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Factors Affecting the Utilization of Antenatal Care Visit in Nepal

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Abstract

The antenatal care is an entry point for maternal and child health care service utilization through which pregnancy risk can be detected and managed and contributes to reducing both the maternal and neonatal mortality. This study is an attempt to identify the factors affecting on the utilization of antenatal care in Nepal. It is based on data of Nepal Demographic and Health Survey (2016) that covered 3,998 currently married women, aged 15-49 years who had a live birth in the 5 years preceding the survey. In this study, ANC visit is dependent variables is defined by women who attend ANC as 4 or more visits and the women who attend ANC as less than 4 times visits. Information on socio-demography characteristics and the utilization of antenatal care (ANC) visits are collected. Findings of this study show that different demographic, socio-economic factors are responsible for the utilization of antenatal care services in Nepal. Despite the need and the efforts made by the government of Nepal through different policies to improve access to antenatal care service, complete ANC utilization has been inadequate.

Keywords: Antenatal Care, Antenatal Visit, Utilization, Pregnancy Risk and NDHS

Introduction

Globally, approximately 830 women die each day from preventable causes related to pregnancyor childbirth. Among total maternal deaths, almost 99 percent of deaths occur in developing countries. This shows that the lifetime risk of death due to pregnancy or childbirth-related complications ishigher in developing countries as compared to developed countries. For example, the lifetime risk ofdeath of 1-year-old women from a maternal cause is; 1 in 180 in developing countries vs. 1 in 4900 indeveloped countries (WHO, 2018).

Antenatal care is important for timely identification and prevention of complications during pregnancy. During ANC visits, women receive nutritional advice, information about warning signs indicating possible problems during pregnancy and additional resources to help prepare for a safe delivery. It is one of the “four pillars” of safe motherhood initiatives to promote and establish good health during pregnancy and the early postpartum period

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(WHO, 1996). Good quality antenatal care services improve the survival and health of mothers as well as babies. Antenatal care also provides an opportunity for women to communicate with their healthcare provider and increases the chances of their using a skilled birth attendant (WHO, 2006).World Health Organization (WHO) recommends that all women should initiate their first antenatal care in the first trimester of pregnancy and should have at least four antenatal visits to avoid the health risk during pregnancy (WHO, 2016).

According to WHO (2016) recommendation, ANC services have to be provided within four visits for women having normal progress on her pregnancy. The main purpose of the four visits is to identify the complication if any and treating them in addition to addressing behavioral factors. Within this framework government of Nepal has also made a provision of incentive for 4 ANC visits by providing cash payment of NRs. 400. The amount is given to women who made complete four ANC visits at the 4th, 6th, 8th and 9th months of pregnancy to have a safe delivery from skilled health personnel. Despite this provision still there are many cases that do not have adequate number of visits and the care may not be provided by skilled birth attendants. The effectiveness of ANC mostly depends on the continuation of the receiving care from first trimester to throughout pregnancy.

Utilization of ANC differences exist within and among the countries.In 2014, South Asia was the lowest in terms of progress, with only 36 per cent of the mothers aged 15-49 who made four plus visits to any ANC provider compared to 49 per cent in sub-Saharan Africa and 84 per cent in South-Eastern Asia (United Nations, 2015). In Nepal, slightly over 50 percent of mothers reported that they made four or more ANC visits during their most recent pregnancy in 2011 (MoH,2012). Approximately 15 per cent of mothers were not able to make any ANC visits and slightly over one-third of mothers made 1-3 visits.In Nepal, it is about 69 percent of women who attended 4 or more ANC visits in the last 5 years preceding the survey (MoH,2017). There are 30 percent women are still left behind.

The Government of Nepal has implemented a National Health Policy to provide quality health service to all citizens. The Ministry of Health and Population (MoHP) of Nepal has been providing maternal and child health services including ANC check-ups free of cost through the health system network including at the community level (Deoet al., 2015). Moreover, as an incentive, each woman receives a fixed amount of money to cover transportation costs and 4 ANC visits (Upretiet al., 2012). Despite thesupport from the Government, a large portion of women still do not receive the recommended number of ANC visits. Considering that universal access is provided, it is important to investigate the influence of non-monetary factors such as caste and ethnicity. Ensuring access to ANC also helps achieve the United Nation’s Sustainable Development Goal (SDG) 3, which

emphasizes universal health coverage, and SDG 10, which focuses on reducing inequality (UN, 2016).

A large number of studies worldwide have examined the various aspects of ANC. These studiesshow that age, parity, education, mother's autonomy, occupation and economic status are associated with both the number of ANC visits and the quality of health care received (Simkhada et. al., 2008; Joshi and others, 2014). Other factors include religion, husband's education and occupation, access to health services and affordability.There is a need to identify the variables in attending the recommended number of ANC visits by women during their pregnancy. Thus, the aim of this study is to identify the influence of demographic and socio- economic variables on ANC visit during pregnancy in Nepal. The study has defined two sets of variables which are categorized as dependent and independent. Demographic and socioeconomic variables are considered as independent variables for the study, i.e. maternal age, place of residence, province, wealth index, occupation. In this study ANC visit is dependent variables is defined by women who attend adequate ANC as the 4 or more visits and the women who attend inadequateANC as less than 4 visits.

Objective

The main objectives of this paper are to analyze the factors affecting the utilization of antenatal care (ANC) visit in Nepal and to examine the relationship between the antenatal visit and socio-economic and demographic factors.

Methodology

This study is based on secondary source of data utilized from Nepal Demographic and Health Survey, (NDHS, 2016) datasets. NDHS is nationally representative cross sectional household sample survey, which was conducted under the aegis of Ministry of Health and Population.Stratified two-stage cluster sampling was used in rural areas and three-stage in urban areas to select household for the survey. In rural areas, wards were selected as primary sampling units (PSUs) in the first stage and households in second stage. In urban areas, wards were selected as PSUs in first stage, one enumeration area (EA) was selected from each PSU in second stage, and households were selected from sample EAs in third stage. The 2016 NDHS sample contained 11473 households, and 12862 women aged 15-49 years were interviewed.

This study is considered only currently married women aged 15-49 years who had a live birth in the 5 years preceding the survey by number of antenatal care (ANC) visit for the most recent live birth. The study population for this analysis is 3,998.In this study, data are limited to only currently married women. The relationship between antenatal care (ANC)

visit and women's socioeconomic and demographic characteristicsrelated to them is analyzed in this study.The analysis begins with descriptive statistics to understand the distribution of different independent variables in relation to outcome variable that is current ANC practice.

Results

Antenatal care is more beneficial in preventing adverse pregnancy outcomes when it is sought early in the pregnancyand is continued through delivery. ANC visit is possible to detect health problems associated with a pregnancy. In the event of any complication, more frequent visits are advised and admission to a health facility may be necessary.

Table 1 data shows that the coverage of ANC visits, two ANC visits is very low (3.6%) in NDHS, 2016.Thirty-one percent women make aged (15-49 years) with a livebirth in the past 5 years had attained at least 3 ANC visits based on the most recent live birthexperience. Sixty-nine percent of women had at least four ANC visits during their entire pregnancy.

Table1: Percentage Distribution of Respondents by Antenatal Visits,2016

Number of ANC Visits	**Percent**	**Number**
No ANC visit	5.9	236
1 ANC visit	3.6	142
2 ANC visits	8.0	320
3 ANC Visits	13.2	527
4 + ANC visits	69.4	2773
Timing of First ANC Visit(months)		
No ANC visit	5.9	236
<4	65.1	2603
4-5	23.5	939
6-7	4.5	179
8 and higher	1.0	40
Total	**100.0**	**3998**

Source: Dataset of NDHS, 2016

Almost two-thirds of women (65%) received first ANC visit less than four month of pregnancy. Twenty-four percent of women made their first visit at 4-5 months of pregnancy. The timing of the ANC visits in eight months and higher has very low percentage (1%).

Relatively higher proportions of the respondents are in the middle age groups. More than 50percent of them are age group 24-34 years. About 40 percent respondents are younger age groups of 15-24 years and 9 percent of them are above 35 years of age. The distribution of respondents by number of living children shows that more than two fifth of women (46%)

have 2-3 children, about 12 percent have 4-5 children, 5 percent have more than 6 children.While talking about education level, near about one-third percent (31.4%) of respondents did not have any formal education. One fifth (19.4%) of respondents had primary education and remaining 49 percent have attended the secondary. Likewise, nearly one-fourth (24%) of respondents were from province 2 and only (6.4%) of them were from province 6. Likewise, similarly about 42 percent of the respondents were from poor household wealth (Table 2).

Table 2: Percentage Distribution of Respondents According to Background Characteristics, 2016

Background Characteristics	Number	Percent
Age of Mother		
15-24	1606	40.2
25-34	2033	50.9
35-49	359	9.0
Number of Living Children		
1	1498	37.5
2-3	1833	45.9
4-5	481	12.0
6 and higher	186	4.7
Education Level		
No education	1257	31.4
Primary	777	19.4
Secondary and higher	1964	49.1
Province		
Province 1	686	17.1
Province 2	963	24.1
Province 3	691	17.3
Province 4	337	8.4
Province 5	720	18.0
Province 6	255	6.4

Province 7	346	8.7
Wealth Index		
Poor	1661	41.5
Middle	863	21.6
Rich	1474	36.9
Total	**3398**	**100.0**

Source: Dataset of NDHS, 2016

There are large differences in the use of 4 times ANC visits according to demographic and socio-economic background of women.Table 3 shows that 72 percent of women age 15-24 made at least four ANC visits for their most recent birth and only with 56 percent of women age 35-49. This finding indicates that younger mothers received proper ANC visits than older mothers. Result shows that the percentage of receiving ANC increased with mother's education.As Caldwell (1979) stated that educated women are considered to have greater awareness of the existence of maternal health care services and benefits in using such services.They are likely to enjoy more autonomy within and outside the household and the skill acquired from schooling enable women to communicate with the health professionals and demand health care services.Results show that the percentage of receiving ANC increased with mother's education.

Table3: Percentage Distribution of Women Age 15-49 Who had a Live Birth in the 5 Years Preceding the Survey by Number of ANC Visit for Their Most Recent Birth According to Background Characteristics, 2016

Background Characteristics	ANC Visit					
	Less an 4 times		4 times and higher		Total Respondents	
	Number	Percent	Number	Percent	Number	Percent
Age of Mother						
15-24	455	28.3	1151	71.7	1606	100.0
25-34	611	30.0	1422	70.0	2033	100.0
35-49	159	44.3	200	55.7	359	100.0
Number of Living Children						
1	261	17.4	1237	82.6	1498	100.0
2-3	594	32.4	1239	67.6	1833	100.0
4-5	252	52.4	229	47.6	481	100.0
6 and higher	118	63.6	68	36.4	186	100.0
Education Level						

No education	636	50.6	621	49.4	1257	100.0
Primary	279	35.9	498	64.1	777	100.0
Secondary and higher	310	15.8	1655	84.2	1964	100.0
Province						
Province 1	158	23.1	527	76.9	686	100.0
Province 2	449	46.6	514	53.4	963	100.0
Province 3	149	21.6	542	78.4	691	100.0
Province 4	79	23.3	259	76.7	337	100.0
Province 5	189	26.3	531	73.7	720	100.0
Province 6	122	47.8	133	52.2	255	100.0
Province 7	79	22.7	267	77.3	346	100.0
Wealth Index						
Poor	647	38.9	1014	61.1	1661	100.0
Middle	287	33.2	576	66.8	863	100.0
Rich	291	19.7	1183	80.3	1474	100.0
Total	**1225**	**30.6**	**2773**	**69.4**	**3998**	**100.0**

Source: Dataset of NDHS, 2016

As Caldwell (1979) stated that educated women are considered to have greater awareness of the existence of maternal health care services and benefits in using such services.They are likely to enjoy more autonomy within and outside the household and the skill acquired from schooling enable women to communicate with the health professionals and demand health care services.Results show that the percentage of receiving ANC increased with mother's education.For example nearly 49 percent of the mothers with no education make 4 or more times ANC visits and higher percentage of women (84.2%) with secondary education has at least 4 ANC visits., receiving proper ANC services was more common in all provincial level except provinces 2 and 6. Only a little more than half of the mothers from province 2 and 6 received four and more ANC visits in comparison with other provinces.

About 76.9 percent mothers from province 1 received proper ANC visits which are highest among in all provincial level. From the table it appeared that receiving antenatal care improves with household wealth. Mother from poor household had less antenatal visit than mothers from rich household (61.1% Vs 80.3%). It shows that increased household economic status increases the use of recommended ANC visit.

Conclusions

The study examined the factors affecting the utilization of antenatal care (ANC) visit in Nepal using the data from NDHS, (2016).The analysis shows large variations and gaps in the utilization of ANC at least 4 times on the basis of demographic, social and economic characteristics of women such as women's age, number of living children, levels of

education, province, and wealth index.There is relationship between the antenatal visit and socio-demographic factors.The utilization of ANC is affected substantially by women's age, number of living children, education level, province and wealth quintile.Even though there are incentives for 4 ANC visits, sufficient utilization of ANC has not yet been achieved as varied demographic and socioeconomic factors. These factors still make problem to mothers in using of ANC services.It is essential to encourage pregnant women to use the sufficient number of ANC visits. Efforts are needed to target women of less educated and from low wealth quintile to improve antenatal care services.This study recommends implementation of appropriate policy and program measures by the government and other agencies to address the existing variations and gaps in ANC services utilization among various sub-groups of women.Government efforts should be designed to enhance female education at least secondary level for future favorablehealth outcomes. Therefore, emphasis should be given to address factors responsible for low use of ANC service.

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