

Maternal Health Seeking Behavior among Pregnant Women in Nepal

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Abstract

Introduction: Maternal mortality remains a global public health problem. Despite the call to improve access to maternal health care services and reduce maternal mortality, maternal health-seeking behavior in Nepal has remained poor. This study, therefore, aims to assess the awareness regarding pregnancy and health seeking behavior of pregnant women in Nepal.

Methods: House-hold Survey and health camps were conducted from 2011 to 2012 by using structured questionnaires and physical examination of reproductive age women (15 to 49 years) in selected Village Development Committees of nine districts of Nepal. Data entry and analysis was performed by using SPSS version 11.5.

Results: Among the pregnant women, 19.6% (n=235) did not go for Antenatal check (ANC). More than a half of the women having ANC visited Auxiliary Nurse Mid-wife. 15.8% (n=200) of the pregnant women did not receive tetanus toxoid (T.T) vaccine and 16.3% (n=195) did not take iron/folic acid. In comparison to younger age, the odds of having antenatal check-up was increased by two times in the women 25 to 34 years of age ($p<0.001$, OR=2.166). Women having formal education were more likely to go for ANC than other women were ($p=0.002$, OR=1.703). Involvement of pregnant women in the community organizations motivated them for ANC visit ($p<0.001$, OR=2.106). ANC visit had significantly increased T.T vaccination ($p<0.001$) and consumption of iron/folic acid ($p<0.001$).

Conclusion: Lack of proper knowledge regarding complications of pregnancy and delivery remains the major challenge in health seeking behaviors. Therefore, raising awareness about its importance can improve maternal and child health.

Key words: antenatal care, health seeking behavior, maternal health, Nepal, pregnancy

Introduction

Maternal mortality remains a leading cause of death worldwide among women of reproductive age¹ and a global public health problem, especially in developing countries.^{2, 3} Globally, an estimated 300,000 maternal

deaths occur annually owing to causes associated with pregnancy, of which nearly 75% are preventable.⁴ World Health Organization (WHO) estimated that every day, approximately 800 women die from preventable causes

related to pregnancy and childbirth and 99% of all maternal deaths occur in developing countries.⁵ According to WHO report, about 50% of women does not receive Antenatal care (ANC) during pregnancy in Nepal and the maternal mortality rate was 170 per 100,000 live births in 2010.⁶

Antenatal care can help prevent maternal and neonatal deaths by early identification of pregnancy-related complications. ANC also offers an opportunity to educate women on obstetric danger signs and motivate them and their families to seek appropriate and timely referral to a Skilled Birth Attendant.⁷ Similarly, other interventions which are part of ANC such as routine iron and folic acid supplementation, vitamin A consumption for prevention of night blindness, and tetanus immunization are beneficial to mother and child health.⁸

Maternal health is a major challenge in most developing countries, including Nepal. Despite the call to improve access to maternal health care services and reduce maternal mortality, maternal health-seeking behavior in Nepal has remained poor. The poor maternal health situation in the country generally underscores the importance of this study. This study, therefore, aims to assess the awareness regarding pregnancy, experience of medical services and prenatal health seeking behavior of pregnant women in Nepal.

Methods

Study design

This research is a part of a large sample study and the data were obtained from the baseline survey (2011-2012) conducted to determine the prevalence of neural tube defects (NTD) at birth. This study was conducted in nine districts (Illam, Dolakha, Kavrepalanchowk, Sarlahi, Kathmandu, Lamjung, Kaski, Nawalparasi and Kailali) covering three ecological regions of Nepal. From nine districts, four to eight Village Development Committees (VDC) were selected in consultation with District Health Offices. Health camps were conducted in the VDCs for clinical assessment and interview of reproductive age women. All women of reproductive age (15-49 years) were informed to participate from the study villages.

Household survey

The study team visited all the villages of the selected VDC of the district for line listing of the households. During line listing, the research team collected information regarding the number of household members, their age and women of child bearing age in the household. In the baseline survey, structured questionnaires were used to collect the required information from the women in the study. A total

of 21,371 women participated in the study. However, not all were included in the study because of the exclusion of missing values, non-response and some had incomplete information.

Validity and reliability

Regarding the validity of the tools, the clinical assessment tools were produced in consultation with physicians, gynecologists and nurses. The study tools were pre-tested among 30 women of the ward of the VDC of similar population before conducting the actual study. The feedback from the pre-testing was used for the modification of the tools. To maintain the reliability, expert physicians from the study team were involved in the survey camps. In addition, the locally hired health workers were trained to work in the survey camps. The research assistants for data collection were trained for consistency and accuracy of data collection.

Limitations and possible bias of the study

Possible bias during the process of the study was minimized through close supervision and monitoring by the study team. The generalization of the study was maintained by selecting representative samples and site of districts from all ecological and administrative regions of the country.

Ethical issues

Ethical clearance was taken from Ethical Committee of the Nepal Health Research Council (NHRC reg. no. 5/2011) as per national health research policy. The protocol for informed consent developed by NHRC was strictly followed.

Data management and analysis

Data entry and analysis was performed by using SPSS version 11.5. Descriptive analysis was done and the result was expressed in percentage, ratio and rate. Inferential statistics was calculated using chi-square test, odds ratio (OR) was calculated using binary logistic regression analysis with 95% confidence interval (CI) and p-value less than 0.05 was considered significant.

Results

Among the pregnant women, still 19.6% did not go for antenatal check-ups. However, more than a half of the women who had ANC visited Auxiliary Nurse Mid-wife (ANM) followed by doctor, 38.7%. Among the type of advices that were provided by the health workers, nearly three-fourth women got advice on birth preparedness and vaccination program. Regarding tetanus toxoid (T.T.) vaccination during pregnancy, 15.8% of the pregnant

women were not vaccinated. Still, 16.3% of pregnant women did not take iron/folic acid provided by the government free of cost (Table 1).

Table 1. Health seeking behaviors of currently pregnant women

Variables	Number	Percent
Current pregnancy status (n=1266)		
Yes	1199	94.7
Do not know	67	5.3
ANC visits (n=1199)		
Yes	964	80.4
No	235	19.6
Health workers during ANC visits (n=964)		
Doctor	373	38.7
ANM	540	56.0
MCHW	130	13.5
FCHVs	66	6.8
Birth attendant	12	1.2
Type of advice gained from the health workers (n=964)		
Birth preparedness	709	73.5
Vaccination	711	73.8
Dangerous signs during pregnancy	665	69.0
Breast feeding	625	64.8
Birth spacing	572	59.3
Nutrition	576	59.8
No advice gained	87	9.0
T.T. vaccination received before delivery (n=1266)		
Yes	1008	79.6
No	200	15.8
Do not know	58	4.6
Intake of iron/folic acid during pregnancy (n=1199)		
Yes	982	81.9
No	195	16.3
Do not know	22	4.6

Almost eighty-eight percent of women of age group 25 to 34 years of age went for ANC visit. In comparison to younger age, the odds of having ANC increased by two times in the women 25 to 34 years of age ($p<0.001$; OR=2.166, CI=1.526 to 3.076). Women having formal education were more likely to go for ANC than other women were

($p=0.002$; OR=1.703, CI=1.216 to 2.384). Similarly, 86.8% of the pregnant women who were involved in community organization had ANC visit. Involvement of pregnant women in the community organizations motivated them for ANC visit ($p<0.001$; OR=2.106, CI=1.544 to 2.871). Women with second (OR=3.663, CI=2.366 to 5.580) and

third pregnancy (OR=4.287, CI=2.244 to 8.190) went for ANC visit four times more than those with first pregnancy ($p<0.001$). Among the women who did manual work, 88.2% had ANC visit. The percentage of ANC visit varied among women from different ethnic groups, with the upper caste women more likely (85.2%) to have ANC visit than other ethnic groups (Table 2).

Table 2. Association between socio-demographic variables and ANC visit

Variables	ANC visit Yes (%)	No (%)	p-value	OR	95% CI Lower	Upper
Maternal age (in years)						
15-24	600 (77.0)	179 (23.0)		1		
25-34	334 (87.9)	46 (12.1)	<0.001	2.166	1.526	3.076
35-49	30 (75.0)	10 (25.0)	0.767	0.895	0.429	1.866
Education						
Illiterate	172 (72.9)	64 (27.1)		1		
Informal	101 (83.5)	20 (16.5)	0.027	1.879	1.074	3.286
Formal	691 (82.1)	151 (17.9)	0.002	1.703	1.216	2.384
Involvement in community Organizations						
No	524 (75.7)	168 (24.3)		1		
Yes	440 (86.8)	67 (13.2)	<0.001	2.106	1.544	2.871
Pregnancy						
First	439 (72.4)	167 (27.6)		1		
Second	339 (89.9)	38 (10.1)	<0.001	3.633	2.366	5.580
Third	132 (89.8)	15 (10.2)	<0.001	4.287	2.244	8.190
More than three	54 (78.3)	15 (21.7)	0.081	1.958	0.921	4.166
Employment						
Unemployed	383 (81.5)	87 (18.5)		1		
Formal employment	55 (82.1)	12 (17.9)	0.906	1.041	0.535	2.027
Agriculture	496 (79.0)	132 (21.0)	0.304	0.854	0.631	1.154
Manual work	30 (88.2)	4 (11.8)	0.329	1.704	0.585	4.961
Ethnicity						
Dalit	131 (82.9)	27 (17.1)		1		
Disadvantaged janajati	329 (79.3)	86 (20.7)	0.329	0.788	0.489	0.720
Disadvantaged non-dalit Terai caste	55 (65.5)	29 (34.5)	0.003	0.391	0.212	0.720
Religious minorities	10 (71.4)	4 (28.6)	0.291	0.515	0.150	1.765
Relatively advantaged janajati	65 (73.0)	24 (27.0)	0.068	0.558	0.299	1.043
Upper caste	374 (85.2)	65 (14.8)	0.496	1.186	0.726	1.937

When we observed the result of ANC visit, 92.6% of the women who had ANC visit received T. T. vaccination. The ANC visit had significant role in increasing the prevalence of T. T. vaccination ($p<0.001$). Similarly, if the women had ANC visit, 94.2% of them consumed iron/folic acid ($p<0.001$) and 92.8% consumed anti-helminth medicine ($p<0.001$) (Table 3).

Table 3: Consequence of ANC check-up and health behavior of mothers (n=964)

Variables	Number	Percent	p-value
T.T. vaccination			
Yes	817	92.6	<0.001
No	134	69.4	
Don't know	13	59.1	
Iron/folic acid consumption			
Yes	850	94.2	<0.001
No	100	57.1	
Don't know	14	70.0	
Intake of anti-helminth medicine			
Yes	720	92.8	<0.001
No	244	76.0	

Discussion

In the present study, 12.1% of the pregnant women did not have ANC visits and more than half of the women who had such visits checked with ANM. According to Nepal Demographic Health Survey, 42% of the women did not receive antenatal care from skilled providers.⁹ This corroborates with our study. In developing nations like Bangladesh and Nigeria, almost half of the women did not have skilled ANC visits.^{10, 11} During ANC visit, the women received advices regarding maternal and child health. Nearly three-fourth of the women received information regarding birth preparedness and vaccination programs. This could be a reason for the decline of the maternal and neonatal mortality rate and increase in the vaccination coverage.⁹ Tetanus toxoid injections are given during pregnancy for the prevention of neonatal tetanus, a major cause of death among infants. Still 15.8% of the women did not receive T.T. vaccination during pregnancy, which is similar to the results of a study done in rural part of Nepal.¹² Although the government has distributed iron/folic acid tablets free of cost, 16.3% of the women did not take them. This could result in anemia in the pregnant women.¹³ If women miss ANC visit, they will be devoid of all the information regarding the maternal and child health,

which ultimately jeopardizes the whole health system of the nation. Therefore, ANC visits should be encouraged.

The study showed that the women of age 25 to 34 years were more likely to receive antenatal care compared with women of age 35 to 49 years and 15 to 24 years ($p<0.001$; OR=2.166, CI=1.526 to 3.076) might suggest that the women may have more knowledge of maternal health services and modern medicine.¹⁴ The relationship between education and maternal health seeking behavior was as expected as women that are more educated are more likely to have greater exposure to maternal health care than their counterparts.¹² This suggests that education is an important factor to be considered in order to achieve the desired target in maternal health. When women are involved in community organizations like mothers' group, there can be exchange of information, which results in the increased ANC visits.

Number of pregnancy (gravidity) was directly related to maternal health seeking behavior. As the pregnancy increased, the proportion of women receiving antenatal care increased. This suggests that as gravidity increases, the women become more aware and might realize the importance of antenatal care. Regarding occupation, there was no significant association with the health seeking behavior. However, in a study occupation of women played an important role in the maternal health seeking behavior.¹⁵ In this study, discrimination among different ethnic groups regarding maternal health seeking behavior has been observed. The study revealed that more upper caste women had a chance for ANC visits than other ethnic women. In line with expectation, the results showed that ethnicity is significantly associated with ANC visits, which is supported by a study done in Nigeria.¹⁵ Therefore, it would be better if the government reaches the backward ethnic group and encourage them for ANC visits.

There are always positive consequences when women seek antenatal care. In this study, more women (92.6%), who had ANC visit, had T.T vaccination during pregnancy. The vaccination helps to prevent maternal and neonatal tetanus. As expected, the more the ANC visit the more is the number of women taking iron/folic acid. This helps to reduce iron deficiency anemia in pregnant women¹⁶ and prevent birth of children with neural tube defects.¹⁷ Similarly, consumption of anti-helminth medicine was positively associated with ANC visits. The more the number of women goes for antenatal visit; the better is its impact in the maternal and child health.

Conclusion

Lack of access to basic healthcare facilities, shortage

of health care professional, poor knowledge regarding pregnancy, vaccination, deworming, and nutrition and under utilization of currently available government health services remain the major challenges in improving maternal and child health. Therefore, improving health facilities, providing education and raising awareness about the importance of health seeking behaviors for the targeted population can play a vital role in the improvement of maternal and child health.

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