International Research Journal of MMC (IRJMMC)
Open Access
Volume 3(3), 2022 ISSN 2717-4999 (Online) 2717-4980 (Print)

Examining the Adequate Content of Antenatal Care for Empowered Women in Nepal

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Citation: Shrestha, B. (2022). Examining the adequate content of antenatal care for empowered women in Nepal. *International Research Journal of MMC, 3*(3), 91–97. https://doi.org/10.3126/irjmmc.v3i3.48640

Abstract
The most crucial aspects whenever we discuss antenatal care services are the coverage of antenatal care contacts and the contents of antenatal care during pregnancy. During the ANC contact, women get counselling and medical check-upfor their pregnancy which preventsnot only women but also the newborn babiesfrom preventable death. It is a window of opportunity for offering preventive measure to save the mother and newborn's life. But despite the significance of antenatal care content in Nepal, many women are still being left behind, either directly or indirectly. Women empowerment and adequate content of care during ANC visits are both concerns about women's reproductive rights. Women who have greater power usually use antenatal care facilities. In this regard, the goal of this study is to look into the relationship between women empowerment and adequate content of care. This study is completely based on Nepal Demographic Health Survey, 2016. The main target populations of this study were women who weree currently married and had had at least one child in the two years before the survey. The content of care was found to be inadequate. Thus, women who had been left behind should be empowered to increase the adequate use of ANC services. Likewise, policies and activities should be tailored to serve the most marginalized, poor and vulnerable populations to offer sufficient, timely, and adequate ANC services in Nepal.
Keywords: Antenatal care, content of care, NDHS, women empowerment

1. Introduction

Antenatal care (ANC) gives expectant mothers a place to learn about their pregnancies from qualified healthcare professionals. During pregnancy, women need unique care and counselling, and this opportunity they can get throughout their ANC visits. This helps in preventing deaths that may have been avoided, therefore, ANC is acknowledged and focused on. It saves not only pregnant women's health but also the health of their unborn babies. However, there are still many pregnant women who are visiting health facilities but do not receivean adequate component of ANC content that she has to receive during their visits.Benova et al. (2018) assert that obtaining the recommended amount of prenatal care is insufficient, even among women who meet the requirements for the number of visits and the date of the first appointment.As Tunçalp et al. (2017) also state that a woman's 'contact' with her provider should be more than a simple 'visit' but should be an opportunity for good quality care including medical care, support, and timely and relevant information throughout pregnancy.

The success of ANC services depends on the continuity of care from the first trimester of pregnancy through labour and delivery. Many women are still denied access to ANC services despite their importance. Although ANC visits have increased in developing countries like Nepal, where governments are constantly working to save women's lives, it is still a major surprise why women are not receiving content of ANC. There are different perspectives in looking at the cause ofless coverage of CoANC. The most crucial factor as Fathalla (1988) stated that the socioeconomic condition of women is the main reason. He

added that offering medical care might be simpler than altering people's behaviour or raising socioeconomic standards.

In recent years, women empowerment has emerged as one of the key factors influencing ANC services. Numerous earlier researchers have discovered beneficial connections between ANC use and women's empowerment (Hossain & Hoque, 2015, Bloom, Wypij, & David, 1999, Adhikari, 2016). The relationship between women's empowerment and the content of antenatal care (CoANC) may or may not follow the same patterns in each of the countries, though, because women's empowerment is diverse and contextual. Contradictions between contact and CoANC continue despite efforts made in ANC programs. To achieve the Sustainable Development Goals (SDGs) in the context of Nepal, which is crucial as well, these gaps must be closed. This study aims to look into the link between women empowerment and the content of antenatal care in Nepal.

The CoANC services provided during ANC visits have a significant impact on the quality of ANC services. The World Health Organization (WHO) has recently advised a minimum of eight ANC visits that offer an adequate content of ANC to ensure safe motherhood. In the Nepalesecontext, most women are not the key decision-makers and are subordinate to men, most of them are unable to express their needs or desire for their health services. A variety of circumstances, including failure to provide adequate treatment and a women's lack of agency to use services, could prevent them from understanding the recommended ANC schedule and receiving CoANC.As said by Benova et al. (2018) there has been a global movement in focus toward effective coverage of ANC in the age of the Sustainable Development Goals, away from crude coverage. As it ignores the quality and importance of antenatal care, attending prescribed ANC visits is just a partial measure of service delivery and health system performance. This study is only the first step to exploring antenatal care services in terms of the content of ANC. In this regard, this study has focused onthe content of ANC among women who had at least one child two years preceding the survey. Using the data from Nepal Demographic Health Survey, 2016, this study aims to examine the relationship between women empowerment and the content of antenatal care.

2. Methods

The dataset used in this study came from the 2016 Nepal Demographic and Health Survey. Every five years, the NDHS conducts a cross-sectional survey that is nationally representative. Although there were other periodic surveys, the NDHS and Nepal Multiple Indicator Cluster Survey (NMICS)- were focused solely on services for pregnant women. But NMICS could not find the variable associated with empowerment. The NDHS was just one survey that collected information on socioeconomic, health, and demographic characteristics as well as antenatal care services and women's empowerment. Most significantly, the evidence serves as a gauge for policy. The Measure DHS website (https://dhsprogram.com) and the openly accessible NDHS reports both detail sampling in depth. This study has been restricted to the most recent birth to currently married mothers aged 15-49 with a sample of 1,973 women who had their most recent birth in the two years preceding the survey period. The two-year reference period provided a more current estimate than the five years and should therefore be less prone to recall error by women.

3. Variables

Dependent variable: The main dependent variable in this study was the content of care during ANC visits. It includes only five services that a mother received during her ANC contact. The services contained physical examination (measure blood pressure), a screening test (urine tests, blood tests) and counselling (counselling on pregnancy complications, and the place to go if any complication occurs). Each component was in a binary value of 0 and 1. One denotes received content and 0 was for not received content. Received content of care was measured by summing all the 5 contents the maximum value a woman could get was 5

and the minimum value was 0. The scored value of 5 indicates the received adequate content of ANC, the score of 1-4 was assigned as inadequate and 0 was recoded for those who had not received any ANC services.

Independent variable (Women empowerment): Women empowerment in this study followed the Kabeer (1999) definition that refers to agency as a means to achieve the desired outcomes. This study makes use of indicators that had already been utilized for a women's empowerment study, rather than creating new indicators or survey questions (Htun et al., 2019; Sebayang et al., 2017; MacQuarrie, 2021; Crissman et al., 2012). Empowerment variables used in this study are:

1. Household decision-making: This dimension contains three indicators: mobility, own health care, and the agency of women in household purchases. All these three variables were made dichotomous, that is, women who made decisions alone or together with others were assigned as 1 and 0 for those women who did not participate in making a decision. And then all these three binary indicators were summed up. The result ranged from 0 to 3. The score 0 is recoded as 'none', 1-2 (Low) and 3(high) for household decision-making dimensions.
2. Control over sexual relations: Control over sexual relationships refers to a woman's ability to act autonomously regarding sexual matters. Within sexual relationships, power dynamics had a clear causal link to violence or the fear of violence, and violence, in turn, affects health sometimes forced sexual initiation was also associated with pregnancy and may cause violence at this time. These dimension hadfour indicators that refer to women agencies that could control their sexual relations according to their choice. All the responses were made binary with 1 for Yes, can refuse and 0 for acceptance 'cannot refuse'. All the binary valueswere then summed up and the score was categorized into 'none' if the value is 0, assigned 'low' for the value 1 to 3, and assigned 'high' for the value 4.
3. Getting access to health care: This is related to the problem in accessing health treatment with five variables where women perceived that accessing health care was a big problem or not big problem. These variables were made binary with the value 0 as a big problem and 1 as not a big problem. All the value wasthen summed and the summed value 0 represents that women perceived a big problem in getting access tohealth care and 5 represents that women did not perceive a big problem at all. For the study purpose, this study hadrecoded these scores into three groups (0=none, 5=high and 1-4=low empowerment) representing the empowerment level.
4. Women empowerment index: This is the overall women empowerment index which was calculated based on all 12 indicators. The summative index score ranges from 0 to 1. A score of 0 indicates 'no empowerment' and 1 indicates 'high empowerment. The total score of the composite index was then divided into terciles of none, low, and high levels based on previous evidence (Atteraya et al., 2014; Shibre, et al., 2021).

Covariates**:** Based on the literature review, the following factors that havd an influence on empowermentand increases in the uptake of ANC care were considered: Maternal age (15–24, 25–34, 35 and above), birth order (1st, 2nd, 3rd and above), place of residence (Urban, Rural), Province level, educational level (No education, Primary and Secondary and above), media exposure (none, either and both), working status (not working, working but not earning cash and kind and working and earning) and wealth (poor, middle and rich).

4. Analysis of data

The association between the dependent and independent variables was examined using bivariate analysis. Additionally, chi-square statistics were employed to assess the strength of association between the independent and dependent variableschi-square statisticswere used. This study has used binary logistic analysis to explore the causal

relationship using an odds ratio (OR) with a 95 percent confidence interval. The value of OR <1 indicates a negative relationship, OR>1 indicates a positive relationship and OR=1 indicates no relationship. The levels of 1%, 5%, and 10% statistical significance were used to gauge the degree of relationship between the independent and dependent variables.

5. Findings

This study looked at three aspects of women's empowerment: decision-making power, access to health care, and sexual relationship control. Table 1 shows how women usedthe content of ANC in terms of their level of empowerment and its dimension. Womenempowerment appears to be beneficial in utilizingthe content of ANC, according to data. Utilizing appropriate content during ANC visits tended to vary depending on the degree of women empowerment than only ANC contacts. It was the most important part of ANC services; contact alone is meaningless. Getting the right counselling, treatment and physical examination impact more than just the visiting numbers at the right time is the most crucial factor.

Table 1 reveals the adequacy of the content of ANC according to empowerment indicators. Data reveals that women who had high empowerment levels were more likely to receive adequate content of ANC than women who had low empowerment levels (66.9% Vs 36.6%). Indicator-wise also shows a similar pattern. Women who had high decision-making power were more (54.3%) likely to receive adequate content of ANC than women who do not (45.4%). The nearly same percentage (54.3%) of women who had high control over their sexual relations responded that they received adequate ANC components. But in the case of getting access to health care, about 30 percent more women with a high level of empowerment reported obtaining adequate content than those who were not empowered (71.7% Vs 40.6%). At a 1 percent level, the majority of the dimensions are significantly associated (Table 1).

Table 1 *Percentage distribution of women who had a live birth in the 2 yearspreceding the survey according to women empowerment and ANC service utilization, 2016*

Empowerment	**Adequate Content of ANC**	**Total**
Decision-making power		
None	45.4	872
Low	53.0	623
High	54.3	479
p-value	0.001	
Getting access to health care		
None	40.6	1232
Low	55.0	275
High	71.7	466
p-value	0.000	
Control over sexual relations		
None	49.7	53
Low	41.4	643
High	54.3	1277
p-value	0.000	
Overall empowerment		
Low	36.6	702
Moderate	51.6	793
High	66.9	478
p-value	0.000	
Total	**50.0**	**1973**

Source: *Calculated from NDHS 2016 datafile*

Table 2 shows the crude and adjusted effect of women empowerment on adequate utilization of the content of ANC.The crude effect shows that women with a high level of empowerment, for instance, were about twice more likely to utilize the content of ANC than women with low levels of empowerment. Even after takinginto account the socioeconomic and demographic factors, the causal relationship between these two variables found still strong.

Decision-making power is significantly associated with an adequate content of ANC. When compared to women with no decision-making power, women with a high level of decision-making power had42 percent higher likelihood of receiving adequate ANC content whereas the percentage was less but found a positive association while adjusting the demographic and socioeconomic variables. Likewise, ANC content is associated with women's access to health care. In comparison to women who did not have access to health care, women with a high level of access to health care were about 4 times (OR=3.69) more likely to receive adequate ANC content. Since it was roughly twice as high (OR= 2.27) among women with high access to health care compared to their counterparts, the adjusted value likewise revealed the same pattern as in the crude effect.

Notably, women with the same level of control over sexual relations had only 20 percent greater odds of receiving adequate ANC content compared with women with no control over sexual relations. But it was noteworthy that while adjusting the control variables, the value was found less among women with high control over sexual relations. It suggests that socioeconomic and demographic factors had alsoan impact on the ability to control sexual relations.

Table 2 *Effect of women empowerment on adequate ANC components (n=1973)*

Variables	Crude	Adjusted
Decision-making power (Ref.=None)		
Low	1.35***	1.09
High	1.42***	1.11
Getting access to health care (Ref.=None)		
Low	1.78***	1.27
High	3.69***	2.27***
Control over sexual relations (Ref.=None)		
Low	0.72	0.56*
High	1.20	0.69
Overall empowerment (Ref.=Low)		
Moderate	1.84***	1.52***
High	3.49***	1.91***

*** significant at 1%; ** significant at 5% and * significant at 10%

Source: *Calculated from NDHS 2016 datafile*

6. Discussions of findings

The main goal of this study is to find out if there is a link between women empowerment and adequate use of ANC content in Nepal. This study attempted to cover ANC service use in terms of adequate ANC content of care. Despite government claims, most of them were not found in receiving adequate ANC content. Looking at the evidence several possible determinants might arise. However, the main aim of this study is to explore the effect of women's empowerment on receiving adequate content of antenatal care.

Pregnancy and childbirth constitute a crucial window of opportunity for providing effective interventions to minimize pregnancy complications and other unfavourable health outcomes. According to WHO (2009), ANC is to monitor and protect the health of the mother and unborn, diagnose pregnancy complications and take the appropriate action, attend to the complaints of the mother, get her ready for delivery, and encourage healthy motherhood practices. The main reason a pregnant woman should attend a hospital is for routine ANC appointments, which will both mentally and physically assist her as she gets ready for a healthy delivery. But the situation was dire, this study suggests still half of the women is left behind and did not seek adequate content of ANC during their visits.

Although the recommended ANC coverage has significantly grown in recent years, the quality of ANC services including the content of ANC was still meagre. Concerning the empowerment dimension, women who had more access to health care were more likely to receive adequate content of ANC. Similar to our findings, Asim, Hameed and Saleem (2022) also state more empowered women the more they seek quality ANC care in Pakistan. Both studies, one done in Bangladesh by Hossain and Hoque (2015) and the other in South Saharan Africa by Kareem et al. (2021), support our conclusion that the more empowerment there is, the more women will use ANC services. However, according to the findings of another study by Shibre et al. (2021), women empowerment did not predict the use of skilled ANC in South Sahara Africa. It's worth noting that most of the previous research used data from the DHS, which had about the same dimension for measuring women's empowerment. However, due to the contextual nature of empowerment, a different outcome has been reached. In the Nepalese context, the net effect of women empowerment on adequate content of antenatal care services also demonstrates that the women empowerment dimension has still been predictedin antenatal care services except for control over sexual relations. All of them, however, are not statistically significant.

7. Conclusions

It is common knowledge that many women die from preventable causes. When it comes to maternal health, the first and most important component that cannot be disregarded is antenatal care, followed by experienced birth attendants and postpartum checkups. Women's empowerment and the use of adequate content of ANC are two separate topics, yet they are both related to women's reproductive rights issues. Both call for improving women's status to protect not only their own but also their unborn children's rights. Overall, the study's main finding shows women's empowerment is positively associated with ANC services, even after adjustment for the demographic and socioeconomic factors. In Nepal there are diverse groups including most at risk of being left behind thus women should be empowered to increase adequate content of ANC and alternatively this hits sustainable development goals 3 and 5 that is, gender equality and good health and well-being.

8. Acknowledgements

The author would like to thank University Grant Commission for the research grants.

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