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Prevalence and Associated Factors with Uterine Prolapsed among the Chepang Women in Chitwan, Nepal"

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Abstract
Background
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. It is a major public health problem. It is a significant health problem amongst women and has affected women all over, in the mountains, hills, plains and the valleys and affect women's quality of life. The most commonly perceived cause of prolapse are age of early marriage and frequency of child birth, place of delivery, heavy household and farm working during pregnancy and lifting heavy loads.
Methods
This descriptive cross-sectional study was conducted on "Prevalence and Associated Factors with Uterine Prolapsed among the Chepang Women in IcchakamanaRural Municipality, Chitwan."Approximately 112 respondents wereparticipated by using semi-structured self prepared interview schedule. Data was collected through face to face interview method and by checking per vaginal examination for each respondents. Data entry was done by using Epi data and analyzed by SPSS. Descriptive and inferential statistics were used to analyze the collected data.
Results
Out of 112 respondents, 20.5% had uterine prolapse. Most of the respondents, 60.7% had first child birth at the age of 16-18 years. More than half of the respondents, 56.2% were illiterate.Binary logistic analysis showed numberof factors associated with uterine prolapse such as age of respondents, education status, and number of children and soon after delivery physical work. Those respondents who were $\geq$ 40 years of age had more chance to suffer from uterine prolapse (OR= 12.245, p=<0.001) as compare to those who had age $\leq$ 40 years of age. Similarly, education status of respondents, who were illiterate have higher prevalence of uterine prolapse as compare to those who were literate (OR=3.520, p=0.017).Correspondingly, more number of children (p=<0.001) and soon after delivery of physical work (p=0.22) were statistically significant with the uterine vaginal prolapse.
Conclusion:
A number of factors have shown the uterine prolapse. Uterine prolapse was significantly associated with age of respondents, number of children, education status, occupation, health service distance, smoking status and soon after delivery physical work.

Keywords: Prevalence, Associated Factors, Uterine Prolapsed, Chepang Women

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I. Introduction

Uterine prolapse is characterized under a more general classification called pelvic organ prolapse which encompasses descent of the anterior, middle and posterior structures into the vagina.[1]Uterine prolapse (UP) is the condition in which the uterus descent into the vagina or protrude out of vagina due to the stretching and weakening of muscles and ligaments to support the uterus .[2]

The problem of uterine prolapse (UP) exist throughout Nepal and affect women's quality of life. For women living with this condition, life's basic activities are a challenge, urinating, defecating, walking, standing and sitting are difficult and painful, which in turn leads various forms of psycho-social and physical disorders.3The prevalence rate of women with uterine prolapse found to be 13%.[4]

Chepangs are the earliest known inhabitants and one of the most backward indigenous nationalities of Nepal. Nepal Federation of Indigenous Nationalities (NEFIN) has categorized Chepangs "as the second most backward/marginalized community" from the bottom list from among the 59 marginalized Indigenous Communities listed by it .Today almost 90 percent of Chepangs are leading life under utter poverty. Further while only 23 percent of them are literates, literacy rate among Chepang women is only 1 percent.[1]There are

several causes of uterine prolapse that have been generally identified for example inaccessibility to quality maternal health care, poverty, gender discrimination related to health, nutrition (life cycle), workload immediate postnatal period and domestic violence. Likewise, prolonged labor, birth of big babies, unsafe abortions, sexual relation immediately after delivery, tightening of stomach using *patuka*(a piece of cloth used to wrap around the stomach) after delivery.[5]Uterine prolapse is a significant health problem which has affected women all over, in the mountains, hills, plains and the valley areas.[6]In Nepal, the prevalence of clinically diagnosed uterine prolapse ranges from 17% to 27%.[7]Uterine prolapse is one of the health priority program of Nepal Government . UP is the common gynecological morbidity in Nepal. Likewise, knowledge of uterine prolapse among the community level is still deficient**.**[8]

Uterine prolapse is statistically significant with family income (p =0.017), educational status (p=0.007), and type of family (p=0.048).[9]The prevalence rate of women with uterine prolapse was found to be 13% whereas mean and standard deviation were 0.87 ±0.33. The findings of association between the prevalence of uterine prolapse with age at first child birth, abortion, sexual intercourse immediate after delivery and constipation were found to be significantly associated.[10]Among various reproductive health issues, uterine prolapse is one of the largely hidden problem and these issues are not openly shared in Nepalese community .The high burden of uterine prolapse may be linked to the lack of knowledge among community women .[11]

II. Material And Methods

Study design, settingand population

A community based descriptive cross-sectional research design was used for this study to meet its objectives. This study was conducted in IcchakamanaRural Manicipalityof Chitwan. It is one of the backward rural and hilly area of the Chitwan where majority of people are from Chepang community. The population of the study was married women who have at least one child.

The researcher collected name list from IcchakamanaRural Manicipalityoffice and organization who were working there. There were total 18 women groups with the total population of 418in Chepang community. Each group has at least 18 to 24members. Data collection took place between 2019-10-11 to 2019-11-2.

Sampling Technique

Simple random sampling technique was used for the study and 2 wards were selected among the 7 wards.Ward number 1 and 2 were selected through lottery method of simple random sampling technique for uterine screening program. For selecting the women group from these two wards total cluster sampling technique was used. In this two wards, 6 women groups were found.

Probability proportionate was used in these wards for the selection of population (30% of the total wards), which was taken from selected women's group of Icchakamana Rural Municipality.

Chepang community is one of the backward rural area of the Chitwan. The population of screening programm were all Chepangwomen groups. There were total 18 women groups of Chepang community in Icchakamana Rural Municipality and total population was 448. The required sample size (n) was 136.

In this screening program only 112 Chepang women involved due to lack of knowledge and shyness for exposing private part.It took lot of counseling's and explanationfor convincing those participant to participate in this screening program.

Instrumentation

The instrument for data collection was structure schedule through face to face interview method which was developed by the researcher herself reviewing the related literature and consulting with subject experts.

Inclusion criteria

All married women who are involved in different women's group and having at least one child.

Outcome variable

Find out prevalence and associated factors of uterine prolapse

Explanatory variables

Explanatory variables were age, education, types of family, occupation, health services distance etc.

Ethical committee approval

Ethical clearance was obtained from Manmohan Memorial Institute of Health Sciences (IRC)Kathmandu, Nepal. Data collection permission was obtained from theIcchakamanaRural Manicipality office,Chitwan. The purpose of the study was explained to the participants. Verbal consent was taken from all respondents prior to the data collection. Privacy was maintained by using code number for each respondent. Confidentiality was maintained by not disclosing the information to others and assured that the information will be used for study purpose only. Respondents were clearly explained that they have choice to reject or discontinue from the research study at any point of the study time. Confidentiality was maintained throughout the study and thereafter.

Questionnaire design

Content validity of the instrument was established by consultation with research advisor and subject experts. English questionnaire was translated into the local Nepali language to maintain simplicity and comprehensibility with the help of language expert. Besides, pre testing was done among 10% of respondents (i.e. 12 respondents) to assess the practicability of use of the instrument and was excluded in the main study. Slight modifications were done in the instrument such as in ordering of questions and adding/deleting some response categories after pretest.

Data management and statistical analysis

The collected data was checked, reviewed and organized for accuracy, completeness and consistency. All collected data was analyzed by using statistical package for social sciences (SPSS) version 20.0. Association between different variables were tested by Chi square. Logistic regression analysis was done to identify the strength between the variables. An adjusted odds ratio with 95% confidence interval was calculated.

III. Results

TABLE 1
Socio-demographic Characteristics

n=112

Variables	Frequency (n)	Percentage (%)
Age groups (in completed years)		
>20year	10	8.9
20-30year	48	42.9
31-40year	24	21.4
>40 year	30	26.8
Education Status		
Literate	49	43.8
Illiterate	63	56.2
If Literate, Level of Education(n=49)		
General literate (Can read and write only)	8	7.1
Basic literature (Up to 8 class)	38	34.0
Secondary level	3	2.7
Type of family		
Single	30	26.8
Joint	82	73.2
Occupation		
Household work	86	76.8
Agriculture	26	23.2
Health distance		
≤30minutes	42	37.5
31-60minutes	34	30.4
61-120minutes	29	25.9
>120minutes	7	6.2

Table 1 shows socio-demographic variables of respondents. Out of 112 respondents, majority 42.9% were age group of 20 -30 years. More than half of the respondents 56.2% were illiterate and 43.8% were literate. Among them 34% had completed basic level and least7.1% could read and write. Regarding type of family, majority 73.2% were livingin joint family. Concerning the health service available distance, 37.5% took30 minutesor less time and 6.2% took ≥120 minutes time.More than one third of the respondents 76.8% were involved in household work and 23.2% in agriculture.

TABLE 2
History of Uterine Vaginal Prolapse

n=112

Variables	Frequency	Percentage (%)
Uterine Vaginal Prolapse		
Yes	23	20.5
No	89	79.5
Stages of uterine vaginal prolapse UVP (n=23)		20.5
First stage of UVP	16	14.3
Second stage of UVP	4	3.6
Third stage of UVP	2	1.8
Fourth stage of UVP	1	.9

Table 2 represents that out of 112 respondents, 20.5% had uterine prolapse. Concerning the stages of uterine prolapse, 14.3% had first stage of UVP, 3.6% had second stages of UVP, 1.8% had third stages of UVP and 0.9% had fourth stage of UVP.

TABLE 3
Marriage and Obstructive History

n=112

Variables	Frequency	Percentage (%)
Age of marriage		
<14 years	19	17.0
14-16 years	64	57.1
≥17 years	29	25.9
Mother age at first child birth		
<16 years	31	27.7
16-18 years	68	60.7
≥19 years	13	11.6
Number of children		
≤2 children	46	41.1
3-5 children	36	32.1
≥6 children	30	26.8
Male child		
≤2	78	69.6
3-4	19	17.0
≥5	4	3.6
Female child		
≤2	63	56.2
3-4	23	20.5
≥5	6	5.4

Table 3 describes that more than half 57.1% of the respondents got married at age of 14-16 years. Regarding the age of first child birth, 60.7% had their first child at the age of 16-18 years and 11.6% had their first child birth at the age of >= 19 years. Majority 41.1% had one or two children and 3.6% had 5 or more children.

TABLE 4
History of Abortion and Stillbirth

n=112

Variables	Frequency (n)	Percentage (%)
Abortion		
Yes	36	32.1
No	76	67.9
Number of abortion (n=36)		
One	24	21.4
Two	10	8.9
Three	2	1.8
Method of abortion (n=36)		
Self	9	8.0
Traditional	26	23.2
Medicine	1	.9
Stillbirth		
Yes	20	17.9
No	92	82.1
Number of stillbirth (n=20)		
One	11	9.8
Two	7	6.2
Three	1	.9
Five	1	.9
Who help for stillbirth (n=20)		
Health worker	1	.9
Self	18	16.1
Traditional	1	.9

Table 4 illustrate that 32.1% respondents had history of abortion. Among these 36 respondents 21.4% had once, 8.9% had twice and 1.8% had history of three miscarriage. 23.2 % had aborted traditionally and 0.9% used medicine for abortion.

Regarding the still birth, 20 out of 112 that is 17.9% had history of still birth. Among these 9.8% had once, 0.9% had five time history of stillbirth. Concerning the help for stillbirth, 16.1% were self and 0.9% were health worker.

TABLE 5
Antenatal Checkup and Birth Spacing

n=112

Variables	Frequency	Percentage
ANC Check up		
Yes	45	40.2
No	67	59.8
Birth Spacing		
Yes	91	81.2
No	21	18.8
Birth spacing(n=91)		
less_than_2yror2	71	63.4
3yrs	19	17.0
4yrs	1	.9

Table 5 shows that 40.2% did antenatal checkup. Concerning the birth spacing, 81.2% did birth spacing. Out of 91, 63.4% had history of <=2 years birth interval and merely 0.9% had history of 4 years.

TABLE 6
History of Pregnancy, Postnatal and Present Coughing and Constipation
n=112

Variables	Frequency	Percentage
Pregnancy constipation		
Yes	4	3.6
No	108	96.4
Postnatal constipation		
Yes	2	1.8
No	110	98.2
Present constipation		
Yes	2	1.8
No	110	98.2
Pregnancy cough		
Yes	1	.9
No	111	99.1
Postnatal cough		
Yes	4	3.6
No	108	96.4
Present cough		
Yes	1	.9
No	111	99.1

Table 6 indicates that 3.8% respondents had pregnancy, 1.8% had postnatal and 1.8% had problem of constipation. Concerning the coughing problem, 0.9% respondents had pregnancy and present coughing and 3.6 % had postnatal coughing problem.

TABLE 7
Information about Smoking

n=112

Variables	Frequency	Percentage
Smoking status		
Yes	45	40.2
No	67	59.8
Year of Smoking (n=45)		
<5year	5	4.5
6to10year	12	10.7
11to15year	14	12.5
>16year	14	12.5

Table 7 shows that respondent's information of smoking, 40.2% had habit of smoking. Out of them,12.5% had smoking for more than 15 years and 4.5% had smoking for less than five years.

TABLE 8
Information about Delivery

n=112

Variables	Frequency	Percentage
Place of delivery		
Home	98	87.5
Health institution	14	12.5
Mode of delivery		
Spontaneous vaginal delivery	111	99.1
Instrumental delivery	1	0.9
Help during delivery		
Family member	91	81.2
Health worker	20	17.9
Female community health volunteer	1	0.9

Table 8 displays that 87.5% of the respondent's place of delivery were home and least 12.5% had institutional delivery. Out of 112, 99.1% had spontaneous vaginal delivery and 0.9% had instrumental delivery. Concerning help during delivery, 81.2% of the respondents were assisted by family member and merely 0.9% were assisted by female community health volunteer.

TABLE 9
Physical work after delivery, Pregnancy and Postnatal Nutrition

n=112

Variables	Frequency	Percentage
Physical work after delivery		
Start soon after birth	94	83.9
After six weeks	18	16.1
Pregnancy nutrition		
Yes	51	45.5
No	61	54.5
Postnatal nutrition		
Yes	51	45.5
No	61	54.5

Table 9 depicts that majority 83.9% respondents started physical work soon after birth and 16.1% of the respondents started after six weeks.Regarding nutrition, 45.5% had pregnancy and postnatal nutrition respectively.

TABLE 10
Association between Uterine Prolapse with Selected Socio-demographic Variables

n=112

	Uterine Vaginal Prolapse			OR(95%CI)	
Variables	Yes n (%)	No n (%)	X^2 value		p value
Age				12.245(4.26-35.19)	
≤40 years	7(8.5)	75(91.5)	27.01	1	<0.001*
≥40 years	16 (53.3)	14 (46.7)			
Education status					
			5.698	3.520(1.202-10.308)	.017*
Literate	5 (10.2)	44 (89.8)		1	
Illiterate	18 (28.6)	45 (71.4)			
Type of family					
Single	8(26.7)	22(73.3)	.944		.331
Joint	15(18.3)	67(81.7)			
Occupation					
Household work	22(25.6)	64(74.4)	F		.014**
Agriculture	1(3.8)	25(96.2)			
Health distance					

					.001*
			10.136	4.464(1.70-11.68)	
<60 minutes	9(12.0)	66(88.0)		1	
≥60 minutes	14(37.8)	23(62.2)			

1= reference OR=Odds ratio
*Significantly associated in 95% confidence interval. P-value obtained from Pearson chi-square *, Fisher's Exact Test ***

Table 10 presents bivariate analysis of uterine prolapse with age, education status of respondents and health distance. The bivariate analysis applied in this study suggest that variables like age of respondents, education status and health services distances were significantly associated with the uterine prolapse. Those respondents who were ≥ 40 years of age had more chance to suffere from uterine prolapse (OR= 12.245, p=<0.001) as compare to those who had age ≤ 40 years of age. Similarly, education status of respondents, who were illiterate to have higher prevalence UP as compare to who were literate (OR=3.520, p=0.017). Likewise, those respondents who were far away from health facilities were found having more uterine prolapse as compared to those who were near by the health facilities(OR=4.464, p=<0.001). The UP was statistically significant with the respondent occupation (p= 0.015). The uterine prolapse was not statistically significant with the types of family (p=0.331).

TABLE 11
Association between Uterine Prolapse with Number of Children, Smoking Status after Delivery Physical Work

n=112

	Uterine vaginal prolapse		**X^2 value**	**OR(95%CI)**	**p value**
Variables	**Yes n (%)**	**No n (%)**			
Number of children					
≤ 2	1(2.2)	45(97.8)	-		.000**
≥3	22 (33.3)	44 (66.7)			
Do smoking					
Yes	14 (31.1)	31 (68.9)	5.155	2.91(1.13-7.48) 1	.023*
No	9 (13.4)	58 (86.6)			
After delivery physical work					
Start soon after birth	23(24.5)	71(75.5)	-		.022**
After six weeks	0(0)	18(100)			

1= reference OR=Odds ratio
*Significantly associated in 95% confidence interval. P-value obtained from Pearson chi-square *, Fisher's Exact Test ***

Table 11 presents bivariate analysis of uterine prolapse with smoking status of the respondents. Those respondents who had habit of smoking have more chance (OR=2.91, p=0.023) of having uterine prolapse as compare to those who had no habit of smoking. Similarly, the more number of children (p=<0.001) and immediate after delivery of started physical work (p=0.22) were statistically significant with the uterine vaginal prolapse.

IV. Discussion

Majority of the respondents 48 (42.9%) were of age group 20-30 and age above 40 years were 30 (26.8%).Majority of respondents 63(56.2%) were illiterate. The most of the respondents 82(73.2%) belongs to joint family. More than two third of the respondents occupation 86 (76.8%) was agriculture.

In our study, prevalence of UP found 20.5%. Whereas the study findings was similar to the finding of Silwal, M., Gurung, R., Shrestha, N., Gurung, A., &Ojha, S (2016). [12]Which revealed thatthe prevalence rate of women with uterine prolapse was found to be 13%. Another finding was consistent to the study of Pathak, K. &Khanal, S (2018) which shows that the prevalence of UP was found 13.7%.[9]

Our study revealed that UP is significantly associated with age of respondents (p=<0.001), education status (p=0.017), health services distantance (p=0.001), smoking status (p=0.023), number of children

(p=<0.001) and after delivery physical work (p=0.022).The finding of result which shows that there was statistically significant between uterine prolapse and age of first child birth (P- value=0.002). Similar finding was on a study conducted byPathak, K. &Khanal, S (2018) Analysis of the data chi square of UP was found statistically significant with education status (p=0.007), family type (p=0.048).[9]

This study shows that 40.2% respondents have habit of smoking. This finding is similar to the study of Thapa B, Rana G, Gurung S. (2014), which revealed that there were 45% of the women having the history of smoking.[13]

V. Conclusion

A descriptive cross sectional study was conducted regarding prevalence and associated factors with uterine prolapse among Chepang women with the objective to identify the associate factors of uterine prolapse.Chepangs are the earliest known inhabitants and one of the most backward indigenous nationalities of Nepal.Base on the findings of this study, the prevalence rate of women with uterine prolapse was 20.5%. It was significantly associated with age of respondents, education status, occupation, and health service distance, number of children, smoking status and after delivery start physical work.

The findings of this study indicates the need to identify the main causes and associate factors of uterine prolapse for effective awareness interventions in community level to enhance their knowledge and reduce the burden of UP. Similarly, study findingsinformed local health institution and social activistfor help to make plan about awareness program. It is very essential for reducing this problem and its detrimental effect. Awareness program can be done through orientation and trainings regarding reproductive health. When people are aware about the associate factors and consequences of uterine problem,the problems will minimize itself.

Limitations of the study

The study was conducted only in one IcchakamanaRural Manicipality of Chepang women. This finding of the study cannot be generalized in other area's people.

Conflict of Interest: The authors do not have any conflict of interest arising from the study.

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