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ABSTRACT

Background: Birth preparedness and complication readiness is a key component of globally accepted safe motherhood programs that can reduce the number of women dying from the obstetrical complication.

Methods: A descriptive cross sectional study was carried out to assess the knowledge and practice regarding birth preparedness and complication readiness (BPACR) among antenatal mothers attending obstetric and gynecological Department of National Medical College and Teaching Hospital (NMCTH), Birgunj, Parsa, Nepal. Total 60 antenatal mothers were selected using non probability purposive sampling technique. The obtained data was analyzed by descriptive analysis- frequency, percentage, mean, standard deviation and inferential statistics by using Karl Pearson's coefficient correlation and Chi-square.

Results: The findings of the study revealed that 63.33% of antenatal mothers were in the age group 20-24 years, 53.33% were hindu by religion, 85% from rural area, less than half 43.33% were illiterate, most of them 91.66% were housewife, majority of their husbands occupation was service 71.67%, about 36.67% of them had been one time pregnant and majority of antenatal mothers 66.67% had received information regarding BPACR from health personnel. The study identified only 50% of the antenatal mothers had moderate knowledge and 83.33% had poor practice of preparation for birth and its complication.

Conclusions: Thus the study concluded that antenatal mothers had inadequate knowledge and poor practices and these are not associated with any socio-demography components except knowledge is found associated with occupation.

Keywords: Birth preparedness and complication readiness (BPACR), Maternal Mortality Rate, Birth Preparedness Package and Maternal and Neonatal Health, Safe motherhood newborn health

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INTRODUCTION

Every pregnancy is a joyful moment for all mothers who dream of a safe pregnancy and a healthy baby. However, every pregnant woman faces the risk of sudden, unpredictable complications that could end in death or injury to herself or to her infant. BPACR is a strategy that encourages pregnant women, their families and communities to effectively plan for births and deal with emergencies, if they occur. It is a key component of globally accepted safe motherhood programs.¹

The goal of the national safe motherhood program is to improve the maternal and neonatal health through preventive and promotive activities as well as by addressing avoidable factors that causes complications of pregnancy and childbirth. Evidences suggested that three delays are of

critical importance to outcomes of an obstetric emergency in Nepal context : (i) delay in seeking care, (ii) delay in reaching care and (iii) delay receiving care. To reduce the risks associated with pregnancy and childbirth and address factors associated with mortality and morbidity three major strategies have been adopted in Nepal : promoting birth preparedness and complication readiness including awareness raising and improving the availability of funds , transport and blood supplies, encouraging for institutional delivery and expansion of 24 hour emergency obstetric care services(basic and comprehensive) at selected public health facilities in every district.

Maternal and Neonatal Health (MNH) and Birth Preparedness Package activities at community level are major activities of safe motherhood newborn health. Family Health Division (FHD) continued support for expansion and maintenance of MNH activities at community level which included birth preparedness package (Jeevan Suraksha Flip Chart and Jeevan Suraksha Card). Such community level activities are focusing on the continuum of care from pregnancy, through child birth and post -partum period, including the newborn care. These activities promote Birth Preparedness and Complication Readiness (preparedness of money), Skilled Birth Attendant (SBA)/health facilities, transport and blood donors), promotion of key Antenatal Care (ANC)/ Postnatal Care (PNC) service (iron, Tetanus Toxoid (TT), Albendazole), Including self-care (food, rest, no smoking and no drinking alcohol, including pregnancy and post- partum period), identification and prompt care seeking for danger signs during pregnancy, delivery and post- partum period.²

The Maternal and Neonatal Health (MNH) program of Johns Hopkins Program for International Education in Gynecology and Obstetric (JHPIEGO) developed the Birth Preparedness and Complication Readiness matrix to address these three delays: (a) delay in deciding to seek care if complication occurs; (b) delay in reaching care; and (c) delay in receiving care at various levels, including the pregnant woman, her family , her community, health providers, health facilities and policy makers

during pregnancy, childbirth and post- partum period. BPACR is the process of planning for normal birth and anticipating the actions needed in case of an emergency.³ The key elements of the birth plan package include recognition of danger signs, plan for birth attendant, plan for the place of delivery, and saving money for transport and other costs in case need arises. BPCR is a comprehensive matrix that includes preparing pregnant women, their families, communities, providers, facilities and policy makers to reduce the delays that contribute to maternal and newborn death by ensuring the women receive timely and appropriate care with timely preparation and rapid action.⁴

The current Maternal Mortality Rate (MMR) in Nepal is 170 per 100,000 live births, whereas a goal of safe motherhood is to reduce the maternal mortality ratio to 134 per 100,000 live births by 2017. Maternal mortality is unacceptably high. About 830 women die from pregnancy or childbirth related complications around the world every day. By the end of 2015, roughly 303,000 women will have died during and following pregnancy and childbirth. Almost all of these deaths occur in low resources setting and most could have been prevented.⁵

MATERIALS AND METHODS

A descriptive cross-sectional study design was adopted for the study. The study was conducted on antenatal mothers who had attended the Obstetrical and Gynecological In- patient Department of NMCTH, Birgunj. Non probability purposive sampling technique was used for sample selection. The sample size were 60 antenatal mother attending Obstetrical and Gynecological Department of NMCTH. Structured interview schedule was used to collect data, it was divided in three parts, and each part consisted of 10 items. Data was collected from 2073-05-26 to 2073-06-08. Descriptive statistics i.e. frequency, percentage distribution, mean, median and mode was used to analyze demographic variables. Karl Pearson's correlation co-efficient method was used to find relationship between knowledge and practice. Inferential statistics chi-square was used to find out association between the knowledge and practice with selected socio-demographic variables.

RESULTS

Section A: Socio-demographic characteristics of antenatal mothers

Table 1: Percentage and frequency of antenatal mothers

Age	Frequency	Percentage
Below 20	10	16.67
20-24	38	63.33
25-30	12	20.00
Religion		
Hindu	32	53.33
Muslim	27	45.00
Buddhist	1	1.67
Residence		
Rural	51	85.00
Urban	9	15.00
Educational level		
Illiterate	26	43.33
Primary	13	21.67
Secondary	15	25.00
Higher secondary and above	6	10.00
Occupation		
Housewife	55	91.66
Private job	3	5.00
Government job	1	1.67
Self-employ	1	1.67
Occupation(husband)		
Farmer	6	10.00
Foreign labor	11	18.33
Service	43	71.67
Monthly income		
Less than 5,000	4	6.67
5000-10,000	19	31.67
10,000-15,000	26	43.33

Section D: Association between knowledge score regarding BPACR with selected socio-demographic variables

Table 4: Association between knowledge score and socio-demographic variables

N=60

Demographic variables	Knowledge score		# ² Value calculated	* ² Value tabulated	Significant	Degree of freedom
	Frequency below or equal to median	Frequency above median				
Age(in years)						
15-24	35	13	0.971	3.84	NS	1
25-above30	10	9	2.11	3.84		
Religion						
Hindu	20	12	2.11	3.84	NS	1
Others	22	6				
Place of residence(#)						
Rural	37.5	13.5	2.015	3.84	NS	1
urban	4.5	4.5				
Education						
Illiterate	21	5	2.532	3.84	NS	1
Literate	21	13				
Occupation(#)						
Housewife	38.5	16.5	0.000	3.84	NS	1
Others	3.5	1.5				
Number of pregnancy (*)						
One	12	10	3.948	3.84	S	1
Two and above	30	7				
Source of information						
Health personnel	27	13	0.356	3.84	NS	1
others	15	5				

S= Significant, p<0.05, Median=13, NS= Not significant, p>0.05

= Yate's correction was used, * = significant

Age	Frequency	Percentage
More than 15,000	11	18.33
Type of family		
Nuclear	7	11.67
Joint	38	63.33
Extended	15	25.00
Number of pregnancy		
One	22	36.67
Two	19	31.67
Three	14	23.33
More than three	5	8.33
Source of information		
Health personnel	40	66.67
Television/radio	6	10.00
Family and friends	14	23.33

Section B: Knowledge regarding BPACR among antenatal mothers

Table 2: Frequency and percentage of knowledge level of antenatal mothers regarding BPACR

Knowledge level	Frequency	Percentage
Adequate	13	21.67
Moderate	30	50.00
Inadequate	17	28.33

Section C: Practice score regarding BRACR

Table 3: Frequency and percentage of antenatal mothers according to level of practice

Practice level	Frequency	Percentage
Satisfactory practice	10	16.67
Poor practice	50	83.33

Section E: Relationship between knowledge and practice score regarding BPACR

Table 5: Relationship between knowledge and practice score regarding BPACR

N=60

Study variables	Total score	Correlation	P value
Knowledge	756	0.545	0.000
Practice	218		

Section F: Association between practice score regarding BPACR and selected socio- demographic variables

Table 6: Association between practice score and selected socio- demographic variables

N=60

Demographic variables	Knowledge	Score	# ² Value calculated	* ² Value tabulated	Significant	Degree of freedom
	Frequency below or equal to median	Frequency above median				
Age (in years)						
15-24	35	13	0.971	3.84	NS	1
25-above 30	10	9				
Religion						
Hindu	19	13	3.6797	3.84	NS	1
others	23	5				
Place of residence(#)(*)						
Rural	38.5	12.5	4.879*	3.84	S	1
Urban	3.5	5.5				
Education						
Illiterate	21	5	2.532	3.84	NS	1
Literate	21	13				
Occupation (#)						
Housewife	39.5	15.5	1.04	3.84	NS	1
Others	2.5	2.5				
Number of pregnancy						
One	13	9	1.967	3.84	NS	1
Two and above	29	9				
Source of information						
Health personnel	27	13	0.3567	3.84	NS	1
Others	15	5				

S = Significant, $p < 0.05$, Median =4

NS= Not significant, $p > 0.05$

= Yate's correction, * = significant

DISCUSSION

The study was conducted to assess knowledge and practice regarding birth preparedness among antenatal mothers. The findings of the study showed that only 21.67% of antenatal mothers were having adequate knowledge regarding BPACR, half(50%) of antenatal mothers had moderate knowledge and remaining 28.33% of antenatal mothers were having inadequate knowledge and majority 83.3% were having poor practice of birth preparedness and complication readiness, whereas 16.67% antenatal mothers were having satisfactory practice.

Incongruently, the study conducted by Tilahun and Sinaga in Dere Teyara district (Woreda) of Ethiopia among 436 pregnant women by using structured questionnaire. The finding of the study out of 423 respondent, 42.8% (181/423) of the

pregnant women had good birth preparedness. 40.9% had good knowledge on obstetrical danger sign during pregnancy, delivery and postpartum respectively. The poor result of the present study might be due to the high illiteracy among women and most of the women were from rural area who might not have access to health care facilities and lack of awareness.⁶

In the present study the knowledge of antenatal mothers and their practice were positively correlated to each other as r value is 0.545 which is significant at 0.01 levels. It implied that when there is increase in knowledge, practice will also increase. There was significant association between knowledge score with number of pregnancy and practice score with place of residence.

Similar study conducted by Hiluf and Fantahun in Adigrat town, North Ethiopia among 538 women to assess knowledge and practices with respect to birth preparedness and complication readiness and factors associated with their practices. The study revealed that preparation for birth and its complication was higher among literate mothers, married women, women with parity range 2 to 4, women with history of still birth and those who were advised about birth preparedness during their antenatal follow up.⁷

CONCLUSION

Total 60 antenatal mothers attending Obstetrical and Gynecological Department of NMCTH were selected to assess knowledge and practice regarding the birth preparedness and complication readiness. Only 50% antenatal mothers had moderate knowledge and 83.33% had poor practice among who participated in the study. The results show that there is moderate degree positive correlation between knowledge and practice. Significant association has been found between knowledge score with number of pregnancy and practice score with place of residence. Hence it can be concluded that study identified that antenatal mothers had moderate knowledge and poor practice for birth and its complications. Furthermore many women were not knowledgeable about BPACR.

Community education about preparation for birth and its complication and empowerment of women through expansion of educational opportunities are important steps in improving birth preparedness and consequently the effects of pregnancy related complications. Antenatal clinics should give due emphasis to preparation for birth and its complication and provide information and education to all pregnant women.

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