatal women and their family members from the start of conception itself.
- Intervention at the primary level in terms of health education of the community, is the need of the hour.
- Several steps need to be taken to provide antenatal women favourable environment for the safe delivery.
- Awareness about existing govt. schemes for antenatal women like JSSY, should be increased among the antenatal women.

REFERENCES

1. Trends in Maternal Mortality: 1990 to 2015: estimates by WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division. Geneva: World Health Organization; 2015.
2. JHPIEGO; Maternal and Neonatal Health Program: Monitoring Birth Preparedness and Complication Readiness; Tools and Indicators for Maternal and Newborn Health [Internet]. Hopkins: Bloomberg School of Public Health, Center for Communication Programs, Family Care International; 2004. Available from: http://pdf.dec.org/pdf_docs/PNADA619.pdf.
3. Shubhanshu Gupta, Rashmi Yadav, A. K. Malhotra. Birth Preparedness and Complication Readiness plans among the antenatal attendees at Primary Health Centre of District Jhansi, U.P., INDIA. Int. J. Intg Med Sci 2016:3(4):258-264. DOI:10.16965/ijims.2016.112.
4. Acharya AS, Kaur R, Prasuna JG, Rasheed N. Making Pregnancy safer-Birth Preparedness and Complication Readiness study among Antenatal Women Attendees of A Primary Health Centre, Delhi. Indian Journal Community Med 2015:40:127-134.