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Factors Associated with Uterine Prolapse among Married Women of Reproductive Age Group of Gorkha District

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Abstract— **Pelvic organ prolapse is the widespread chronic problem among women in Nepal; particularly among adult and old women of hilly areas. Uterine prolapse is a condition when the uterus drops from its normal position. The major purpose of the study was to assess the prevalence and factors associated with uterine prolapse in Gorkha district of Nepal. The community based descriptive cross sectional study conducted among the 153 married women of the Gorkha district. Simple random sampling procedure was adopted. Face to face interview was conducted with respondents using pre-tested, structured interview schedule. Data were analyzed by statistical package for social Sciences (20 Version) and results were presented in table and figures. Percentage, mean, median, Chi Square test was applied.**
Prevalence of uterine prolapse was found to be 13.7%. Majorities of the respondents were over 35 years of age. Difficulty in sitting was reported by more than 75% cases. It was found that Uterine prolapse is statistically significant with family income (p =0.017), Educational status (p=0.007), family type (p=0.048). It was found that knowledge level is statistically not significant with caste (p =0.617), religion (p=0.631), income level (p=0.493). Among 21 respondent 47.6% of respondent were treated the UP. But almost 52% were unable to treat their disease. Concerning the place of treatment, 80% of cases used public health facilities and only 20% of cases used medical and hospital facilities.
Uterine prolapse was observed among women; among these almost all were married before the age of 20 years. Illiterates and low family income women were suffered greatly. The service utilization was reported to be low among respondents. Women's empowerment, income generating activities and provision of educational opportunities are recommended for the prevention of uterine prolapse.

Index Terms— **Associated Factors, Service utilization, Uterine prolapse.**

I. INTRODUCTION

Uterine prolapse (UP) is the descent of one or more vaginal segments: the anterior wall, the posterior wall or the apex of the vagina, with a protrusion of the pelvic organs into or out of the vagina. Uterine prolapse (UP) is a form of genital prolapse among females and it is one of the most widespread reproductive health problems among the women in Nepal. Uterine prolapse is a significant health problem amongst women and has affected women all over, in the mountains, hills, plains and the valleys [1]. It is a condition in which women's uterus slips or sags out of its normal position. This is called incomplete prolapse. In a more severe case called complete prolapse, the uterus slips so far out of place that some of the tissue drops outside of the vagina [2].

Uterine prolapse is always accompanied by some degree of vaginal wall prolapse. No one definite cause of the problem has been firmly established, as women from different economic strata, a wide range of ages, belonging to various ethnic groups and from all ecological regions from east to west suffer from it. Experience indicated that it is the result of hard physical labour, such as carrying heavy loads, especially during and immediately after child birth. Other often-cited causes are prolonged labour during childbirth, forced delivery by untrained persons, lack of postpartum rest, insufficient spacing between births, bearing a large number of children with inadequate spacing and poor nutrition [3].

Generally, women in Nepal have three levels of responsibility such as reproduction and child rearing, household maintenance and earning. Under traditional gender divisions of labour women tend to concentrate more on their reproductive roles and household responsibilities. As a role of reproduction, they are expected to give child birth and rear the children. Due to prevailing cultures and social norms of the society, many women have either no access to care for reproductive health problems or limited access.

As a predominantly patriarchal society, institutions such as education, the legal system and even health services are heavily influenced by these norms and values. The consequences of this system can be seen in social indicators such as literacy, child mortality, maternal mortality and morbidity amongst women. So, their problems remain hidden which leads them into poor health and consequences are seen in either new born child or her own health. In absence of proper care and support during pregnancy and child birth, the outcomes of pregnancy leads into complication such as falling of uterus outside of vagina, heavy bleeding leading into deaths[4].

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II. MATERIALS AND METHODS

A. *Study area and setting*

This study was conducted in the three VDC of Gorkha district of Nepal i.e. Mirkot, Dhuwakot and Deurali. Gorkha distict is almost 150 kilometer west from Kathmandu (capital city).

B. *Study population*

All married women of reproductive age group were the target population of the study. Although, the uterine prolapse is an issue of concern for all women; for the study purpose, women who were the resident of Gorkha district of Nepal consisted study population.

C. *Sample size*

The sample size for this study was determined from the following equation. The confidence level was fixed 95% and marginal error is 5%. According to NDHS2011, In Nepal, uterine prolapse affects about 10 percent of women nationally (Institute of Medicine, 2006).

$$n = \left(\frac{Z_\alpha}{E}\right)^2 PQ$$

Hence, desired sample size,

$$n = \left(\frac{Z_\alpha}{E}\right)^2 PQ = \left(\frac{1.96}{0.05}\right)^2 0.10 \times 0.90$$

$$= 138.29 \approx 139$$

Considering 10% non-response rate

The sample size was equal to (n) = 139+14 = 153

D. *Sampling technique*

Firstly, purposive sampling was used to select the three VDC and the probability sampling technique was used to select the sample**.** In Mirkot VDC had total 1389 women of reproductive age, in Deurali VDC has 1645 women of reproductive age and Dhuwakot VDC had total 1203 women of reproductive age group. All three VDC had total 4237 women of reproductive age. Mix of these entire sample and select the random number of 153 samples with the help of computer. Sampling frame was taken from election office of Gorkha.

E. *Ethical consideration*

The proposed study was conducted after the ethical approval from Nepal Health & Research Council (NHRC) and Hope International College. Administrative approval was obtained from different VDC offices of Gorkha District. Written informed consent was taken from all respondents and their parents.

F. *Validity and reliability*

Validity of the instrument was established by developing instrument on the basis of literature review, consulting the research advisor and concerned teacher. Reliability of the instrument was maintained through pretest the instrument. For pretesting the 10% of total sample in the same setting was taken and it was excluded from the main sample of the study. After pretesting necessary modification was done as per needed.

III. FINDINGS

Out of 153 respondents, nearly half of the respondents were over 35 years and lowest (9.8%) of respondent lies below 25 years. Mean age of the respondents was 35.38 years with Mean ± SD (35.38 ± 8.41). Regarding Caste and Ethnicity, Janajati were the major i.e. (34.6%) followed by Chettri (28.1%), Braham (26.1%) and Dalit (i.e.11.1%). Likewise, Majority of respondents was Hindu that is 84.3%,

Table I. Distribution of respondent according to socio-demographic variables

Characteristics(n=153)	Frequency	Percent
Age Group		
<25	15	9.8
25 - 30	38	24.8
31 - 35	26	17.0
>35	74	48.4
Mean ± SD(35.38 ± 8.41)		
Caste/Ethnicity		
Brahman	40	26.1
Chettri	43	28.1
Janajati	53	34.6
Dalit	17	11.1
Religion		
Hindu	129	84.3
Buddhist	13	8.5
Christian	11	7.2
Monthly Income(Rs)		
< 5000	13	8.5
5000 - 15000	63	41.2
≥ 15000	77	50.3
Education Status		
Literate	78	51.0
Illiterate	75	49.0
Level of Education		**n = 78**
Primary	54	69.2
Secondary	18	23.1
Higher Secondary and above	6	7.7
Occupational Status		
Agriculture	52	34.0
House wife	89	58.2
other	12	7.8

Majority of respondents with monthly income were greater than or equal to Rs.15000 were 50.3%. Whereas 41.2% had their monthly income lies between Rs. 5000 to Rs. 15000. But only 8.5% respondents had monthly income is less than Rs. 5000. Furthermore, almost equal literately status was encountered that was 51.0% and 49.0% literate and illiterate women respectively. Likewise, most of the respondents were housewife that is 58.2%. There were 34% respondent involved in Agriculture and fewer respondents (i.e. 7.8%) were engaged in other types of occupation.

Table II. Distribution of reproductive health information

Characteristics (n=153)	Frequency	Percent
Age at marriage		
Below 15	37	24.2
16-20	98	64.1
21-25	18	11.8
Mean ± SD(17.3 ± 2.4)		
Age at first pregnancy		
≤ 15	4	2.6

16-20	113	73.9
21-25	30	19.6
≥ 26	6	3.9
Mean ± SD(18.9±2.7)		
Gravida		
≤2	66	43.1
3-5	76	49.7
≥6	11	7.2

The above table revealed that among 153 respondents, majorities of respondent got married between the age 16-20 years that was (64.1%) and rest of them (24.2%) got married at below 15 years. But small percentage (11.8%) of women married above 20 years. Most of the respondents were become pregnant between the 16-20 ages (i.e. 73.9%). The percentage of women had become pregnant between 21-25 years of age (19.6%) and negligible population was experienced pregnancy below or equal 15 (i.e. 2.6%). Most the women conceived in reproductive age. Exactly (49.7%) of the women had become pregnant 3 to 5 times in her life and rest of them (43.1%) had conceived 2 or less than 2 times pregnant in her life span.

Table III. Distribution respondents use of family planning and number of children.

Characteristics	Frequency	Percent
Use of family planning		
Yes	33	21.6
No	120	78.4
Use of FP Methods (n=33)		
Depo-Provera	15	45.5
Oral Pills	7	21.2
Vasectomy	6	18.2
Mini lap	4	12.1
Implant	1	3.0
No of Children		
≤ 2	83	54.2
3-5	69	45.1
6-10	1	0.7
Mean±SD (2.6±1.2)		

Above table shows the respondents to used family planning method, majorities (78.4%) of the respondent did not use the family planning method. Only 21.6 percent respondent was used family planning method. Out of 33 respondents (45.5%) were used Depo-Provera. Oral Pills and Vasectomy users were almost in equal percentage i.e. (21.2%) and (18.2%) respectively. More half (i.e. 54.2%) respondent had 2 or less than 2 children and 45.1% participant had 3 -5 children. But only 0.7% of respondents had 6-10 children.

Table IV. Distribution of cases of UP and symptoms

Characteristics	Frequency	Percent
Cases of UP		
Yes	21	13.7
No	132	86.3
Symptom * (n=21)		
Difficulty walking	5	23.8
Difficulty standing	10	47.6
Difficulty sitting	16	76.2
Difficulty lifting	5	23.8
Foul smelling discharge	2	9.5
Itching	3	14.3
White Watery Discharge	6	28.6
Burning Upon Urination	7	33.3
back aches/back pain	8	38.1
Menstruation longer than 1 week	4	19.0
Difficulty/pain defecating	1	4.8
Urine incontinence	7	33.3
Treatment Status (n = 21)		
Yes	10	47.6
No	11	52.4
Place of Treatment (n = 10)		
Public Health facilities	8	80.0
Private medical/hospital	2	20.0
Degree of UP (n = 7)		
First	2	28.6
Second	2	28.6
Third	3	42.9

*** Multiple responses**

Among 153 respondents (13.7%) were suffered from uterine prolapse. The multiple response of symptom out of 74 responses (76.2%) of cases was difficulty of sitting and (47.6%) were difficulty on standing. Among 21 respondents (47.6) percent of respondent were treated the UP. But almost 52 percent were unable to treat their disease. Most of the cases (80%) used public health facilities and only 20% of cases used private medical and hospital facilities. Belong to past diagnosis among 7 cases (42.9%) had third degree of UP and 28.6 percent of cases have had first and second degree of Uterine Prolapse.

Table V. Association between Uterine Prolapse and Risk Factors.

Characteristics	Status of UP		p-value
	Yes	No	
Types of Delivery($^{\pounds}$)			
Vaginal	20(13.1)	129(84.3)	0.449
CS	1(0.7)	3(2.0)	
Place of Birth of Last Child			
Institutional	2(1.3)	19(29.4)	
Non Intuitional	45(12.4)	87(56.9)	0.023*
Assistance of delivery			
Skilled	3(2.0)	51(33.3)	
Non skilled	18(11.8)	81(52.9)	0.030*
Labor Hour			
≤ 8 Hours	16(10.5)	79(51.6)	0.513
> 8 Hours	5(3.3)	53(34.6)	
Rest After Delivery			
≤ 42	20(13.1)	94(61.4)	0.019*
> 42	1(0.7)	38(24.8)	
Place of Stay After Post-Partum($^{\pounds}$)			
Home	21(13.7)	27(83.0)	
Hospital	0(0.0)	5(3.3)	
Tying Patoka($^{\pounds}$)			
Yes	19(12.4)	125(81.7)	0.357
No	2(1.3)	7(4.6)	

Carrying Heavy Load After Delivery			
Immediately After Delivery (≤42 Days)	19(12.4)	35(22.9)	
After Six Weeks of Delivery(>42 Days)	2(1.3)	97(63.4)	0.000*

*** significant at 5%, [£]Fisher Exact test**

The above showed the association between uterine prolapse and Risk factors. It was found that uterine prolapse was statistically significant with place of birth of last child (p =0.023), assistance of delivery (p=0.030), rest after delivery (p=0.019). Likewise, carrying heavy load after delivery (p=<0.001). However, types of delivery (p= 0.449), labor hour (p =0.513), severe tear of vagina in delivery (p= 1.00), place of stay after post-partum (P =1.00), tying *patuka* (p=0.357, frequency of smoking (p=0.465*)* and period of smoking (p =1.00) were not associated with uterine prolapse

IV. DISCUSSION

This was the descriptive cross sectional community based study representing the glimpse of the hilly districts of the region. Major aim of the study was to estimate the magnitude of uterine prolapse and its associated factors among the married women of Gorkha who was at 15-49 years. The findings of the study are discussed here comparing with existing facts identified in similar setting. Uterine Prolapse is a challenge for women's life. Basic activities like urinating, defecating, walking, standing, working, and sitting are difficult and painful. Despites the occurrences being alarmingly common, the women who suffer are awfully silent. Many women believe (or made to believe) that women's fate and falling or uterus is the part of being women. Still the social conditions restrict women for seeking medical assistance. Due to various social and cultural reasons women prefer to stay their life with problem rather than to seek its solution. Even they seek medical assistance proper medical care is limited in most of rural Nepal.

Women have no voice or decision making power even in domestic activities, and no access to or control over family resources, even though they perform all the household activities. A belief is established that the role of women is to perform household chores, take care of the family and produce for as long as they are able. The strength of belief is so great, among both men and women, that women's time of thinking and contact with outside world is limited by their domestic chores and this restricts their access to information and further reduces their decision making power.

Paneru Damaru Prasad,et al., reported that equal numbers of respondents were selected from each cluster representing the target population of defined strata. Majorities of respondents were more than 35 years' age followed by 20-25 years with median age 35 years. More than half of them were Chhetri followed by Dalits (33.6%). Large numbers of (71.4%) of respondents were illiterate and almost out of every ten literate respondents, nine have had primary and lower secondary level education with few had higher educational attainment. Most of the respondents adopted farming and household work as major occupation and more than half had joint family structures [21]. In this study, equal numbers of respondents were selected from each VDC representing the target population. Majorities of them were more than 35 years' age followed by 20-25 years with median age 35 years. More than half of them were Janajati followed by Chettri (28.1%). Almost both literate and illiterate respondent was equal and most of the literate respondent have had primary followed by secondary and higher secondary. Most of the respondents adopted farming and household work as major occupation and more than half had nuclear family structures.

Paneru Damaru Prasad,et al., identified that most of the respondents got married before the 20 years of age. Majorities of the respondents experienced 3-5 pregnancies during her reproductive life span and most of them 3-5 living children. Average numbers of pregnancies were four /women and average numbers of living children were 3.44/ women. This study identified that most of the respondents got married before the 20 years of age. About seven out of every ten delivered their first child before 20 years' age and two in every ten delivered first child before 16 years of life. Majorities of the respondents experienced 3-5 pregnancies during her reproductive life span and most of them 3-5 living children.

Literatures on Prevalence of Uterine Prolapse the global prevalence of prolapsed uterus ranges from 4 to 40 percent (UK APPG, 2009 cited in Pradhan et al., 2010). A cross-sectional study of 200 women was performed in rural Ghana using a questionnaire and pelvic examination to detect symptoms and signs of prolapse. Main outcome measures were the presence of POP and its impact on quality of life. Out of 174 women included in the study, 21 women (12.07%) had POP. Seventeen of these women (81%) were symptomatic, of which only 6 women (35.3%) had sought treatment because of financial constraints. This study concluded that only about one third of women with symptomatic prolapse sought treatment because the cost of medical care outweighed the impact of the condition on their lives. This study found the prevalence of uterine prolapse (13.7%). A description cross sectional study of 153 women was performed using only questionnaire and detect the symptoms. Out of the 153 women in this study 21 women (13.7%) had uterus prolapse. Cent percent women were symptomatic, of which only 10 women (6.4%) had sought treatment and rest of women had not sought treatment because various constraints like financial, unawareness about treatment facility, lack of family support etc. In this study had not performed the physical examination for detect the sign of uterus prolapse. Baruwal Ashma, et al., found that the prevalence of uterine prolapse was found to be (24.7%). Analysis of the data using chi square revealed that total pregnancies (p-value=0.005), delivery practice (p-value=0.046), age (p value=0.016), and knowledge level (p value<0.01) were found to be significantly associated with the status of uterine prolapse. In this study, prevalence found 13.7%. It was found that Uterine prolapse is statistically significant with family income (p =0.017), Educational status (p=0.007), family type (p=0.048). It was found that knowledge level is statistically not significant with caste

(p =0.617), religion (p=0.631), income level (p=0.493). Likewise, education status (p=0.264), occupation (p= 0.996), types of family (p =0.518) and age at marriage (p= 0.287) also were not associated with knowledge level.

Tamrakar Anupama, studied the prevalence of the uterine prolapse and its associated factors in Kaski revealed that prevalence of uterine prolapse was (11.7%). Median duration of suffering was two years. Mejorities of the respondants were over 30 year's age. The strongest variation was observed in age of respondants,age at first child birth and smoking in the past and present. More than (50%) had received treatment of uterine prolapse and most of them reseived services from hospitals followed by private medicals.More than (72%) were treated by the application of ring pessary. Uterine prolapse was observed highly amomg large number of women having teenage pregnancy, lower educational level,increasing age and high parity women.In this study found the prevalence of uterine prolapse (13.7%). Majorities of the participant were over 35 years of age. More than 50% had not received the treatment, out of 21 women only 10 women had received the treatment from government hospital and followed by private medical. Uterine prolapse was observed mainly among large number of women having pregnancy below 20 years of age , high parity and working immediately after pregnancy. In this study had not found the type of treatment among among women who received treatment.

Marahatta R.K. reported that prevalence of female genital prolapse was 7.55% among the women over age 20 years. Maximum numbers of women were having children eight and more (48.51%). Seventy-nine percent of women with genital prolapse had all children born at home without help. In this study prevalence of female genital prolapse was 13.7% among the women over age 20 years. Strong association was reported with uterine prolapse and place of delivery and skilled assistance during delivery. Eighty-seven percent of women with genital prolapse had all children born at home without help.

Almost all respondents replied that uterine prolapse can be prevented by avoiding lifting or carrying heavy loads followed by intake of nutritious diet, limiting births and avoiding application of vigorous pushing before true labor pain, intuitional delivery, timely treatment of associated diseases and delaying the sexual contact with husbands respectively. Most of the aforementioned ideas are seen as consistent with the established principles.

Gurung Geeta, et al., reported that prevalence of pop was found to be 10 % in this community based study having a true representation of women from all parts of rural Nepal, tarai as well as hilly regions thus identifying problems from severity of prolapse. And such loads were carried in the basket or on their back (Doko) by 15.9% or on their head in 15.7% or over the waist (11.1%). Tight patuka (yards of clothes) worn by 38.1% women during post-partum period to enable them to carry heavy loads in fact contributed in increasing abdominal pressure in addition. In this study prevalence of UP 13.7% in this selected VDC. Loads were carried in the doko by 64% or on head in 94%. Tight patuka (yards of clothes) worn by 94% women during post-partum period [22].

Study conducted by Rortveit et al, Thapa, Bonetti et al and CAED reports also revealed similar facts that difficulty in weight lifting, and sitting, walking, protrusion of pelvic contents per vagina, painful sexual act, pain in low abdominal area, pelvic pain, and urinary incontinence etc. were common manifestations if the varying degree of uterine prolapse onsets, Those who had been suffering from the uterine prolapse, cent percent explained the backache followed by feeling of heaviness or something coming down per vagina [22]. In this study found that similar facts that difficulty in weight lifting, and sitting, walking, standing, white discharging, difficulty on burning upon urination and urine incontinence. In this study also found that those who had been suffering from the uterine prolapse, the cent percent respondent said that something coming down per vagina.

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