

A Descriptive Study to Assess Birth Preparedness and Complication Readiness among Antenatal Primigravida Mothers in a Selected Hospital of Guwahati, Assam

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Abstract: *Background: Maternal mortality and morbidity poses a huge public health burden. It is difficult to envisage which women will experience obstetric complications that may lead to maternal mortality and morbidity. Objective of the study: To identify birth preparedness and complication readiness among antenatal primigravida mothers. Material and methods: The study adopted a descriptive research design, 120 samples were recruited using convenient sampling technique. Self structured questionnaire for assessing birth preparedness and complication readiness were used to collect data. Descriptive and inferential statistics were used to analysis the data. Result: The study revealed that the birth preparedness among antenatal primigravida mothers, half of antenatal primigravida mothers 60(50%) were well prepared and 60(50%) were not well prepared with mean score and SD was 4.61±1.646. Complication readiness or awareness of danger signs during pregnancy, labour and postpartum period among antenatal primigravida mothers, majority 80(66.7%) were moderately aware of complications, 24(20%) were less aware of complications and 16(13.3%) were more aware of complications with and mean score and SD was 6.13±1.969. There is no any significant association between birth preparedness and complication readiness with socio demographic variables and clinical variables. Conclusion: The study clearly suggests that half of the antenatal primigravida mothers were well prepared for birth preparedness and majority of the antenatal primigravida mothers moderately aware of danger signs. Education and counseling related to knowledge on birth preparedness and complication readiness needs due attention.*

Keywords: Birth preparedness and complication readiness, Antenatal primigravida mothers

1. Introduction

“In pregnancy, there are two bodies, one inside the other. Two people live under one skin. When so much of life is dedicated to maintain our integrity as distinct beings, this bodily tandem is an uncanny fact”.

- Joan Raphael Leff

Pregnancy is a beautiful phase because it gives women the joy fulfillment which comes from bringing a new life into the world¹. Every pregnancy is a joyful moment for all mothers who dream of a safe and healthy baby. However, every pregnant women faces the risk of sudden, unpredictable complications that could end in death or injury to herself or to her infant². Birth is a process of bearing or bringing forth offspring, also referred to in technical contexts as parturition³. Preparedness refers to a very concrete research based set of actions that are taken as precautionary measures in the face of potential disaster⁴. A complication is an unfavorable result of a health condition, or treatment. Complications generally involve a worsening in severity of disease or the development of new sign, symptoms changes which may become widespread throughout the body and affect other organ systems⁵. Readiness is the state of being prepared for something⁶. The birth preparedness plan helps to ensure that all arrangement for clean and safe delivery, including the presence of skilled provider are made in advance of estimated date of child birth as well women are at risk of complication during child bearing age⁷. Birth Preparedness usually includes a birth

plan – transportation, where to go and any needed supplies, A plan for saving money to pay for transport, supplies and a skilled attendant at delivery, knowledge of danger signs and community resources for emergencies⁸. Birth Preparedness and Complication Readiness is an intervention included by WHO as an essential element of the antenatal care package. It is the often delivered to the pregnant women by the health care provider in antenatal care or initiated or followed up through a visit to the home of pregnant woman by a community health worker⁹.

2. Background of the Study

Most of the time pregnancy and childbirth are times of joy for parents, families, communities at large. But in many countries where health care service coverage and quality remain low, they could also be periods of great risk to the health and survival of women and newborns¹⁰. Maternal mortality and morbidity poses a huge public health burden. When complication arises their family members waste time in recognizing the problem, making decision to seek emergency care, getting money, finding transport and appropriate referral facility. Birth preparedness and complication readiness is a global strategy in safe motherhood programmes aimed at reducing these delay¹¹. In developing countries, the leading cause of death and disability among women of reproductive age are the complications that occur during childbirth and pregnancy. The maternal mortality rate is used to represent the risk associated with pregnancy among women¹². Assam's

mortality rates in all these crucial areas have been significantly higher than respective national rates for the past decade from 2008 to 2017. During 2014-16, the rate of maternity mortality rate (MMR) in Assam was 237 as against one lakh (1, 00,000) live births, while the national average then was 130. During 2011 – 13 Assam MMR status was 300 as against the national status of 167. During 2010 – 12, Assam MMR status was 328 as against the national status of 178¹³.

Birth preparedness is a central element of antenatal care aimed at reducing risky delays in pursuing emergency obstetric care so as to aver unwanted maternal and fetal outcomes. Birth preparedness is considered as a useful of skilled services to avoid the potential unexpected events during pregnancy and help them to plane for the required backup¹⁴.

2.1 Need of the Study

The birth of an infant is a major reason for celebration around the world. Societies expect women to bear children, but in most parts of the world pregnancy and childbirth are a perilous journey. Maternal mortality is a serious public health problem. Many strategies have been put in place including risk screening during antenatal care and training of skilled birth attendants, emergency obstetric care and birth preparedness and complication readiness. Every pregnant woman faces the risk of sudden, unpredictable complications that could end in death or injury to her. It is necessary to employ strategies to overcome such problems as they arise¹⁵. Maternal death is a major public health problem globally. It is estimated that 216, 000 maternal deaths occurred in 2015 worldwide. The major causes of these death were; maternal hemorrhage, complication of abortion, maternal hypertensive disorders, maternal sepsis and other maternal infections and obstructed labor¹⁶. Thus most maternal deaths are preventable through access to a utilization of effective modern¹⁷. Majority of maternal deaths are quite high in developing countries. Majority of maternal deaths occur during labor, delivery and within 24 hour postpartum period. Apart from medical reasons these are numerous other interrelated biosocial factors which delay care seeking and thus leading to death. Intervention at individual level could play an important role in bringing out desirable change in health-seeking behavior among pregnant females¹⁸.

Based on the literature review and the researcher experience it was felt that birth preparedness and complication readiness (BPCR) is an important strategy to promote use of skilled maternal and neonatal care. But due to some cultural belief in society there is decrease rate of use of BPCR and maternal mortality rate also increase in developing countries. Therefore the investigator felt that it is important to create awareness among mothers and family member regarding BPCR.

2.2 Problem Statement

A Descriptive Study to Assess Birth Preparedness And Complication Readiness Among Antenatal Primigravida Mothers In A Selected Hospital Of Guwahati, Assam.

2.3 Objectives

2.3.1 General Objective

To identify birth preparedness and complication readiness among antenatal primigravida mothers in selected hospital of Guwahati, Assam.

2.3.2 Specific Objectives

- To evaluate birth preparedness among antenatal primigravida mothers.
- To evaluate complication readiness among antenatal primigravida mothers.
- To determine the association between birth preparedness and selected socio-demographic variables among antenatal primigravida mothers.
- To determine the association between complication readiness and selected socio-demographic variables among antenatal primigravida mothers.
- To determine association between birth preparedness and selected clinical variables among antenatal primigravida mothers.
- To determine association between complication readiness and selected clinical variables among antenatal primigravida mothers.

2.4 Operational Definition

- **Birth preparedness:** In this study birth preparedness refers to the actions adopted by the pregnant women and her family members related to its components. Components are - Decision making in an emergency, Skilled attendant at birth, Supplies needed for clean delivery, Establish financing plan for delivery, Blood donor, Transportation, Identify the facilities for delivery, Arranged person for accompany of delivery.
- **Complication readiness:** In this study complication refers to the pregnant women's awareness on the warning signs occur during the pregnancy, during labor process, during postpartum period.
- **Antenatal primigravida mothers:** In this study antenatal primigravida mothers refers to the primigravida pregnant women attending antenatal clinic of selected hospital Guwahati, Assam.

2.5 Assumption

Study assumed that – Antenatal primigravida mothers has little knowledge about birth preparedness and complication readiness.

2.6 Hypothesis (HYPOTHESES ARE TESTED AT 0.05 LEVEL OF SIGNIFICANCE)

- **H₁:** There is significant association between birth preparedness and selected socio-demographic variables among antenatal primigravida mothers.
- **H₂:** There is significant association between complication readiness and selected socio-demographic variables among antenatal primigravida mothers.
- **H₃:** There is significant association between birth preparedness and selected clinical variables among antenatal primigravida mothers.

- **H₄**: There is significant association between complication readiness and selected clinical variables among antenatal primigravida mothers.

2.7 Delimitation

The study is delimited to – Antenatal primigravida mothers who are attending antenatal clinic in a selected hospital of Guwahati, Assam.

2.8 Research Methodology

A Quantitative research approach was used and A Descriptive Study Design was used to assess the Birth Preparedness and Complication Readiness among antenatal primigravida mothers. The target population in the present study was the Antenatal Primigravida Mothers attending antenatal OPD of Gauhati Medical College and Hospital, Assam. Sample size of the present study consists of 120 number of antenatal primigravida mothers. Non probability Convenient Sampling Technique was adopted, as it is the easiest, cheapest and least time consuming technique of data collection.

2.9 Variables

Research variables - Birth preparedness and complication readiness

Socio - demographic variables – Age, Educational qualification, Religion, Area of residence, Type of family, Occupation, Monthly family income.

Clinical variables – Gestational age, Starting time for ANC visit, No of ANC visit, Source of information.

3. Analysis and Interpretation

The analysis of data is organized and interpreted under the following sections:

Section I: Socio-demographic proforma is described by frequency and percentage.

Section II: Clinical proforma is described by frequency and percentage.

Section III: Birth preparedness is described by frequency and percentage.

Section IV: Complication readiness is described by frequency and percentage.

Section V: Association between birth preparedness and selected socio-demographic variables.

Section VI: Association between complication readiness and selected socio-demographic variables.

Section VII: Association between birth preparedness and selected clinical variables.

Section VIII: Association between complication readiness and selected clinical variables.

3.1 Section - I

Table 1: Frequency and percentage distribution of demographic variables among antenatal primigravida mothers, N=120

Sl. No	Demographic Variables	Frequency (f)	Percentage (%)
1.	Age (in Years)		
	a. 18- 22 years	45	37.5
	b. 23-27 years	40	33.3
	c. 28-32 years	35	29.2
2	Educational qualification		
	a. Primary school	21	17.5
	b. Middle school	32	26.7
	c. High school	25	20.8
	d. Higher secondary	17	14.2
	e. Graduation	17	14.2
	f. Above graduation	8	6.7
3	Religion		
	a. Hindu	50	41.7
	b. Islamic	47	39.2
	c. Christian	23	19.1
4	Area of residence		
	a. Rural	64	53.3
	b. Urban	56	46.7
5	Type of family		
	a. Nuclear	68	56.7
	b. Joint	52	43.3
6	Occupation		
	a. Housewife	49	40.8
	b. Self employed	31	25.8
	c. Service	25	20.8
	d. Other	15	12.6
7	Monthly family income (Rs)		
	a. 10000-15000	21	17.5
	b. 15001-20000	31	25.8
	c. 20001-25000	31	25.8
	d. 25001-30000	22	18.4
	e. 30001-35000	15	12.5

3.2 Section – II

Table 2: Frequency and percentage distribution of clinical variables among antenatal primigravida mothers. N=120

Sl. No	Demographic Variables	Frequency (f)	Percentage (%)
1.	Gestational age		
	a. 1 st trimester	48	40
	b. 2 nd trimester	38	31.7
	c. 3 rd trimester	34	28.3
2	Starting time for ANC visit		
	a. 1 st trimester	85	70.8
	b. 2 nd trimester	35	29.2
	c. 3 rd trimester	0	0
3	No of antenatal visit		
	a. 1 st time	39	32.5
	b. 2 nd time	39	32.5
	c. 3 rd time	23	19.2
	d. 4 th time or more	19	15.8
4	Source of information		
	a. Medical personnel	66	55
	b. Mass media	31	25.8
	c. Friends and relatives	23	19.2

3.3 Section III

Birth preparedness is described by frequency and percentage among antenatal primigravida mothers

Data presented in table 3 shows that the birth preparedness among antenatal primigravida mothers, half of antenatal mothers 60 (50%) were well prepared and 60 (50%) were not well prepared with mean score and SD was 4.61 ± 1.646 .

3.4 Section IV

Frequency and percentage distribution according to complication readiness among antenatal primigravida mothers

It reveals that complication readiness (awareness of danger signs) among antenatal primigravida mothers, majority 80 (66.7%) were moderately aware of complications, 24(20%) were less aware of complications and 16(13.3%) were more aware of complications pregnancy, labour and postpartum period with and mean score and SD was 6.13 ± 1.969 .

3.5 Section V

Association between birth preparedness and selected socio-demographic variables among antenatal primigravida mothers

The obtained Chi-square value is 0.151 with p value = 0.927 > 2 (df) at 0.05 level of significance for association of birth preparedness with age. Thus, this association is statistically non significant. The obtained Chi-square value is 0.830 with p value = 0.975 > 5 (df) at 0.05 level of significance for association of birth preparedness with education qualification. Thus, this association is statistically non significant. The obtained Chi-square value is 0.555 with p value = 0.758 > 2 (df) at 0.05 level of significance for association of birth preparedness with religion. Thus, this association is statistically non significant. The obtained Chi-square value is 0.536 with p value = 0.464 > 1 (df) at 0.05 level of significance for association of birth preparedness with area of residence. Thus, this association is statistically non significant. The obtained Chi-square value is 0.737 with p value = 0.864 > 3 (df) at 0.05 level of significance for association of birth preparedness with occupation. Thus, this association is statistically non significant. The obtained Chi-square value is 2.073 with p value = 0.722 > 4 (df) at 0.05 level of significance for association of birth preparedness with monthly family income. Thus, this association is statistically non significant.

It is evident from that there is no any significant association between birth preparedness and selected socio-demographic variables among antenatal primigravida mothers. Socio-demographic variables such as age, educational qualification, religion, residence, type of family, occupation and monthly family income. Thus research hypothesis is rejected.

3.6 Section VI

Association between complication readiness and selected socio-demographic variables among antenatal primigravida mothers

The obtained Chi-square value is 1.797 with p value = 0.773 > 4 (df) at 0.05 level of significance for association of complication readiness with age. Thus, this association is statistically non significant. The obtained Chi-square value is 3.069 with p value = 0.980 > 10 (df) at 0.05 level of significance for association of complication readiness with educational qualification. Thus, this association is statistically non significant. The obtained Chi-square value is 0.321 with p value = 0.988 > 4 (df) at 0.05 level of significance for association of complication readiness with religion. Thus, this association is statistically non significant. The obtained Chi-square value is 0.335 with p value = 0.846 > 2 (df) at 0.05 level of significance for association of complication readiness with area of residence. Thus, this association is statistically non significant. The obtained Chi-square value is 0.034 with p value = 0.983 > 2 (df) at 0.05 level of significance for association of complication readiness with type of family. Thus, this association is statistically non significant. The obtained Chi-square value is 1.397 with p value = 0.966 > 6 (df) at 0.05 level of significance for association of complication readiness with occupation. Thus, this association is statistically non significant. The obtained Chi-square value is 1.563 with p value = 0.992 > 8 (df) at 0.05 level of significance for association of complication readiness with monthly family income. Thus, this association is statistically non significant.

It is evident that there is no significant association between complication readiness and selected socio-demographic variables among socio-demographic variables such as age, educational qualification, and religion, and residence, type of family, occupation and monthly family income among antenatal primigravida mothers. Thus research hypothesis is rejected

3.7 Section VII

Association between birth preparedness and selected clinical variables among antenatal primigravida mothers

The obtained Chi-square value is 0.223 with p value = 0.895 > 2 (df) at 0.05 level of significance for association of birth preparedness with gestational age. Thus, this association is statistically non significant. The obtained Chi-square value is 0.363 with p value = 0.547 > 1 (df) at 0.05 level of significance for association of birth preparedness with starting time for ANC visit. Thus, this association is statistically non significant. The obtained Chi-square value is 1.994 with p value = 0.574 > 3 (df) at 0.05 level of significance for association of birth preparedness with no. of antenatal visit. Thus, this association is statistically non significant. The obtained Chi-square value is 0.076 with p value = 0.963 > 2 (df) at 0.05 level of significance for association of birth preparedness with source of information. Thus, this association is statistically non significant. It is evident that there is no any significant association between birth preparedness and selected clinical variables among antenatal primigravida mothers such as gestational age, starting time for ANC visit, No of antenatal visit and source of information. Thus research hypothesis is rejected.

3.8 Section VIII

Association between complication readiness and selected clinical variables among antenatal primigravida mothers

The obtained Chi-square value is 1.591 with p value = $0.810 > 4$ (df) at 0.05 level of significance for association of complication readiness with gestational age. Thus, this association is statistically non significant. The obtained Chi-square value is 1.069 with p value = $0.586 > 2$ (df) at 0.05 level of significance for association of complication readiness with starting time for ANC visit. Thus, this association is statistically non significant. The obtained Chi-square value is 2.803 with p value = $0.833 > 6$ (df) at 0.05 level of significance for association of complication readiness with no of antenatal visit. Thus, this association is statistically non significant. The obtained Chi-square value is 0.736 with p value = $0.947 > 4$ (df) at 0.05 level of significance for association of complication readiness with source of information. Thus, this association is statistically non significant.

It is evident from that there is no any significant association between complication readiness and selected clinical variables among antenatal primigravida mothers. Hence, research hypothesis is rejected.

4. Discussion

The objective was “To evaluate birth preparedness among antenatal primigravida mothers”. The study findings were among them 50% of the antenatal primigravida mothers were well prepared for birth preparedness and 50% of the antenatal primigravida mothers were not well prepared for birth preparedness.

The second objective was “To evaluate complication readiness among antenatal primigravida mothers”

In this present study majority 66.7% of the antenatal primigravida mothers moderately aware of dangers signs during pregnancy, labour and postpartum period, 24% of the antenatal primigravida mothers less aware of danger signs and 13.3% of the participants were more about danger signs during pregnancy, labour and postpartum period.

The third objective was to - To determine the association between birth preparedness and selected socio-demographic variables among antenatal primigravida mothers.

In this present study it shows that the association between birth preparedness and selected socio-demographic variables among antenatal primigravida mothers which was tested using chi-square test. Result reveals that socio-demographic variables such as age, educational qualification, religion, residence, type of family, occupation and monthly family income was not found significant association at $p > 0.05$ with birth preparedness antenatal primigravida mothers.

The fourth objective was to - To determine the association between complication readiness and selected socio-demographic variables among antenatal primigravida mothers.

The present study finding shows that association between complication readiness and selected socio-demographic variables among antenatal primigravida mothers which was tested using chi-square test. Result reveals that socio-demographic variables such as age, educational qualification, religion, residence, type of family, occupation and monthly family income was not found significant association with complication readiness antenatal primigravida mothers.

The fifth objective was -To determine association between birth preparedness and selected clinical variables among antenatal primigravida mothers.

The study finding shows that association between birth preparedness and selected clinical variables among antenatal primigravida mothers which was tested using chi-square test. Results reveals that clinical variables such as gestational age, starting time for ANC visit, No of antenatal visit and source of information was not found significant association with birth preparedness antenatal primigravida mothers.

The sixth objective was to - To determine association between complication readiness and selected clinical variables among antenatal primigravida mothers.

The study finding shows that association between complication readiness and selected clinical variables among antenatal primigravida mothers which was tested using chi-square test. Result reveals that clinical variables such as gestational age, starting time for ANC visit, No of antenatal visit and source of information was not found significant association with complication readiness antenatal primigravida mothers.

5. Implication

The findings of the study have implication of nursing practice, nursing education, nursing administration and nursing research.

5.1 Nursing Practice

- The findings would help the nurse practitioner to develop insight about the birth preparedness and complication readiness among antenatal primigravida mothers and importance of education regarding a preparation for birth and awareness of danger signs during pregnancy, labour and postpartum period.
- The study alerts the nurse practitioner that there is need of clinical research on the birth preparedness and complication readiness among antenatal primigravida mothers.

5.2 Nursing Education

- Nursing education in practice enables lectures and practitioners to both share and disseminate evidence that demonstrate the actual practice of education as it is experienced in the realities of their respective work environments.
- For the expanded role of a nurse educator, it is important to know how to improve the maternal wellbeing during their pregnancy period.

- The study can offer an insight to the nurses to obtain specific experience and ideas, through continuing education, to lead them to be better-versed for this needful capacity.

5.3 Nursing administration

As the practice of research increasingly becomes a part of the nursing profession, the nurse administrator should encourage staff nurse, student nurse and other workers to participate in 'in service' programmes to update their knowledge on birth preparedness and complication readiness. The present study findings suggest that the nurse administrator can plan, organize and conduct awareness programmes or distribute information for general population in public place.

5.4 Nursing research

- The findings reveals preparation for their birth and awareness of danger signs during pregnancy, labour and postpartum among antenatal primigravida mothers which need further research to explore in the future.
- Further research study has to be conducted in this field to find out the factors associated with birth preparedness and complication readiness among antenatal primigravida mothers.

5.5 Limitation of the Study

- Study was to antenatal primigravida mothers age above 18 years.
- The sample size was small so the scope of generalization of findings was limited.
- Antenatal mothers who were present at the time of data collection.
- Antenatal mothers who willingly participate in the time data collection.

6. Conclusion

After conducting the study, the following conclusions can be drawn from study findings. Firstly birth preparedness among antenatal primigravida mothers that half of antenatal mothers 60(50%) were well prepared and 60(50%) were not well prepared with mean score and SD was 4.61 ± 1.646 . Next complication readiness among antenatal primigravida mothers that majority 80(66.7%) were moderately aware of complications, 24(20%) were less aware of complications and 16(13.3%) were more aware of complications with mean score and SD was 6.13 ± 1.969 . There is no any associated factor for birth preparedness and complication readiness like age, educational status, occupation, type of family, gestational age, source of information etc.

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