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Factors Influencing Delivery Service Utilization in Rural Areas of Dadeldhura District of Nepal

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ABSTRACT

Although, safe-motherhood is a priority issue in Nepal, there is paucity of researches about institutional delivery. Objective of the study was to identify the factors affecting utilization of institutional delivery services in rural areas of Dadeldhura District of Nepal. A cross-sectional study was conducted in the rural areas of Dadeldhura district among 376 mothers. Data were collected through individual interview. Descriptive and inferential statistics were applied. Approval was obtained from DHO, Dadeldhura.

Almost 73% respondents had institutional delivery in the last child birth and 53.3% of them delivered at primary level health care facilities. Ethnicity, husband's literacy, history of institutional delivery, ANC, availability services, pregnancy monitored by Female Volunteers, quality of care, behavior of health workers, participation of husband in decision and knowledge of incentive scheme were significant factors affecting the utilization of institutional delivery care.

KEYWORDS Factors, Institutional delivery, Rural, Dadeldhura

Introduction

Although, safe-motherhood is a priority priority issue, lots of discrepancies continue to exist in accessibility of maternal health care between developed and the developing world; urban and rural areas (Mesfin, Damen & Getnet, 2004). Global evidences have shown that complications occurring during pregnancy, child birth and the postnatal period are unpredictable (DoHS, 2009/10). Timely management of such complications is essential to avert the preventable deaths. This requires operational health care systems that cater the need of expectant mothers for skilled care, preferably at the health care facility (WHO, ICM &FIGO, 2004). Therefore, National Safe Motherhood Programme of Nepal has emphasis on institutional delivery for all pregnancies (MoHP, 2005).

Although, there has been substantial progress in maternal health care since few decades; Nepal's mortality rates are still very high. Reductions of maternal and child mortality remain critically challenges in Nepal because many deliveries take place at home (WHO 2011; Dhakal et al 2011; DoHS2011/12). It has been documented that social, cultural, behavioral and care factors affect utilization of institutional care (Mefsin et al, Kesterton et al 2011 and Sohail & Thomas 2011). Although, these factors are documented from elsewhere, there is paucity of information pertinent to the factors affecting utilization of institutional delivery services in Nepal. Therefore, this study was conducted to identify the factors affecting utilization of institutional delivery services in rural areas of Dadeldhura District of Nepal.

Materials and Methods

This was the community based cross-sectional study; conducted in rural areas of Dadeldhura district of Nepal during January-March 2014. Dadeldhura is a hill district of Far-western Development Region of Nepal. It is divided into one municipality, nine llakas and twenty Village Development Committees (VDC). The jurisdiction of VDC is considered rural area. A total of 376 mothers who delivered within one year preceding to the study were included in the study. Out of nine Illakas, five were selected randomly and the number of respondents/Illaka was estimated proportionately. Individual interview was conducted with the respondents at household level using pretested questionnaire. Data were analyzed using SPSS 20 version; percentage, standard deviation and Chi-square test was applied.

Results and Discussion

As indicated in table 1, majority (47.3%) of the respondents was 20-24 years and their mean age was 24.8±3.7years. Studies from Ethiopia and Nepal also reported the similar findings (Wolelie, Aychiluhm & Awoke, 2014 and Bhusal et al 2011). About 41.0% of the respondents were Chhetri and 39.1% were scheduled caste. Brahmins and Chhetri are higher castes whereas scheduled castes are the lower castes in Nepal. Similar statistics were observed by Karkee et al (2013) in Kaski district, Nepal. Almost 27% respondents had primary education whereas 23.9% was just literates. Similar findings were reported a study from eastern Nepal (Dhakal, 2013). Almost78% respondents were from joint families. Similar observations were reported by Karkee in Kaski, Nepal. Almost all were respondents were house workers. The study findings are in consistent to the Ethiopian and Nepalese studies (Dhakal; Wolelie et al). About 42% of the respondents had marriage during adolescence (mean: 19.8±2.1years). Nepal Demographic and Health Survey (NDHS) 2006 reported 17.2years as median age at marriage in Nepal. Pradhan et al (2013) also reported that majority of the respondents married during adolescence. Median age reported in this study was two years more than that was reported in NDHS (2006). It indicates the declining trend of early marriage which could be due to the improved educational status, women's empowerment and implementation of marriage act in Nepal.

Table 1 Respondents by the Background characteristics (n=376)

Characteristics	No. of respondents	Percentage
Age (in years)		
<20	6	1.6
20-24	178	47.3
25-29	144	38.3
≥30	48	12.5
Caste		
Brahmin	75	19.9
Chhetri	154	41.0
Dalit/schedule caste	147	39.1
Literacy status		
Illiterate	70	18.6

Only read and write	90	23.9
Primary	102	27.1
Low secondary and secondary	79	21.0
≥10	35	9.3
Family Type		
Nuclear	82	21.8
Joint	294	78.2
Occupation		
Household works	356	94.7
Service/business	20	5.3
Age at Marriage		
<20	158	42.0
20-24	212	56.4
≥25	6	1.6
Age at first pregnancy		
<20	107	28.5
20-24	261	69.4
≥25	8	2.1
Gravida		
Primi	128	34.0
Multi	248	66.0

Majority (69.4%) of the respondents conceived during 20-24 years of age for the first time while 28.5% conceived during adolescence (mean: 20.4±2.1years). These findings corroborate with NDHS (2011) and the findings of Shrestha et al (2012). These findings indicate that first conception in the early age of life is still prevalent in Nepal which might be due to early marriage. Nearly two-third (66%) respondents were multi-gravida and 34.0% were primi-gravida (Mean: 2.2±1.3). Mean number of conceptions reported in this study were less than that was reported in NDHS (2011). This might be due to the improved usage of contraceptive services in Nepal.

A total of 72.9% respondents had institutional delivery in the last childbirth; out of which 33.8% delivered at hospital and 39.1% delivered at primary level health facilities (figure 1). Wide ranges (19-87%) of institutional delivery practices have been reported in Nepal. (NDHS, Dhakal et al, Pradhan 2005, Shretha et al, Baral 2012 and Bhusal et al). Studies from Punjab, India, Ethiopia and Nepal also affirm that majority of the deliveries occur at primary level facilities (Munjia, Kaushik, & Agnihotri 2009; Baral, Devkota 2013, Karkee and Wolelie et al).

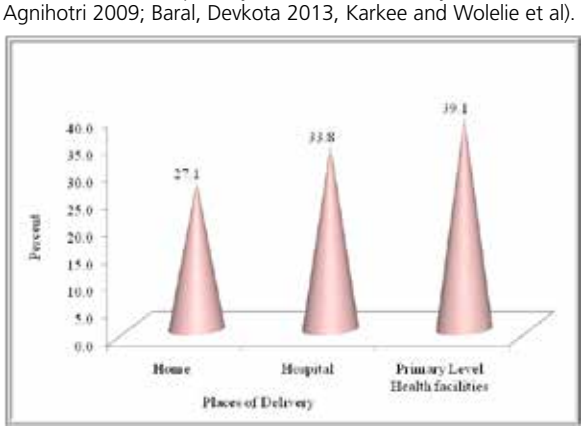


Figure 1: Percentage distribution of respondents by Place of Delivery

Institutional deliveries were significantly higher among Brahmins and Chhetri as against the scheduled caste respondents. Similar annotations were reported in the studies from east and west Nepal; and an Indian study from Punjab where higher caste respondents were found to have higher preferences for institutional delivery than those belongs to lower castes (Dhakal et al, Munjial et al and Dahal). Institutional delivery was significantly higher amongst the respondents whose husbands had higher education as compared to those who had low education ($p<0.05$). Similarly, acceptance of institutional delivery was significantly higher among those respondents whose husband was the decision maker for her care. These findings are in agreement with the Sohail's observations in developing countries including Nepal. Significantly higher proportion of respondents who had residents nearby the health facility (≤2Km) had delivered at health facility ($p<0.05$).

Table 2: Place of delivery by Background characteristics of the respondents

Characteristics	Place of Delivery		Total	Statistics		
	Health Institution	Home		Chi Square	DF	P value
Ethnicity						
Brahmin	64(85.3)	11(14.7)	75	7.79	2	0.02*
Chhetri	110(71.4)	44(28.6)	154			
Schedule caste	100(68.0)	47(32.0)	147			
Literacy status of Husband						
Primary Education	47(63.5)	27(36.5)	74	6.48	2	0.03*
secondary	174(73.1)	64(26.9)	238			
Higher Education	53(82.8)	11(17.2)	64			
Decision Making personnel for Delivery care						
Husband	94(90.4)	10(9.6)	104	23.06	2	0.001*
Self	17(73.9)	6(26.1)	23			
Parent in laws	163(65.5)	86(34.5)	249			
Distance (Km)						
≤ 2	113(82.5)	24(17.5)	137	10.06	2	0.001*
>2	161(67.3)	78(32.7)	239			
History of facility Delivery	171(86.8)	26(13.2)	197	71.16	1	0.001*
ANC visits	268 (74.0)	94 (26.0)	362	6.62	1	0.01*
Number of ANC Visits (≥4)	198(80.5)	48(19.5)	246	16.63	1	0.001*
Perceived quality of services (Good)	222(76.8)	67(23.2)	289	8.18	1	0.002*
Health Worker's supportive behavior	242(76.8)	73(23.2)	315	15.20	1	0.001*
Pregnancy monitored by FCHV	229(76.6)	70(23.4)	299	10.20	1	0.001*
Perception of home delivery as Risk	223(79.1)	59(20.9)	282	22.34	1	0.001*
Perception of institutional delivery as safe	268(74.4)	92(25.6)	360	13.20	1	0.001*
Awareness about SDIP	263(94.6)	15(5.4)	278	254.81	1	0.001*

***Statistically significant**

Institutional delivery service utilization was significantly higher among those respondents who had earlier experience of institutional delivery ($p<0.05$). Similar observations are reported from an Indian study (Varma, Khan, & Hazra, 2010). Institutional delivery practices were significantly higher amongst those who had ANC during pregnancy and had ≥4 times of visits. These findings are in consistent with several studies (Pradhan; Varma et al; Paudel, 2011).

The institutional delivery was significantly higher among those who reported good quality of services are available health facility and where the health worker's behaviors was patient friendly ($P<0.05$). Varma et al (2010) observed similar results in Uttar Pradesh of India. These findings are also in concurrent with the Paudel's study in Nepal. Those respondents who perceived the home delivery as risk and the institutional delivery as safe had institutional delivery as compared to those who perceived otherwise ($p<0.05$). Similarly, the institutional delivery care was significantly high among the respondents who had heard about the Safe Delivery Incentive Progrmme (SDIP). The results concur with other studies (Wolelie et al, Bhusal et al)

Conclusion

Institutional delivery service utilization was 72.9 % which was better than the national averages. Ethnicity, husband's education, history of institutional delivery, ANC, distance of health facility and availability of care, pregnancy monitoring by FCHV, quality of services, behavior of health workers, husband's participation in decision making, perception of home delivery as risk and institutional delivery as safe; and the knowledge of SDIP were found to be the significant factors affecting utilization of institutional delivery services. Strengthening of primary level health care facilities through equipment, skilled care providers and continuity of SDIP might be the crucial to promote the utilization of institutional delivery services.

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