Original Article

Women's Autonomy and Maternal Health Care Utilization in a Community of Dang District, Nepal

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ABSTRACT

Introduction: Maternal health services utilization during pregnancy, childbirth, and postnatal period is vital for both mother and child. Women's autonomy is one of the determinants of maternal health care utilization. The objective of the study was to find out women's autonomy and its effect on maternal health care utilization.

Methods: Descriptive cross-sectional study design was carried out among 166 women having a child under one year using simple random sampling via lottery method from ward number 1 and 2 of Ghorahi, Dang, Nepal. Semi-structured interview schedule from 2nd July to 28th July 2017 was used to collect data, which were analyzed using descriptive and inferential statistics. Multivariate logistic regression was used to find association between women's Autonomy and maternal health care utilization.

Results: The study findings revealed that less than half (47%) of women had a higher level of Autonomy. The majority of respondents, 77.7% and 76.5%, had utilized ANC and delivery care services respectively, whereas only one-third (32.5%) had utilized postnatal care adequately. The overall maternal health care utilization was only 25.9%. Women who had a higher autonomy level were two times more probable (OR=2.870, 95% CI: 1.169-7.048) for utilizing maternal health care service than who had lower level of autonomy. Other factors which affected maternal health care utilization were the age of women (OR=4.747, 95%CI: 1.416-15.919) and the educational level of women (OR=3.157, 95% CI: 1.196-8.328).

Conclusions: Both autonomy and maternal health care utilization were low. Women's autonomy was one of the determinants for maternal health service utilization.

Keywords: Autonomy; Cross-sectional study; Maternal health; Nepal, Postnatal period.

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INTRODUCTION

Maternal mortality as a result of complications during pregnancy and following childbirth has become major public health problem in developing countries.[1] According to data of NDHS, mortality ratio is (239 per 1, 00,000 live births), only Sixty-nine percent of women had at least four ANC visit, institutional delivery is 57% and 57% of women had a PNC checkup in the first 2 days after birth. [2] The findings of National demographic study carried in three countries revealed that decisions regarding women's health were taken without their participation in Nepal (72.7%) Bangladesh (54.3%) and Indian (48.5%) houses.[3]

Utilization of health care services is significantly affected by autonomy. Autonomy of finance, decision making and movement autonomy had a pivotal role on the utilization of maternal health care services during antepartum, intrapartum and a postpartum period in Nepal.[4] In a study conducted in Nepal using demographic health survey data, it was found that women who have higher autonomy were more likely to utilize maternal health services (OR = 1.40, 95% CI: 1.18 – 1.65) in comparison with those who have lower autonomy.[5] Literature reveals that the high autonomy of women is significantly associated with the high utilization of maternal health services. The objective of the study was to find out women's autonomy, maternal health care utilization and its association in a community of Dang district.

MATERIALS AND METHODS

Study design and setting

Cross- sectional descriptive study design was carried out from 28th May 2017 to 13th April 2018. Data were collected from ward number 1 and 2 of Ghorahi Sub metropolitan which falls under Province 5 Nepal. These Wards consisted of many rural areas like Chaklighat, Maale, Sukakhola, Kandakhutti, Harnok; and many villages are away from access to transportation and other facilities and disadvantaged group (Tharu, Magar, Dalit) reside there.

Study population

Study populations were women having a child under 12 months of age and completed their postpartum period. At first community (Ward no 1, 2 or previous Rampur VDC) was selected purposively. The list of women having under 12 months of child was taken from the immunization register of their baby from Rampur health post then simple random sampling with lottery method was used to select the sample.

Data collection procedure

Each woman was visited in her respective home for data collection with the help of FCHV and face to face interview technique was conducted. The sample size was 166 by using the Cochran formula and adjusting with finite population. A semi-structured interview schedule was developed based on literature review, consultation with the experts, and subject matter specialist for maternal health care utilization. A validated scale of women's autonomy with α value (reliability) 0.85 was used to assess autonomy of women.[6] The permission to use the tool was taken from respective researcher or tool developer. It included 23 statements in the form of a scale which was divided into 3 domains of women's autonomy. The total maximum score was 4.

Date was collected after getting approval from the Research Committee of TU, IOM, Maharajgunj Nursing Campus, Institutional Review Board (IRB) of Institute of Medicine and from respective ward chiefs was obtained. Consent was taken from respective women for data collection.

Data processing and analysis

The data was collected from 2nd July to 28th July 2017. Data was and analyzed using SPSS version 16. The overall autonomy score was divided into high and low categories taking 50% of the total score (46) as a cutoff point. Women who got score ≥ 50% (≥23) were considered as having high autonomy and those who got score below 50% (<23) were considered to have low autonomy. Likewise, maternal health care utilization was divided into utilized (if women had at least 4 ANC visits, had done institutional delivery, and had at least 1 PNC visit after discharge or home delivery within 6 weeks of delivery) and not utilized (if above services are not done). The relationship between variables was tested by Chi-square. Confidence intervals of 95% were calculated and $p<0.05$ was considered significant. Effect of women's autonomy on maternal health care utilization was calculated by Multivariate logistic regression after controlling other significant variables. Hosmer Lemeshow, goodness of fit was applied at 95% CI test to fitness of the model.

RESULTS

Demographic characteristics of the sample population are illustrated in table 1 and results showed that the majority of respondents (77.1%) were more than 20 years and the mean age and SD of the respondent was 23.80±4.876 years. Among literate, half of respondents (55.3%) had got education secondary level and more. Similarly, one-third of respondents (33.7%) were from upper caste group. The majority of respondents were homemakers (78.4%). Slightly more than half (57.8%) had more than two children. Likewise, 70% of respondents had health facility within thirty minutes of distance from their home (Table 1).

Table 1: Socio-demographic characteristics of the respondents (n = 166)

Characteristics	Number	Percentage
Age in completed years		
<20	38	22.9
>20	128	77.1
Mean age ± (SD) 23.80 (±4.876)		
Literacy status	152	91.6
Literate	14	8.4
No education		
Education level (n=152)		
Below Secondary	68	44.7
Secondary and above	84	55.3
Ethnicity		
Upper caste group	56	33.7
Disadvantaged Janajati group	78	47.0
Dalit	32	19.3
Occupation		
Homemaker	130	78.4
Business	26	15.6
Service	10	6.0
Economic status		
Income sufficiency for less than 6 months	64	38.6
Income sufficiency for 6months and more	102	61.4
Number of children		
one child	70	42.2
More than one	96	57.8
Distance to health facility(walking distance in minute)		
≤30	116	69.9
31-60	50	30.1

Autonomy of the respondents were mentioned in table 2 and reveals that more than half (59.6%) and 58.4% of the respondents had decision making autonomy and movement autonomy whereas 32.5% had financial autonomy and 47% of respondent had high autonomy.

Maternal health care utilization of respondents indicates that more than three fourth (77.7%) had utilized ANC services, and three fourth (76.5%) had used delivery services. Likewise only one fourth (25.9 %.) of the respondents had utilized Maternal Health care service and only one fourth had overall maternal health utilization (Figure 2).

There was a significant association of age and educational level of respondents with maternal healthcare utilization (p=0.041, and <0.001, respectively). Similarly economic status (p=0.042), occupation (p=0.004), number of children (p=0.014) and ethnicity (p=0.005) were significantly associated with maternal health care utilization. No association was found between distance to health facility and maternal health care utilization (Table 2). Association of maternal care utilization and women's autonomy reveals overall Maternal Health care utilization is significantly associated with Women's autonomy with (p<0.001) (Table 3).

Multivariate logistic regression analysis to find the effect of autonomy on maternal health care utilization is reported in table 6. The significant variables obtained after bivariate analysis at 5% significance level were taken as covariates against dependent variable. Women's autonomy was significant even after inclusion of other socio-demographic variables with slight reduction OR from 4.177 to 2.870. Other factors for maternal health care utilization were the age of respondents, educational status. Women with high level of autonomy were two times more likely (OR=2.870, 95% CI: 1.169-7.048) to utilize maternal health care service than women with low autonomy. Maternal health care utilization was found four and half times more (OR=4.747, 95% CI: 1.416-15.919) among respondents who were more than 20 years than who were less than 20 years of age and three times (OR=3.157, 95% CI: 1.196-8.328) among respondents who had gained secondary and

above education. Hosmer Lemeshow, the goodness of fit was applied at 95% CI test to fit the model (p=0.372). The value of Nagelkerke R Square was 0.298. The variance inflation factors for autonomy, age and educational level were 1.18,1.34 and1.37 respectively (Table 4).

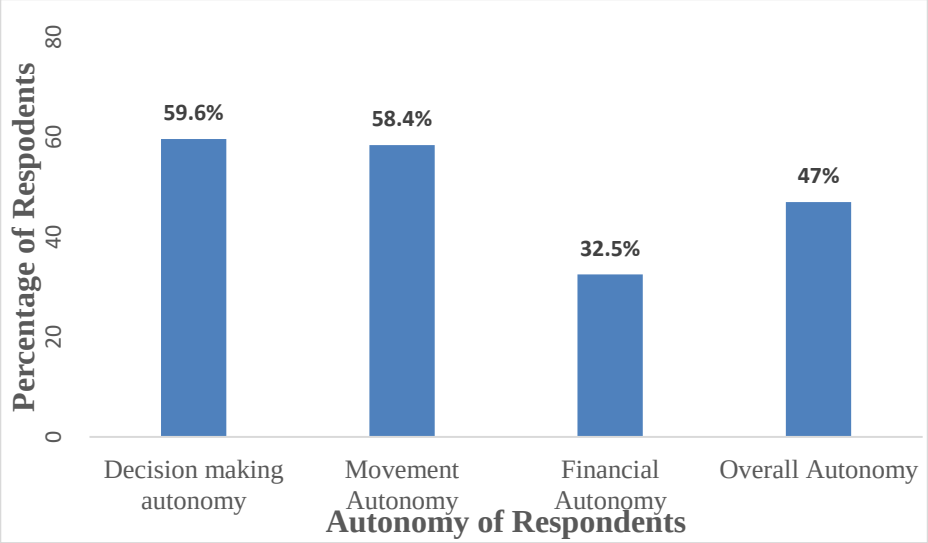

Figure 1: Autonomy of the respondents

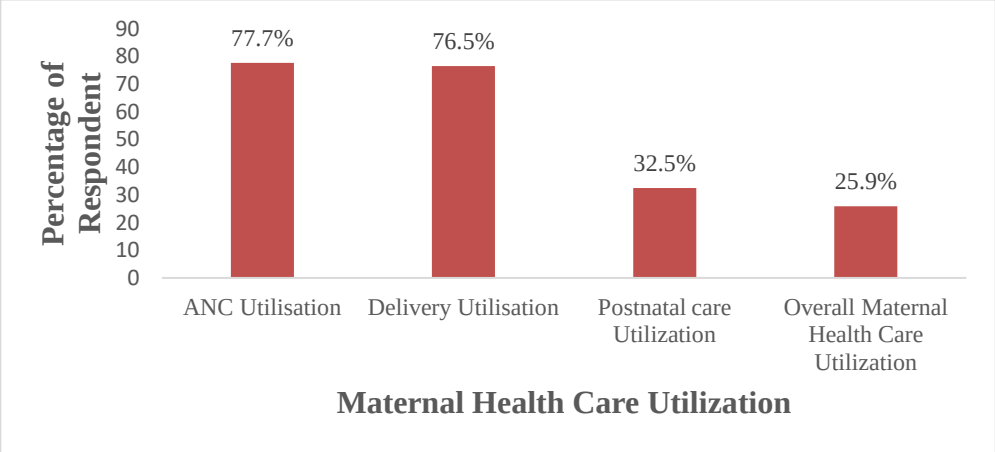

Figure 2: Maternal health care utilization of the respondents

Table 2: Association of Maternal health care utilization and different variables

n =166

Socio-demographic Variables	Maternal health care utilization		χ^2	p value
	Utilized n (%)	Not utilized n (%)		
Age				
< 20 years	5(13.2)	33(86.8)	4.17	0.041*
≥ 20 years	38(29.7)	90(70.3)		
Educational level				
Secondary and above	34(40.5)	50(59.5)	13.74	<0.001*
Below Secondary	9(13.2)	59(86.8)		
Economic status				
Income sufficiency for 6 months and more	32(31.4)	70(68.6)	4.123	0.042*
Income sufficiency for less than 6 months	11(17.2)	53(82.8)		
Occupation				
Work outside home	16(44.4)	20(55.6)	8.233	0.004*

Work inside home	27(20.8)	103(79.2)		
Number of children				
One child	25(35.7)	45(64.3)	6.070	0.014*
> 1 child	18(18.8)	78(81.2)		
Ethnicity				
Upper caste group	22(39.3)	34(60.7)	7.885	0.005*
Disadvantaged group	21(19.1)	89(80.9)		
Distance to health facility				
≤ 30 minutes	35(30.2)	81(69.8)	3.65	0.056
> 30 minutes	8(16.0)	42(84.0)		

(* denotes statistically significant)

Table 3*:* Association of women's autonomy with maternal health care utilization

Maternal Health Care Utilization	High autonomy n (%)	Low autonomy n (%)	χ^2	*p* value
Utilized	31(72.1)	12(27.9)	14.684	**<0.001**
Not utilized	47(38.2)	76(61.8)		

Table 4: Multivariate binary logistic regression analysis for determining effect of Women's autonomy on maternal health care utilization

Variables	OR	95%CI	*p* value	AOR	95%CI	*p* value
Autonomy						
High	4.177	1.955-8.925	<0.001	2.870	1.169-7.048	**0.021**
Low					1	
Age						
Above 20 years	2.787	1.01-7.683	0.041	4.747	1.416-15.919	**0.012**
Below 20 years					1	
Occupation						
Work outside home	3.052	1.396-6.672	0.004	1.565	0.587-4.168	0.370
Work inside home					1	
Number of children						
One child	2.407	1.186-4.888	0.014	2.453	0.974-6.180	0.057
More than 1 child					1	
Ethnicity						
Upper caste group	2.742	1.339-5.615	0.005	1.026	0.423-2.491	0.954
Disadvantaged group					1	
Educational level						
Secondary and above	4.458	1.952-10.179	<0.001	3.157	1.196-8.328	**0.020**
Below secondary					1	
Economic status						
Income sufficient for > 6 months	2.203	1.017-4.769	0.042	1.262	0.503-3.168	0.620
Income sufficient < 6 months					1	

1=Ref, OR= unadjusted odd ratio, AOR= adjusted odd ratio, p value significant at < 0.05,Hosmer Lemeshow (p value =0.372), Nagelkerke R Square 0.298.

DISCUSSION

The current study found that less than half of respondents (47%) of women had a high level of autonomy, 59.6% of respondents had decision making autonomy, 58.4% of women had movement autonomy and 32.5 % of women had financial autonomy which is consistent with the findings from the study done in Kapilvastu Nepal where 46.55% had overall autonomy 50.18% had decision making autonomy, 50.67% had movement autonomy and 37.24% had financial autonomy.[7] The finding of overall autonomy is slightly lower than the finding from Haryana India where 66.3% had high autonomy[8] and slightly higher than

finding from study done in Ethiopia where 41.4% had higher autonomy.[9]

In this study, the overall utilization of maternal health services was only 25.9% which is similar to the finding from a study done in Nepal using NDHS data where 27.2% had utilized overall maternal health service.[5] In this study 77.7 % had utilized ANC services (at least 4 ANC visits). The findings are in agreement with findings from the study conducted in Uttar Pradesh India only 73% mothers had done four or more ANC visits.[10] In this current study majority of respondents (76.5%) had done institutional delivery the finding is in agreement with finding from a study done in North West Ethiopia where 80.14% of women had deliverd in health institution.[11] The finding is in contrast with finding from the Gorkha district where institutional delivery was 93.3 %. [11]In this study. This study had shown that only 32.5% had utilized postnatal service which is supported by finding from study in Amhara region North West Ethiopia where 33.5% had effectively utilized postnatal service.[12] The finding is in contrast with the finding from the study done in Adis Ababa where 65.6% of women visited health facility at least once after the discharge.[13]

The age of respondents was statistically significant with the maternal health care utilization (p=0.041). Women older than 20 years were four and half times more likely to utilize maternal health care services (OR=4.747, 95%CI: 1.416-15.919) than women under 20 years of age. This finding is similar with findings from a study on Oromia state eastern Ethiopia where age is significantly associated with maternal health care utilization (p=0.034) and younger women were more likely to utilize maternal health service.[14] Women with secondary and above secondary level education were more probable to use maternal health services (OR=3.157, 95% CI:1.196-8.328) which is similar to findings from a study done in Nepal where women who gained secondary and above education had 4 times higher chance to use maternal health service (OR=4.06, 95% CI:3.25-5.07) in multivariate analysis.[5] Number of children and occupation were significantly associated with the use of maternal health service in bivariate analysis in this study with *p* values (0.014) and (0.004) respectively. Similar findings are found in study from the Somali region of Eastern Ethiopia where employed women with only one child were more likely to use services with $p<0.05$.[15] In this study ethnicity and economic status were statistically significant with maternal health care utilization in bivariate analysis with $p=0.005$ and $p=0.005$, respectively. This study found that women's autonomy is one of the determinants of maternal care utilization, similar findings are found in other different researches done in Nepal and India. Multivariate analysis of significant variables showed that maternal health care utilization was more than two times higher in women with high autonomy than women with low autonomy (OR=2.870, 95% CI: 1.169-7.048). This is similar to the finding of research done by taking overall data of Nepal where autonomy maintained its significance even after including other variables and women who had high level of autonomy had utilized all maternal health services than women with low level of autonomy (OR = 1.40, 95% CI: 1.18 – 1.65).[5]

CONCLUSION

Less than half of women have a high level of autonomy. More women are autonomous in decision-making aspect and movement aspect than in the financial aspect. Only one-fourth women have utilized maternal health services properly. Similarly, slightly more than three-fourth of women have utilized antenatal and delivery care and nearly one-third of women have utilized postnatal services. Although age of women, educational level, occupation, economic status, ethnicity, and number of children were significantly associated with maternal health service utilization in bivariate analysis, only age and educational level were significant in multivariate logistic regression. Women's autonomy is significantly associated with overall utilization and is a strong determinant of utilization of maternal health services. Other predictors of maternal health care utilization are age and the educational level of women. Based on the findings of study it was found that educational level should be increased and awareness regarding age of marriage and conception should be increased at community level. The study suggests concerned local authority to initiate actions that increase women's autonomy at their home level which ultimately increase utilization of maternal health care services.

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