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Antenatal Care Coverage Among Currently Married Women in Nepal

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Abstract

The study examines utilization coverage of antenatal care services among currently married women in Nepal. An attempt has been made to investigate differentials in antenatal visits among currently married women with skilled and any provider. Secondary data are extracted from the 2016 Nepal Demographic and Health Survey (NDHS) dataset. Out of the 12,862 women aged 15-49 who were interviewed, for the study purpose, this study has employed a sample of 2,746 currently married women who have a live birth in the three years preceding the survey. The analyses are done in bivariate levels and differences among and within women's demographic and socioeconomic characteristic. The result shows that the women who are poor, regionally marginalized, having less access to education have lower utilize the ANC services. This study has suggested that to increase the ANC contact along with content, antenatal care services should be locate based on necessity and focusing on the media exposure, education and geographical barriers.

Keywords: Antenatal care, coverage, and NDHS

Introduction

Antenatal care is one of the most prominent indicators of maternal health and every woman should have full access to antenatal care services. It is also known as prenatal care, which paves the way to improve maternal health. It is the care that a pregnant woman receives available health care services. Every antenatal contact includes planning for pregnancy and continues until birth. Thus, receiving care during pregnancy means receiving quality and proper care for not only the mother but also for protecting their newborns too. According to WHO (2015) high coverage of interventions before, during and after pregnancy could save nearly 3 million women, stillbirths and newborns by 2025. But still every day approximately 810 women died from preventable causes related to pregnancy and childbirth and 94 percent of all maternal deaths occur in low and lower-

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middle-income countries. Skilled care before, during, and after childbirth can save the lives of both women and newborns (WHO, 2019).

Antenatal care as a concept was first developed more than 100 years ago. It was focused on early identification of symptoms of preeclampsia so that mother and newborn could save in time (Maloni, Cheng, Lievel & Maier, 1996). Still, this issue is in prime focus even in recent sustainable development goals that aimed to reduce the maternal mortality ratio to less than 70 per 100,000 live births. Despite the worldwide effort, still, maternal mortality remains a major health problem in many developing countries like Nepal. Hence, Nepal has made substantial progress in improving maternal health access and utilization. Maternal mortality ratio has decreased from 539 to 239 maternal death per 100000 live births between 1991 to 2016 (Ministry of Health; New ERA; ICF, 2017). This status of maternal death indicates not only the poor health system but also shows society's insufficient attention to saving them. Globally, nine out of every ten pregnant women access antenatal care from skilled personnel at least once, only six out of ten access at least four antenatal visits from a skilled provider. In regions where the rates of maternal mortality are high, such as sub–Saharan Africa even fewer women obtain at least four antenatal visits from skilled providers - 49% which is less than the global average. In case of Nepal the use of antenatal services in Nepal is high- 83.6% of antenatal services are provided by a skilled provider; 69.4 percent of women had four or more antenatal visits for their recent live birth and about 59 percent of women had ANC visit at all specified months as per national guidelines (Ministry of Health; New ERA; ICF, 2017).

On another side, the health system tells more about the improvement in the health facility. Nepal Health Facility Survey 2015, the first survey of its kind in Nepal shows that in Nepal 98 percent of facilities offered ANC services across countries. Ninety percent of health facilities have all essential ANC medicines available for ANC clients. Nearly half of the facilities, nationwide provide normal vaginal delivery services and most of the deaths are now successfully prevented too. This survey also shows that in Nepal, on average, 11 percent of facilities have all medicines regarded as essential for delivery care. Similarly, the Ministry of Health's Aama Surakshya Program provides a cash payment of Nepali rupee 800 to women on completion of four ANC visits at the 4, 6, 8, and 9 months of pregnancy and cash incentive for institutional delivery based on

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location. Likewise, the new WHO ANC model recommends that a pregnant woman should have minimum of 8 ANC contacts.

The supply-side evidence shows effective results whereas the demand side is not satisfactory. This evidence suggests that putting services in place will not itself achieve targeted results. It also points out the problem is not about medical risk, it's about non-medical risk particularly socio-cultural problems. Thus, most maternal deaths can be prevented if births are regularly supervised by skilled health personnel i.e. doctors, nurses, or midwives ultimately can refer women promptly to emergency obstetric care when complications are diagnosed. Despite women's commonality regarding the basic problem, there are many divisions among women in Nepal. Still, many pregnant women in Nepal do not receive the maternal and newborn care they need. Urban women are divided from rural women, and uneducated women are divided from educated women. Similarly, divisions in terms of demographic and socioeconomic differentials exist directly or indirectly. Therefore, it is also necessary to assess how the level of demographic and socioeconomic effects on the ANC visits. Because there are still gaps in the use of ANC services continued along with women's geographic, economic, and socio-cultural aspects. This evidence indicates beyond the health sector has developed a stronger effort mechanism but service users are unable to access the available services. Since both actual and perceived quality of care affect whether a woman will choose to deliver in a facility in the first place; if a woman has a positive experience, she will tell her friends and family about it; if the woman has a negative one, she may simply stay home to give birth the next time, and warn others too and guide them to stay away as well (Nair & Panda, 2011). Still there seem some gap except this. What are the reasons behind this gap? This gap is still taken as a serious issue that remained to be addressed. Importantly, ANC visits provide the opportunity for women to communicate with health providers respectfully. And also helps to create a good environment for pregnant women to save two lives. Thus, this study is an attempt to explore the differential of ANC visits in terms of a provider either any provider or skilled provider among currently married women in Nepal.

Methods

The present study intends to analyze the existing inequalities in making ANC visit with health providers between different demographic and socioeconomic classes in Nepal. To represent the issues this study tried to explore ANC visits in terms of any provider and skilled provider that the

women made for their most recent birth. This study was completely based on secondary data. Since the focus of this research is on specific measures rather than specific studies, individual measure data were extracted from the 2016 Nepal Demographic and Health Survey (NDHS) dataset.

The NDHS is the only one national survey that covers a large sample of the country's population at regular intervals. It is designed to cover the national population and have a representative sample size. This is a periodic survey implemented by New ERA under the support of the Ministry of Health (MoH) which includes a large sample of ever married women of reproductive ages from all over the country. This study uses a weighted sample. Out of 12,862 women aged 15-49 interviewed, for the study purpose, this study has employed a sample of 2,746 currently married women who have a live birth in the three years preceding the survey.

The ANC visit is the main dependent variable and measured with at least one and four contacts with skilled health professionals or any providers during the visits. Any provider includes all the health professionals. Skilled providers include the skilled attendant explained by the WHO i.e. doctor (such as obstetricians and paediatricians), midwife, or nurse who is trained and educated with the expertise to manage normal pregnancies and identify and provide a referral for complex problems in women and newborns (WHO,2018). The ANC contact with a skilled provider is important to ensure the best health conditions for both mother and baby during pregnancy. It was measured using a question, "Did you see anyone for antenatal care for this pregnancy?" if a woman said yes, then it is categorized into any providers then it was categorized yes=1 and no=0. Respondent was further asked, "Whom did you see?" The responses for health providers are then categorized into skilled as coded 1 and else as coded 0 based on the WHO definition. Similarly, those who have visited 4 or more times with skilled providers are recoded as 1 and else as 0. This study has first examined the cross-tabulation analysis of the dependent variable and all independent variables as descriptive analysis and then using the Chi-square test the significance of the association between dependent and independent variables is observed. Since cross-tabulations only give simple associations between dependent and independent variables a chi-square test for independence is used to determine whether there is a significant association between the independent variables and the outcome of variables. This study has also tried to calculate the differentials in terms of absolute difference to assess the inequities in ANC visits based on women's individual information and presented in percentage points (PP).

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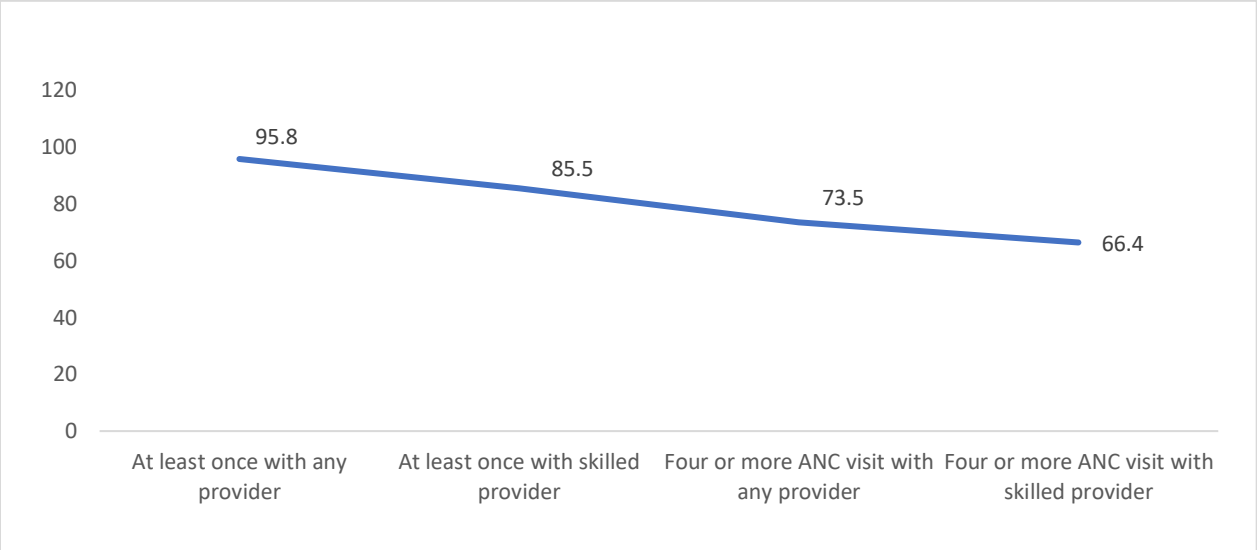
Results

This study has tried to find the difference between receiving the ANC services with any provider and skilled provider in terms of the number of visits. Receiving ANC services with skilled health providers may reduce the complication during delivery. Following the definition, this study has tried to explore the demographic and socioeconomic differential of ANC visits based on 2016 data from the Nepal Demographic Health Service.

Women were asked to report the number of visits that they made with any available providers. Figure 1 shows that ANC visit with any provider is about 9 in 10 women visit one or more ANC visits 2016 which is almost double compare to 2001 data (49.4%) (MoHP, 2017). If we look specifically at ANC visits with any provider and skilled provider according to the number of visits there seems a large gap of about 30 percentage points.

Figure 1: ANC visits with any provider and skilled providers



Source: NDHS 2016 datafile

Likewise, this study has also tried to explore the ANC visit with respondent's demographic and socioeconomic aspects in Tables 1 and 2. Firstly, Table 1 describes the ANC visit at least once with any provider in general and then specifically tries to show the percentage distribution of women who had received ANC services at least once from skilled providers among all women for their most recent birth according to selected demographic and socioeconomic characteristics. According to the age of women, receiving ANC services from any health provider is more than 90

percent with the highest percentage among the young population (97.7%) followed by 25-29 years (94.8%) and 30 and above (92.1%). With vary respondent data are again segregate to explore the ANC contact with skilled providers. In this regard within the age range also there exist gap (6.4PP) between youths (15-24 years) and adult (25 and above). Young respondents are found more ANC contact with skilled providers.

Likewise, women who had already a son as their children are less likely to receive ANC services than those who had no son. There was little difference in receiving ANC services between women who had no son and one son. But while compare with women who had no son and had two or more sons there is a gap in percentage points. This shows the importance of a son in the family and also may indicate the patriarchal society. There are about 20PP differences found among women who had 2 or more sons at home and having no son at home in ANC contact with a skilled provider.

This study has further analyzed the four or more ANC contact with skilled and any provider. The respondents are those who have at least one ANC contact with any providers. The main focus of this study is ANC contact with the skilled provider, however, some respondents have ANC contact with any providers. Data shows that more than 60 percent of the respondents have four or more ANC contact with skilled providers. Out of respondents having at least one ANC contact, about 66 percent of youth women have made four or more ANC contact with skilled providers whereas it is about 64 percent among women from 30 and above years. There is very little difference among age groups. But in the case of the presence of a son at home, there seems a large gap between having no son and having 2 or more sons. For example, there is about 20 PP difference in making four or more ANC contact between having no son and having 2 or more sons. Similarly, in the case of making four or more ANC contact with any provider, there are more found more gaps (25.6PP).

Table 1: Percentage distribution of respondents who had attended at least one ANC visit with any provider and skilled provider

Demographic characteristics	ANC contact at least once with		Four or more ANC visits with	
	Any provider	Skilled provider	Any provider	Skilled provider
Maternal age				
15-24	97.7	88.5	73.5	66.4
25-29	94.8	83.2	74.6	67.1
30 and above	92.1	81.9	70.9	64.4
χ^2	27.378*	*18.281**	*1.941*	*0.893*
Presence of son at home				
None	96.9	85.8	71.7	71.5

One	96.0	75.4	53.8	69.1
2 and more	93.4	65.9	46.1	52.0
χ^2	10.708**	80.011*	143.437*	137.026*
Total	**95.8**	**85.5**	**73.5**	**66.4**
N	**2746**	**2746**	**2630#**	**2630#**

Source: NDHS 2016 datafile *significant at 1% and **significant at 5 %; # Respondents are those who have at least one ANC visit

Women's level of education shows a very influential effect on ANC visits at least once with a skilled provider. The absolute difference between women having education and no education is found higher (18.5PP) while visiting for ANC with skilled provider whereas the gap is about 7.3 PP for ANC visit with any providers. Geographical region/area has also been found significantly associate with ANC visits at least once with any or skilled providers. The ANC visit at least once with any provider is found less among women from Karnali Province (88%) whereas receiving service with skilled provider is found less among women from Province 2. The influence of media can be seen in receiving ANC services with the skilled provider at least once during their pregnancy. The differences are about 18.4PP among women who have exposure to both television and radio and 11.4PP for those women who have exposure to either television or radio. Household economic status has also a significant association with receiving ANC services. There are almost 5.2 PP and 11.4PP differences in receiving ANC services with any provider and skilled provider respectively among women from poor and rich wealth index.

The role of education seems vital regarding four or more ANC contacts. About 95 percent of women with higher education made four or more ANC contact with any providers. Data further suggests that making four or more ANC contact with skilled providers is also found higher among women with higher education. About 38PP more women with higher education than having no education.

The geographical differential can also be seen in the table. Women from rural areas are less likely to make four or more ANC contact than urban women. Likewise, women from Province 2 and Karnali Province are less likely to make four or more ANC contact with skilled providers. Media is another aspect that seems more influential and significantly associates with four or more ANC contacts. There seems huge gap (35.2PP) between women with no media exposure and with media exposure in making four or more ANC contact with a skilled provider. In the case of any provider, the gap is about 28.6PP. Likewise, household economic status is also found an influential indicator in making ANC contact. It is significantly associated with four or more ANC contact.

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Table 2: Percentage distribution of respondents who had attended at least one ANC visit with any provider and skilled provider

Socio-economic characteristics	ANC contact at least once with		Four or more ANC visits with	
	Any provider	Skilled provider	Any provider	Skilled provider
Level of education				
No education	92.1	77.8	56.9	47.6
Primary	94.5	85.2	67.0	61.3
Secondary	98.0	87.4	80.7	72.5
Higher	99.4	96.3	94.8	92.5
χ^2	53.667*	80.596*	240.527*	268.343*
Province				
Province 1	95.9	85.5	80.0	69.9
Province 2	96.4	83.7	57.4	51.5
Bagmati	96.4	85.6	81.0	73.9
Gandaki	94.9	86.0	82.0	77.5
Lumbini	96.4	88.0	78.3	69.4
Karnali	88.0	85.3	62.1	55.6
Sudurpaschim	97.8	75.8	83.4	79.6
χ^2	29.916*	26.771*	146.672*	117.857*
Media exposure				
Neither watch TV nor listen to the radio	91.3	74.1	55.9	44.5
Watch TV or listen to the radio	95.9	85.5	72.4	65.3
Watch TV and listen to the radio	98.3	92.5	84.5	79.7
χ^2	47.373*	106.021*	154.158*	202.517*
Wealth index				
Poor	92.8	80.4	68.7	60.1
Middle	97.7	85.2	69.2	60.7
Rich	98.0	91.8	81.5	76.9
χ^2	42.484*	0.297*	49.207*	75.003*
Total	**95.8**	**85.5**	**73.5**	**66.4**
N	**2746**	**2746**	**2630[#]**	**2630[#]**

Source: NDHS 2016 datafile *significant at 1% and **significant at 5 %; [#] Respondents are those who have at least one ANC visit

Discussions and Conclusions

In this study antenatal care coverage is measured in terms of ANC visit with any or skilled providers. Antenatal care services with skilled providers are found less among women then ANC services with any providers. Service taken with either skilled or any provider increases the number of ANC visits. However, the influential is visit with skilled provider at first trimester so that woman can get right information and counselling in right time. It also helps family/women to get mentally and financially prepare for their unborn child and mother. According to Benova, L., Tuncalp, Ö., Moran, AC., Campbell, OMR. (2018), pregnant women who received the adequate number of components and recommended number of ANC contacts are more likely to use skilled healthcare providers at birth and post-birth care services than women who did not. Late initiation of ANC

impedes sufficient time to access the required number of ANC contacts thus missing opportunities for early intervention, and this has been previously identified. However, this study is not focused on content, contact data also reveals low coverage of ANC services with skilled providers.

Demographic and socioeconomic inequality in ANC contacts exists in both any and skilled providers. The World Health Organization (WHO) as part of its principles underlying antenatal care advocates that antenatal care should be provided by a health care provider - a skilled attendant (WHO, 2002). Similarly, there is also evidence that some pregnant women do not utilize antenatal care services from any provider. Evidence shows that women with secondary or higher education are more likely to receive antenatal care services from skilled providers compared with those with no education. This finding is consistent with findings of other studies (Wang W, Alva S, Wang S, Fort A., 2011). The possible explanation for the findings is that women with higher education may have more aware on the complications and danger signs of pregnancy and also may aware on the services provide by the skilled providers. As expected, wealth status of household is found to have a significant association with any provider and skilled providers for antenatal care services. Rich women are more likely to utilize antenatal care services from skilled providers compared to women from poor household economy. Moreover, the gap is found higher among the rich and poor women in utilizing skilled provider. This is in line with the findings of Atunah-Jay, S., Pettingell, S., Ohene, SA., Michael Oakes, J., Borowsky I. (2013) study that found women with richest wealth status are more likely to receive ANC services from skilled personnel compared to those from poorest wealth status who utilized ANC services from traditional birth attendants.

The study also observed the geographical barriers, media exposure and presence of son at home. All are significantly associate with utilization of ANC services. Son preference is more common especially in South Asia. This study results also evident that women who have already son are less likely to visit health services. Likewise, if a woman lives in an area within fifteen minutes of public transportation, the odds of delivery with the assistance of trained medical personnel increased significantly. Findings further show that “where you live” matters for utilization of any maternal health services moreover “where you live” is also important. Another study also talks about the access, quality of care and medical barrier in family planning programs. It has argued that access helps determine whether individual contacts a service provider in the first place, while quality of care influences a client’s decision concerning whether to accept or use the service or to continue

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using it (Bertrand, Hardee, Magnani, & Angle, 1995). Another factor that help to increase ANC coverage is exposure to media. Study results is in line with the study of Acharya, Khanal, Singh, Adhikari and Gautam (2015). Their study also shows the positive effect of media exposure on utilization of ANC services.

Results shows that the women who are poor, regionally marginalized, having less access to education have lower utilize the ANC services. Thus, to increase the coverage of antenatal care services we have to go through the evidences and identify the gap. This study has suggested that to increase the ANC contact along with content, antenatal care services should be locate based on necessity and focusing on the media exposure, education and geographical barriers.

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