PREVALENCE, RISK FACTORS AND TRADITIONAL TREATMENTS OF GENITAL PROLAPSE IN MANMA, KALIKOT DISTRICT, NEPAL: A COMMUNITY BASED POPULATION STUDY.

This thesis is submitted in partial fulfillment of the requirement for the degree of Master of Public Health at the University of Tromso, Norway

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Abstract

Background: Nepal is a small developing country sandwiched between India and China. Majority (Approximately 80 %) of the people still depend on the traditional medicine for their primary health care. According to World health organization (WHO), reproductive and sexual ill-health accounts for 33 % of the total disease burden in women globally. The global prevalence of genital prolapse (GP) is estimated to be 2 -20 % in women under age 45. The status of reproductive health of women in Nepal is very poor and uterine prolapse (UP) is a serious public health problem in Nepal. Data of uterine prolapse in Nepal are in scattered form and are very little. Study shows that more than one million of Nepali women suffer from uterine prolapse and the majority of these women are of reproductive age and among them two hundred thousand are in need of immediate surgery.

Objective: The main aim of the study were to measure the prevalence of UP, the associated risk factors and documentation of the traditional remedies used by the women for the treatment of UP in the region.

Setting: The study was carried out in a mid western hilly part of Nepal: Manma, village development committee (VDC), the capital of the Kalikot district.

Method: A cross sectional study was conducted by using designed questionnaires during June 2010 –July 2010. Women above 15 years of age were selected by using systematic random sampling method. A total of 368 women participated in this study. Chi square test and multivariate logistic regression analysis were done to explore the association of the risk factors.

Result: The prevalence of uterine prolapse (UP) in our study was 22.6 %. The risk factors for uterine prolapse (p value < 0.05) were illiteracy, multi parity, poverty, home delivery, early age at marriage, less rest time period after delivery and smoking. Results also showed that the majority of women (63.9%) believe in Traditional Medicine for the treatment of Uterine Prolapse. Commonly used herbs reported were Cedrus deodara, Butea monosperma, Oxalis latifolia, Canabis sativa.

Conclusion: The findings confirm the high prevalence of the uterine prolapse (UP) in the region. The majority of women were uneducated, multi parous (> 3), poor and smokers. The most common risk factors for uterine prolapse seem to be low education level, multi parity, poverty, malnutrition, early marriage, smoking habit, hard work and less rest immediate after delivery.

Key words; uterine prolapse, Risk factor, Prevalence, Traditional Medicine, Nepal
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LIST OF ABBREVIATIONS

MDG-Millennium Development Goals

WHO-World Health Organization

UP-Uterine Prolapse

POP- Pelvic Organ Prolapse

TM- Traditional Medicine

ANC- Ante natal Care

SBA- Skilled Birth Attendants

GP- Genital Prolapse

UTI- Urinary tract infection

UNFPA- United Nations Fund for Population Activities.

CAED- Center for Agro-Ecology and Development

VDC- Village Development Committee

NHRC- Nepal Health Research Council
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CHAPTER 1: Introduction

1.1 Country profile

Nepal is a small South-Asian landlocked country that lies between two large countries: India and China. India covers the southern, eastern and western part of the country and the northern part is covered by China. The area of Nepal is 147,181 square kilometer and has 27 million inhabitants (1). Geographically, it is divided into three parts: Tarai, the southern plain part; Pahad, the middle hilly part of the country which covers around 65% of the area and Himal, which is the northern part of the country which covers around 16% of the land. The top eight highest peaks among ten in the world lie in this area, including the highest mountain in the world, the Mount Everest (2). Administratively, Nepal is divided into five regions, fourteen zones and seventy-five districts. Kathmandu is the capital city. Nepal has tremendous variation in geography and climate. It rises from less than 100 m elevation in Tarai to 8848 m at Mount Everest. The climate also varies from tropical warmth to cold, comparable to Polar Regions. Because of these tremendous variations, Nepal is rich in biodiversity (2). Nepal is a multi-ethnic state, comprising of a great diversity of cultures, castes, languages, religions and belief systems.

Religion is very important in Nepal. It plays an integral part of the Nepalese society. According to a census of 1991, the majority of the populations are Hindus (approximately 89.5 percent). Buddhists and Muslims comprised only 5.3 and 2.7 percent, respectively. The remainder followed other religions, including Christianity (3).
Table 1. **Some important sociodemographic** information. (1, 4)

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total population (2005)</strong></td>
<td>27 133 000</td>
</tr>
<tr>
<td>% of total population under 15 (2005)</td>
<td>39</td>
</tr>
<tr>
<td>Women of reproductive age (15-49 years) in million (2006)</td>
<td>6.6</td>
</tr>
<tr>
<td>Average population growth rate % (2006)</td>
<td>2.1</td>
</tr>
<tr>
<td>Population distribution % rural (2005)</td>
<td>84.0</td>
</tr>
<tr>
<td>Life expectancy at birth in years (2007)</td>
<td>66.3</td>
</tr>
<tr>
<td>Under-5 mortality rate per 1000 live births (2006)</td>
<td>61</td>
</tr>
<tr>
<td>Maternal mortality ratio per 100 000 live births (2006)</td>
<td>281</td>
</tr>
<tr>
<td>Infant mortality rate per 1000 live births (2006)</td>
<td>48</td>
</tr>
<tr>
<td>Total fertility rate per woman in reproductive age group (2006)</td>
<td>3.1</td>
</tr>
<tr>
<td>Total expenditure on health as % of GDP (2004)</td>
<td>5.4</td>
</tr>
<tr>
<td>General government expenditure on health as % of total government expenditure (2004)</td>
<td>9.1</td>
</tr>
<tr>
<td>Human Development Index (2007)</td>
<td>0.553</td>
</tr>
<tr>
<td>Human Development Index Rank, out of 177 countries (2010)</td>
<td>138</td>
</tr>
<tr>
<td>Population living below national poverty line % (1990-2002)</td>
<td>42.0</td>
</tr>
<tr>
<td>Adult (15+) literacy rate (%) (2000-2004)</td>
<td>48.6</td>
</tr>
<tr>
<td>Adult male (15+) literacy rate (%) (2000-2004)</td>
<td>62.7</td>
</tr>
<tr>
<td>Adult female (15+) literacy rate (%) (2000-2004)</td>
<td>34.9</td>
</tr>
</tbody>
</table>
1.2 The Situation of maternal health in Nepal.

Hemorrhage, infection, high blood pressure, unsafe abortion, and obstructed labour are known to be the direct major causes for maternal mortality and morbidity (5). It is reported that annually more than 350,000 women die from complications during pregnancy or childbirth and almost all 99 per cent are from developing countries. Even though the deaths are avoidable the mortality rate is declining very slowly. Therefore, the Millennium Development Goal (MDG) also calls for the reduction of maternal mortality ratio by three quarters between 1990 and 2015 (6).

The condition of maternal health in Nepal is also very poor. Around 88 % of the birth occurred in rural area where the access to the health care system is poor. 26 percent of the women who give live birth did not go to ANC visit for a single time and only 44 % of women did ANC with skilled health service providers. The status of skill birth attendants is being used to address the maternal mortality and morbidity because three quarter of deaths occurred during delivery time or the immediate post partum period. In Nepal only 19 % of the births were assisted by SBA and still low in rural area with only 14 %. Alarming data reveal that 88 % of the births occurred in rural areas. The majority of women died from complications during pregnancy or childbirth so the place of childbirth is also an important indicator for maternal health. Good health services can save the mothers. Unfortunately; the majority of the childbirth (around 82 %) took place at home where there is neither skilled manpower nor the basic health service. Utilization of the health services is also very low in Nepal and is hugely contributed by socioeconomic disparity. Studies show that poor women have 15 times less access to the emergency obstetric health care compared to the rich. The perinatal mortality (stillbirth and neonatal mortality) was 45 per 1000 pregnancies in total and was found highest in the mid western (study area) region. The nutritional status of the pregnant women is also not satisfactory. 42 % of the total pregnant women were reported anaemic
according to the data published in 2006. In average, Nepali women gave four childbirth till the end of their reproductive age with a wanted fertility rate of 2.5. The first pregnancy of women during teenage (15-19 yrs) is 5% in Nepal and the rate is higher in rural areas. The survey also shows that 44.2% of the married women were using modern family planning measures and the prevalence is higher in urban areas. (7-9).

1.3 Use of traditional medicine (TM) in Nepal

Nepal is a small developing country between India and China. The Hindu culture of the Indo-Gangetic plains and the Buddhist culture of the Tibetan plateau have intermingled in Nepal to create a complex, fascinating mosaic. The majority of population resides in remote and rural areas where roads, healthcare systems and other life supporting facilities are lacking (10). Ayurvedic and herbal medicines remain the source of everyday healthcare for a majority of the population in Nepal. The reason behind this is that such medicines are easily available, affordable, effective and culturally acceptable.

A variety of medical systems exist in Nepal. Ayurveda, Tibetan medicine and faith healing are the major indigenous medical systems. Western allopathic medicine was introduced in the seventeenth century but became dominant only during the last fifty years (11). Like the data of WHO in some Asian and African country, more than 80% of the population still depend upon the TM in Nepal (12, 13). The belief in traditional medicine is so strong in Nepal that it cannot be replaced or eliminated. Considering this fact, Nepal government has also incorporated the Ayurveda in the national health care system parallel to the western medical health system. Currently there are 214 dispensaries, 61 District Ayurveda Health Centers, 14 Zonal Ayurveda hospital, 1 regional and 1 central hospital are providing the Ayurveda health care throughout the country under the Ministry of health and population (13).
The traditional health care providers in Nepal can be divided into two parts: the medical provider and the faith healer (14). Medical providers are those who have completed a recognized course on particular programs like Ayurveda, Chinese medicine, Tibetan medicine, Unani etc. Faith healers are dhami-jhankri pandit-lamagubhaju-pujari and jyotish (14). Dhami-jhankri are shamans, pandit-lama-gubhaju-pujari are the priests of the different ethnic and religious groups in Nepal while Jyotishi are astrologists (11). Tibetan medical practitioners are called Amchis and the healing practice is common in the upper mountainous regions.
1.4 LITERATURE REVIEW

1.4.1 Genital Prolapse (GP)

Female genital prolapse or sometimes also called pelvic organ prolapse is a condition of slipping down of the genital organs like the uterus, urinary bladder and rectum from their normal anatomical position and either protrude into the vagina or press against the vaginal wall. These pelvic organs are held inside the pelvic cavity by various ligaments, muscles and connective tissues which are collectively known as the pelvic floor. Weakening or damaging of this pelvic floor by any means will usually result the prolapse. There are different types of prolapses. For example rectocele, cystocele, urethrocele and uterovaginal prolapse in which the uterus descends into the vagina (15). AANG JHARNE is the typical Nepali terminology used for the pelvic organ prolapse especially the uterovaginal prolapse.

1.4.2 Pathophysiology

To know the pathophysiology of the uterine prolapse (UP) normal anatomy of the vaginal support is to be understood. Delancey's three levels of support are easy to understand and are accepted worldwide. According to which

- Level 1: The cardinal-uterosacral ligament complex provides apical attachment of the uterus and vaginal vault to the bony sacrum. UP occurs when the cardinal-uterosacral ligament complex breaks or is attenuated.
- Level 2: The arcus tendineous fascia pelvis and the fascia overlying the levator ani muscles provide support to the middle part of the vagina.
- Level 3: The urogenital diaphragm and the perineal body provide support to the lower part of the vagina (16, 17).

The uterus is an organ situated in such a way that it can enlarge without restriction during pregnancy and there is not any fixed support for the organ. The pear shape uterus consists of...
the corpus and the cervix which are enclosed in double layered broad ligaments. The uterosacral and the cardinal ligaments support the uterus which is attached to the cervix from posterior and lateral sides respectively. Fused uterosacral and cardinal ligaments (level 1 supporter) support the upper vagina, cervix, and lower uterine segment to the sacrum and lateral pelvic sidewalls at the pisiformis, coccygeus, levator ani and arcus tendinus. Because of various risk factors the complex between uterosacral and cardinal ligaments becomes attenuated and the endopelvic fascia also breaks. Because of loss of support to the uterus cervix moves anteriorly and the uterus itself moves posteriorly. Furthermore, intra abdominal pressure starts directing towards the anterior part of the uterus and the uterus becomes more retroverted until the axis of the uterus becomes vertical and this condition allows the prolapse to occur (18).

Various methods are being used to find out the severity of the POP. Among them a grading system developed by Beecham. The severity of the UP is divided into three degrees (19, 20).

First degree (mild) - the cervix protrudes into the lower third of the vagina.

Second degree (moderate) - the cervix protrudes past the vaginal opening.

Third degree (severe) - the entire uterus protrudes past the vaginal opening (19, 20).

Nowadays, to make a more precise description, a quantitative measurement system of the pelvic organ prolapse (POP) is being used which is known as POP-Q system (20).
Figure1.citedfrom (http://pelvicrelaxation.com/Our_Office/Types_of_Prolapse/body_types_of_prolapse.html) (21).

1.4.3 Risk factors

The main cause of the POP is still unknown but it is obvious that it is a multi factorial condition. A genetic disorder is regarded as the attributable factor for almost 40% of the prolapses and the rest are contributed by various factors like ageing, hormonal status, birth and surgical trauma, pudendal neuropathy, stretching or detachment of the pelvic support and myopathy. According to Bump and Norton the risk factors for uterine prolapse can be classified into four groups (18, 22).

Predisposing factors- genetics, race and gender

Inciting factors- pregnancy and delivery, myopathy, neuropathy and surgery

Promoting factors - smoking, obesity, constipation, pulmonary diseases and all the activities which increase the intra abdominal pressure.

 Decompensation factors- ageing, menopause, debilitation and medication.
1.4.4 Sign and Symptom

The main symptom of the prolapse is the seeing or the feeling of the bulge in vagina. The presentation of the symptom may be varying among individuals and it also depends on the severity of the prolapse. The mild grade of prolapse may be asymptomatic. Common symptoms can be summarized as follows (17, 23).

Vaginal symptoms

- Sensation or seeing or feeling of something coming out from vagina (bulging).
- Feeling of heaviness or pressure over the perineal area.

Urinary symptoms

- Urinary stress incontinence, frequency and urgency.
- Weak or prolonged urine stream.
- Feeling of incomplete voiding.
- Need to change position for complete voiding.

Bowel symptoms

- Incontinence of stool and flatus.
- Feeling of incomplete emptying.
- Constipation.

Sexual symptoms

- Pain or difficulty during sex (dyspareunia)
- Loss of sensation.

In addition to these symptoms, backache, recurrent urinary tract infection (UTI) and ulceration if procutentia can be seen.
1.4.5 Diagnosis.

Generally the genitourinary prolapse is diagnosed clinically. The patient should be at rest and straining (should ask to bear down) position during valsalva manoeuvre. (17, 23).

1.4.6 Management

Incidental mild grade asymptomatic prolapse generally needs no treatment. The management of the uterine prolapse can be divided into two parts (24).

**Conservative management** - is used before referring to the hospital especially for the mild cases. Pelvic floor exercises and use of different type of pessaries (support pessaries or space occupying pessaries) come into this category.

**Surgical repair** - A variety of surgical repair are performed for the correction of the uterine prolapse depending upon the patients general condition and the severity of the prolapse.

1.4.7 Prevention

Once the prolapse is established it is much more difficult to control with only medication or exercise or pessaries. Ultimately surgical restoration of the vagina or the hysterectomy is required so prevention of the risk factors play vital role.

Reducing second stage of labor, avoiding instrumental deliveries and episiotomy can help preventing prolapse in the long term. Some studies shows that hormone replace therapy also help to prevent prolapse but is still uncertain. Conditions that increase the intra abdominal pressure such as constipation, obesity and chronic cough should be treated for the primary or secondary prevention of the prolapse. Pelvic floor exercise after childbirth can be helpful (17, 23, 24, 25).
1.5 Epidemiological aspect of Genital prolapse.

The World Health Organization estimates that approximately 33% of the total global burden of disease is related to reproductive health (26). The global prevalence of genital prolapse is 2 to 20% under age 45 years (26). In Nepal, more than 1 million of women suffer from genital prolapse and majority of them falls under the reproductive age group (27). It is estimated that about half of the parous women lose their pelvic floor support and result in some degree of prolapse and among them only 10-20% seek medical treatment for the problem (28). In the United Kingdom genital prolapse accounts for 20% of women on the waiting list for major gynaecological surgery (29).

A cohort study with more than 17000 women aged 25-39, carried out in England and Scotland shows that the incidence of prolapse (with at least one hospital admission with the prolapse problem) is 2.04 per 1000 person years observation and the annual incidence of surgery for prolapse is 16.2 per 10,000 (30).

Hysterectomy is the second most common surgical procedure performed in United States and prolapse is the indication for 13% of the total surgery (18).

A study carried out by women health initiative in United States among 27342 participants, forty percent had some degree of prolapse and 14% were diagnosed with uterine prolapse (31). Another study in US also shows 11% lifetime risk of surgery for prolapse or incontinence among 149,554 women enrolled in the study (32).

1.6 Uterine prolapse in Nepal

The status of reproductive health of women in Nepal is very poor and UP is a serious public health problem. Data of UP in Nepal are in scattered form and very limited. Studies show that more than one million Nepali women suffer from uterine prolapse and the majority of these
women are of reproductive age (27). Another population based survey conducted by UNFPA/WHO shows that more than six hundred thousand Nepali women suffer from some form of UP and among them two hundred thousand are in need of immediate surgery (33, 34).

A study carried out in Bhaktapur district which is neighbouring district of the capital Kathmandu shows 7.55% prevalence of GP among 1337 women enrolled in the study (35). Another descriptive study among 7750 women carried out in a mobile health clinic in eastern part of the Nepal shows a 20.1% prevalence of POP (36).

A report published by Women’s reproductive rights program (WRRP) and Center for agroecology and development (CAED) Nepal shows the prevalence of 42% in Saptari district and on average 37% in two districts that is Saptari and Siraha (37). Another report from Nepal revealed that 40% of the women with UP are in the reproductive age group (38, 27).

Bonetti and his group studied among 2072 women in the western part of Nepal and found 25% prevalence of prolapse and that one out of four women reported trying traditional remedies for the prolapse (39).
CHAPTER 2: OBJECTIVE

2.1 General Objective
To main objective of the study was to assess the prevalence, risk factor and various traditional remedies of genital prolapse in Manma, the capital of Kalikot District through a community based population study.

2.2 Specific objective
- To find the prevalence of genital prolapse in Manma Village Development Committee (VDC) of the Kalikot District.
- To identify methods of treatment and the use of traditional remedies treating uterine prolapse in Manma Village Development Committee (VDC) of the Kalikot District.
- To explore risk factors of UP of women in Manma Village Development Committee (VDC) of the Kalikot District.
CHAPTER 3: METHODOLOGY

3.1 Research design
A cross-sectional study was done in the period June-July 2010.

3.2 Operational definitions
Caste- In our study there were four major categories of caste. Bramhan and Chhetri are known as upper cast while Janajaati (disadvantaged group) and Dalit (untouchable group) are known as lower cast.

Poverty- The poverty level of the participants was determined by asking them about their family income. The participant was regarded as poor only when the annual family income of the participant is not sufficient for food.

Uterine prolapse- Slipping or falling of pelvic organ through vagina is generally known as pelvic organ prolapse or uterine prolapse or uterovaginal prolapse (25). In our study we have asked about five major symptoms for the UP. Among them feeling of womb or problem of something coming out from vagina was only regarded as a case of UP.

3.3 Study site
The study was carried out in the Manma Village Development Committee which is also the headquarter of the Kalikot District which lies in the mid-western hilly part of Nepal. The Kalikot district is one of the most underdeveloped remote mountainous area of Nepal. There is very poor access to roads, transportation, electricity, water supply, and health facilities.
Most of the population in this area is faced with lack of basic human needs. According to the 1991 Nepal census the total population in Manma is 4409 with 877 individual households (40). There is one district hospital and one district Ayurveda health center, but because of lack of availability of skilled health professionals, accessibility and low quality health care services women are compelled to remain untreated. That is the main rationale for the selected study area.

A. **Inclusion criteria**

The participant should be of above 15 years of age including unmarried women.

B. **Exclusion criteria**

The women who refuse to enroll in the study were excluded. The women were enrolled by a voluntary informed consent.
3.4 Sampling

A systematic random sampling method was used for the selection of participants. Since there was no comparable study, assuming a 50% prevalence rate and a 95% confidence interval, the minimum sample size (n) calculated was 385 (41). According to Nepal census 2001, the total number of women (more than 15 years of age) is approximately 2000 so a sampling frame was made by using the population registry of the Manma VDC to calculate the sampling interval as follows:

Total number of population (N) = 2000

Sample size calculated (n) = 385

Sample interval (k) = N/n = 2000/385 = 5.19.

In this way, every fifth of the list was chosen after a random starting point between 1 to 5.

3.5 Study procedure

The total number of females above 15 years of age was obtained from the VDC population registry record which was nearly 2000 (According to Nepal census 2001) and required sample size was 385 so every fifth women in the list were selected for the respondent. A designed written questionnaire was used for data collection.

The data were collected over a period of one month from 16 June 2010 to 13 July 2010 at nine wards of the Manma VDC. The interviewers collecting the data were myself and an experienced nurse. Every participant was interviewed after mutual confidence to explore the reality and also to minimize the participants discomfort as much as possible.
3.6 Data processing and analyzing

All the data obtained from interviews were checked for completeness and consistency and reviewed by the researcher. SPSS 16.0 was used for data entry and analysis. A double data entry was done. The Chi-square test was used for association in categorical data. Multivariate logistic regression analysis to assess the association between dependent and independent variables was used. The level of significance was set at 5% and interpretation was done accordingly.

3.7 Ethical clearance

Ethical clearance was obtained from Nepal Health Research Council (NHRC) in Nepal. Informed consent was taken from each participant before enrolling them in the study. Mainly, the oral consent was taken. Participants were ensured to maintain the confidentiality. Participation was voluntary and participants had the right to withdraw from the study at any time without any adverse consequences. There were no any invasive methods used during the study.
CHAPTER 4: RESULTS

Results

A total of 368 participants responded out of a total of 385. Among them four refused to participate and the other 13 were not available during the time of survey.

![Study Participants](image.png)

Figure 3. Study participants

4.1. General Characteristics of the participants.

Table 2 demonstrates the general characteristics of the respondents. Based on the caste, Chhetri were the highest in number: mainly 38.3 %, followed by the Dalit which were 31.5 %. The Bramhan were 26.1 % and the Janajaati were 4.1 %. As our study is focused on women above 15 years, there were 32.6 % women in the age group 15 - 25 years. The respondents between 25 - 35 years were 33.4 %, while 20.7 % were between 35 - 45 years. The group from 45 – 55 years was 8.2 % and 3.8 % were in the age group of 55 - 65 years.
Finally, the remaining age group of 65 - 75 was 1.4 %. The most prevalent group of women was between 25 to 35 years and the median age of the women was 30 years.

Table.2. General characteristics of the participants

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Frequency (n=368)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cast</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brahman</td>
<td>96</td>
<td>26.1</td>
</tr>
<tr>
<td>Chhetri</td>
<td>141</td>
<td>38.3</td>
</tr>
<tr>
<td>Janajaati</td>
<td>15</td>
<td>4.1</td>
</tr>
<tr>
<td>Dalit</td>
<td>116</td>
<td>31.5</td>
</tr>
<tr>
<td><strong>Age (years)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 - &lt; 25</td>
<td>120</td>
<td>32.6</td>
</tr>
<tr>
<td>25 - &lt; 35</td>
<td>123</td>
<td>33.4</td>
</tr>
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<td>35 - &lt; 45</td>
<td>76</td>
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<td>45 - &lt; 55</td>
<td>30</td>
<td>8.2</td>
</tr>
<tr>
<td>55 - &lt; 65</td>
<td>14</td>
<td>3.8</td>
</tr>
<tr>
<td>65 - &lt; 75</td>
<td>5</td>
<td>1.4</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uneducated</td>
<td>229</td>
<td>62.2</td>
</tr>
<tr>
<td>Primary level</td>
<td>43</td>
<td>11.7</td>
</tr>
<tr>
<td>Secondary</td>
<td>33</td>
<td>9.0</td>
</tr>
<tr>
<td>Higher secondary and above</td>
<td>63</td>
<td>17.1</td>
</tr>
<tr>
<td><strong>Occupation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normal housewife</td>
<td>245</td>
<td>66.6</td>
</tr>
<tr>
<td>Office work</td>
<td>22</td>
<td>6.0</td>
</tr>
<tr>
<td>Hard work</td>
<td>101</td>
<td>27.4</td>
</tr>
<tr>
<td><strong>Smoking</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>112</td>
<td>69.6</td>
</tr>
<tr>
<td>No</td>
<td>256</td>
<td>30.4</td>
</tr>
<tr>
<td><strong>Alcohol</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never</td>
<td>353</td>
<td>95.9</td>
</tr>
<tr>
<td>Occasional</td>
<td>15</td>
<td>4.1</td>
</tr>
<tr>
<td><strong>Enough income for food</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>222</td>
<td>39.7</td>
</tr>
<tr>
<td>No</td>
<td>146</td>
<td>60.3</td>
</tr>
</tbody>
</table>
In our study, the education level of the women shows that the majority of the respondents (62.2 %) were uneducated. On the contrary, 17.1 % had completed their higher secondary education, 11.7 % were at the primary education level while the remaining 9 % had secondary level education.

Our study revealed that 66.6 % of the women performed normal house wife work.27.4 % were involved in hard work like farming, livestock rearing and load carrying. Only 6 % of the women had office work.

Nearly seventy (69.6 %) percent of participants were smokers and 95.9 % of the participants had never used alcohol. We found that 60.3 % of the participants had not enough food from their family income. The majority of the participants were defined as poor.

4.2 Status of the maternal health of the participants.

Table 3 shows the maternal health status of the respondents.90.5 % women in our study were married and the remaining 9.5 % were single.

Our study shows that 20.1 % of the respondents married before the age of 15 years. 58.2% women married between the ages of 15 – 20, 11.4 % of the women married between 20 - 25. The 25-30 years married age group was 0.8 % .The median age of marriage of women in our study was 16 years.

48.0 % of the women had 3 - 5 children. Women having 1 – 2 children were 29.1 % and 12.9 % had more than 5 children and 9.9 % of the women had no children .The median number of children was 3.
In our study group 37.7 % women had experienced a miscarriage, while 11.4 % women had been through a still birth.

Assessment of menstrual problem revealed that 40.5 % of the women had pain during their cycle. 40.2 % of the women had irregular cycles. 16.3 % had bleeding problem.

63.3 % of the women gave birth to their first child at the age of 15 to 20 years. 31.0 % gave birth between the age group of 20 to 25 years. 3.7 % of the women became mother for the first time before 15 years and only 0.3 % of the women above 30 years gave birth for the first time. The median age for the first child birth was 18 years.
Table 3. Status of maternal health of the participants.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Frequency (n=368)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>333</td>
<td>90.5</td>
</tr>
<tr>
<td>Unmarried</td>
<td>35</td>
<td>9.5</td>
</tr>
<tr>
<td>Age of marriage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 15 years</td>
<td>74</td>
<td>20.1</td>
</tr>
<tr>
<td>15 - &lt; 20 years</td>
<td>214</td>
<td>58.2</td>
</tr>
<tr>
<td>20 - &lt; 25 years</td>
<td>42</td>
<td>11.4</td>
</tr>
<tr>
<td>25 - &lt;30 years</td>
<td>3</td>
<td>0.8</td>
</tr>
<tr>
<td>≥ 30 years</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Number of children</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No children</td>
<td>33</td>
<td>9.9</td>
</tr>
<tr>
<td>1-2 children</td>
<td>97</td>
<td>29.1</td>
</tr>
<tr>
<td>3-5 children</td>
<td>160</td>
<td>48.0</td>
</tr>
<tr>
<td>&gt; 5 children</td>
<td>43</td>
<td>12.9</td>
</tr>
<tr>
<td>Miscarriage and still birth</td>
<td>miscarriage</td>
<td>122</td>
</tr>
<tr>
<td>still birth</td>
<td>37</td>
<td>11.4</td>
</tr>
<tr>
<td>Problem in menstrual cycle</td>
<td>Pain during cycle</td>
<td>149</td>
</tr>
<tr>
<td></td>
<td>Irregular cycle (early or late)</td>
<td>148</td>
</tr>
<tr>
<td></td>
<td>Duration (prolong or short)</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>Bleeding problem(heavy or scanty)</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Other discharges</td>
<td>10</td>
</tr>
<tr>
<td>Age at first childbirth</td>
<td>&lt; 15 years</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>15 - &lt; 20 years</td>
<td>190</td>
</tr>
<tr>
<td></td>
<td>20 - &lt; 25 years</td>
<td>93</td>
</tr>
<tr>
<td></td>
<td>25 - &lt;30 years</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>≥ 30 years</td>
<td>1</td>
</tr>
<tr>
<td>Complication during pregnancy</td>
<td>Nausea, vomiting</td>
<td>234</td>
</tr>
<tr>
<td></td>
<td>Pain abdomen</td>
<td>133</td>
</tr>
<tr>
<td></td>
<td>Bleeding</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td>Swelling of legs</td>
<td>51</td>
</tr>
<tr>
<td></td>
<td>High blood pressure</td>
<td>9</td>
</tr>
<tr>
<td>Complication during delivery</td>
<td>Prolong labor</td>
<td>153</td>
</tr>
<tr>
<td></td>
<td>Retained placenta</td>
<td>56</td>
</tr>
<tr>
<td>Delivery method</td>
<td>All vaginal</td>
<td>295</td>
</tr>
<tr>
<td></td>
<td>Only surgical or LSCS</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Both vaginal and surgical method</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Unmarried and no child were excluded</td>
<td></td>
</tr>
<tr>
<td>Place of childbirth</td>
<td>Hospital</td>
<td>48</td>
</tr>
<tr>
<td></td>
<td>Home</td>
<td>253</td>
</tr>
<tr>
<td>Skilled birth attendant</td>
<td>SBA</td>
<td>92</td>
</tr>
<tr>
<td></td>
<td>TBA and family member</td>
<td>208</td>
</tr>
<tr>
<td>Rest after Delivery</td>
<td>&lt; 15 days</td>
<td>198</td>
</tr>
<tr>
<td></td>
<td>15 - &lt; 30 days</td>
<td>61</td>
</tr>
<tr>
<td></td>
<td>30- &lt; 45 days</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>&gt; 45 days</td>
<td>33</td>
</tr>
<tr>
<td>Abortion</td>
<td>Yes</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>327</td>
</tr>
</tbody>
</table>
Regarding the problems experienced during pregnancy, 63.6 % of the women had nausea and vomiting during pregnancy while pain in abdomen and bleeding from the vagina were experienced by 36.1 % and 12 % of women respectively. Other problems, like swelling of the legs and high blood pressure, were reported by 13.9 % and 2.4 % of women respectively.

Prolong labour and retained placenta were the common complications experienced by 41.6 % and 15.2 % of women, respectively. We found that the majority (80.2 %) of women delivered vaginally, while only 0.8 % women delivered their child by surgical methods and 0.5 % experienced both vaginal and surgical methods.

68.8 % of women delivered at home and 13 % at the hospital. Our data also shows that 69.3 % were assisted by the traditional birth attendants and the family member while 31.7 % were assisted by skilled birth attendants.

Similarly, 59.5 % of the women took rest after delivery for less than 15 days, while 18.3 % took rest for a minimum of 30 days. Minimum 45 days rest was taken by 2.4 % of the women and more than 45 days rest was taken by 9.9 % of women.
11.1 % women reported previous abortion and 15.5 % of the participants said that their mother or sister also have had the problems of uterine prolapse.

4.3 Health service seeking behavior.

The results show that 94 % of the women will visit a doctor if they have a problem of UP, where as 4.3 % of the women said they will visit a traditional healer and 1.4 % said that they will try home remedies and 0.3 % of the women did not want to do anything for the problem. Furthermore, 91.3 % of the participants preferred conventional treatment or allopathic medical treatment and 8.7 % gave preference to traditional medicine.

88 % of the participants believed that TM also cures UP and 63.9 % wanted to choose TM for the treatment of UP. Similarly, 12 % of the participant said that they do not believe in TM to cure UP and 36.1 % did not want to treat UP by TM. The reason behind choosing TM by the participants for the treatment of UP was that TM is cheap (55.7%), effective (38.6%), easy to use (30.7 %), have no side effects (12%) and have no option for other treatment (3%). The
reason given by the participants for not choosing the TM to treat UP was that TM is not effective for UP (26.6 %) and they do not believe in it (8.4 %).

Table 4. Health service seeking behaviour.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Frequency (n=368)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health service seeking behavior</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Will visit a doctor</td>
<td>346</td>
<td>94.0</td>
</tr>
<tr>
<td>Will try home remedy</td>
<td>5</td>
<td>1.4</td>
</tr>
<tr>
<td>Will visit traditional healer</td>
<td>16</td>
<td>4.3</td>
</tr>
<tr>
<td>Just let it go.</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>Treatment preference.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traditional medicine or remedies</td>
<td>32</td>
<td>8.7</td>
</tr>
<tr>
<td>Conventional treatment or allopathic medicine</td>
<td>336</td>
<td>91.3</td>
</tr>
<tr>
<td>Believe on TM for UP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>324</td>
<td>88.0</td>
</tr>
<tr>
<td>No</td>
<td>44</td>
<td>12.0</td>
</tr>
<tr>
<td>Preference of TM for UP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>235</td>
<td>63.9</td>
</tr>
<tr>
<td>No</td>
<td>133</td>
<td>36.1</td>
</tr>
<tr>
<td>Reason for yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>They are effective</td>
<td>142</td>
<td>38.6</td>
</tr>
<tr>
<td>They are cheap</td>
<td>205</td>
<td>55.7</td>
</tr>
<tr>
<td>They are easy to use</td>
<td>113</td>
<td>30.7</td>
</tr>
<tr>
<td>There is no other option for treatment</td>
<td>11</td>
<td>3.0</td>
</tr>
<tr>
<td>There is no any side effect or harmful effect of using it</td>
<td>44</td>
<td>12.0</td>
</tr>
<tr>
<td>Reason for No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>They are not effective</td>
<td>98</td>
<td>26.6</td>
</tr>
<tr>
<td>Do not believe it.</td>
<td>31</td>
<td>8.4</td>
</tr>
</tbody>
</table>
4.4 Prevalence of UP.

Table 5 shows the prevalence of UP. Out of 368 women, 83 reported that they had a problem or the feeling of something coming out from the vagina, with a prevalence of 22.6%.

Table 5. Prevalence of the UP.

<table>
<thead>
<tr>
<th>UP main symptom.</th>
<th>(n=368)</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Falling of womb or feeling of something coming out from vagina</td>
<td>83</td>
<td>22.6</td>
</tr>
</tbody>
</table>

Other symptoms

Regarding the other symptoms of UP, 32.6% of the women said that they had a feeling of fullness of vagina, 45.7% of the women also felt the dragging sensation on the lower pelvic region; 6.6% of the women reported that they feel easy when in lying position. The remaining 7.1% of women told that they had excessive vaginal discharge.

Table 6. Prevalence of Symptoms of UP

<table>
<thead>
<tr>
<th>Symptom of UP</th>
<th>(n=368)</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feeling of fullness of vagina</td>
<td>120</td>
<td>32.6</td>
</tr>
<tr>
<td>Feeling of dragging sensation on the lower pelvic region</td>
<td>168</td>
<td>45.7</td>
</tr>
<tr>
<td>Feeling of easiness when in lying position</td>
<td>98</td>
<td>26.6</td>
</tr>
<tr>
<td>Problem of increased vaginal discharge</td>
<td>26</td>
<td>7.1</td>
</tr>
</tbody>
</table>

Table 7. Prevalence of Symptoms of UP

<table>
<thead>
<tr>
<th>Prevalence of Symptoms of UP</th>
<th>(n=368)</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Having no any symptom of UP</td>
<td>175</td>
<td>47.6</td>
</tr>
<tr>
<td>Having at least one symptom of UP</td>
<td>30</td>
<td>8.2</td>
</tr>
<tr>
<td>Having at least 2 symptoms</td>
<td>78</td>
<td>21.2</td>
</tr>
<tr>
<td>Having at least 3 symptoms</td>
<td>37</td>
<td>10.1</td>
</tr>
<tr>
<td>Having at least four symptoms</td>
<td>42</td>
<td>11.4</td>
</tr>
<tr>
<td>Having all five symptoms</td>
<td>6</td>
<td>1.6</td>
</tr>
</tbody>
</table>
Regarding the prevalence of symptoms of UP, 47.6% women did not report anything. 8.2% had at least one symptom of UP, 21.2% had at least two, 10.1% had at least 3, and 11.4% of the women had four symptoms and 1.6% of the women had all the symptoms asked.

Table 7. Time period of suffering from the problem

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 year</td>
<td>50</td>
<td>26.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 years</td>
<td>48</td>
<td>25.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 years</td>
<td>24</td>
<td>12.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 years</td>
<td>18</td>
<td>9.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 years</td>
<td>26</td>
<td>13.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 years</td>
<td>2</td>
<td>1.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 years</td>
<td>4</td>
<td>2.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 years</td>
<td>1</td>
<td>0.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 years</td>
<td>15</td>
<td>7.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 years</td>
<td>1</td>
<td>0.5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

0.5% of women had suffered from any one symptoms of UP during the last 20 years. 7.8% of the women had suffered from any sorts of symptoms for last 10 years. 13.8% were suffering for 5 years.

4.5 Association of risk factors with UP.

Table 8. Associations of risk factor.

<table>
<thead>
<tr>
<th>Risk factors</th>
<th>Yes</th>
<th>No</th>
<th>Unadjusted OR (CI 95.5 %)</th>
<th>P value</th>
<th>Adjusted OR</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cast</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>33</td>
<td>98</td>
<td>1.259 (0.762-2.083)</td>
<td>0.220</td>
<td>0.961</td>
<td>0.904</td>
</tr>
<tr>
<td>Upper</td>
<td>50</td>
<td>187</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illiterate</td>
<td>73</td>
<td>136</td>
<td>6.037(2.995-12.166)</td>
<td>0.001</td>
<td>3.371</td>
<td>0.009</td>
</tr>
<tr>
<td>literate</td>
<td>10</td>
<td>129</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
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<tr>
<td>Number of</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>children</td>
<td>11</td>
<td>154</td>
<td>0.130 (0.066-0.255)</td>
<td>0.001</td>
<td>0.263</td>
<td>0.002</td>
</tr>
<tr>
<td></td>
<td>Less than 2</td>
<td>Three and more</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------</td>
<td>-------------</td>
<td>----------------</td>
<td>------</td>
<td>------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poverty</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Yes</td>
<td>47</td>
<td>99</td>
<td>2.440 (1.483-4.014)</td>
<td>0.001</td>
<td>1.439</td>
<td>0.271</td>
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<tr>
<td>No</td>
<td>36</td>
<td>185</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age of marriage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 18 yrs</td>
<td>59</td>
<td>148</td>
<td>1.694 (0.980-2.900)</td>
<td>0.034</td>
<td>1.319</td>
<td>0.466</td>
</tr>
<tr>
<td>18 and more years</td>
<td>24</td>
<td>102</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Birth place</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home</td>
<td>78</td>
<td>175</td>
<td>6.686 (2.016-22.170)</td>
<td>0.001</td>
<td>2.697</td>
<td>0.143</td>
</tr>
<tr>
<td>Hospital</td>
<td>3</td>
<td>45</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rest after delivery</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 45 days</td>
<td>75</td>
<td>192</td>
<td>1.758 (0.698-4.428)</td>
<td>0.158</td>
<td>0.278</td>
<td>0.043</td>
</tr>
<tr>
<td>More than 45 days</td>
<td>6</td>
<td>27</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age of child birth</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 20 years</td>
<td>59</td>
<td>142</td>
<td>1.454 (0.828-2.553)</td>
<td>0.120</td>
<td>1.115</td>
<td>0.780</td>
</tr>
<tr>
<td>20 and more years</td>
<td>22</td>
<td>77</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoking</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>37</td>
<td>75</td>
<td>2.252 (1.357-3.739)</td>
<td>0.001</td>
<td>1.109</td>
<td>0.727</td>
</tr>
<tr>
<td>No</td>
<td>46</td>
<td>210</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 8 shows the various risk factors of UP, their odds ratio (adjusted and unadjusted), and significant values. The risk factors favouring UP (< 0.05) were illiteracy, multi-parity, early age at marriage, poverty, home delivery and smoking.

The multivariate logistic regression analysis of the same variables also demonstrated the associations with risk factors; education level, rest time period after delivery, and number of children. The factor like illiteracy, less rest time period immediate after delivery and multi-parity were independently associated with UP (< 0.05).

### 4.6 Traditional remedies used by the participant for UP

Traditional remedies, herbs, food or other body postures reported by the participant for treating UP are visualized in Table 9.
<table>
<thead>
<tr>
<th>Name of the TM or method (local and English name)</th>
<th>Botanical name or scientific name of the herb.</th>
<th>Method of use</th>
<th>Time period of using the treatment</th>
<th>Source of knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debdaar. (local) Himalayan cedar.</td>
<td>Cedrus deodara.</td>
<td>Juice of leaves cooked with mustard oil and insert inside with a piece of cotton cloth</td>
<td>2 - 3 month</td>
<td>From family</td>
</tr>
<tr>
<td>Gahat ko daal (local) Horse gram (English)</td>
<td>Macrotyloma uniflorum.</td>
<td>As a boiled juice once daily.</td>
<td>Minimum 3 month</td>
<td>From grandmother</td>
</tr>
<tr>
<td>Chari amilo (local)</td>
<td>Oxalis latifolia</td>
<td>Mixed with ghee and make paste and used locally for once daily.</td>
<td>1 - 2 month</td>
<td></td>
</tr>
<tr>
<td>Sitting position.</td>
<td></td>
<td>Sitting on a hot stone</td>
<td></td>
<td>From family</td>
</tr>
<tr>
<td>Root of Macheina (local)</td>
<td>unidentified</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leaves of Tatelo (local) Indian trumpet.</td>
<td>Oroxyllum indicum.</td>
<td>Make warm with applying ghee over the leaves and sit on the it.</td>
<td>Unknown</td>
<td>From family</td>
</tr>
<tr>
<td>Baathjari (local)</td>
<td>unidentified</td>
<td>Boiled in water and take orally.</td>
<td>Upto 3 to 4 months</td>
<td>From family</td>
</tr>
<tr>
<td>Leaves of Gaanja (local) Marijuana Leaves</td>
<td>Cannabis sativa</td>
<td>Sitting on the warm leaves</td>
<td></td>
<td>From grandmother</td>
</tr>
<tr>
<td>Position</td>
<td></td>
<td>Sleeping by putting legs upwards</td>
<td></td>
<td>From family</td>
</tr>
<tr>
<td>Kodo (local) Finger millet</td>
<td>Eleusine coracana</td>
<td>Making paste by cooking flour of kodo mixed with ghee and sugar and eat once daily</td>
<td>2 to 3 months</td>
<td>From local priest</td>
</tr>
<tr>
<td>Aanp and Palash (local) (Mango and Flame of the forest)</td>
<td>Mangifera indica and Butea monosperma.</td>
<td>Bark of both trees powdered and boiled in water and take juice twice daily.</td>
<td>for 3 months</td>
<td>From local traditional healer</td>
</tr>
<tr>
<td>Neem (local) Indian lilac</td>
<td>Azadirachta indica</td>
<td>Boiled with water and take bath of lower pelvic region like sitz bath.</td>
<td>Once daily for 1 month</td>
<td>From family</td>
</tr>
<tr>
<td>Musa ko tail (local) (Oil prepared from mouse).</td>
<td></td>
<td>Dead mouse cooked in mustard oil till it dissolve and make</td>
<td>Apply locally twice daily</td>
<td>From traditional healer of</td>
</tr>
<tr>
<td>paste.</td>
<td>for 2 months and avoid heavy works</td>
<td>village.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER 5: DISCUSSION

Discussion

The main objective of the study was to assess the prevalence and risk factor for UP as well as to explore the traditional remedies used by the women of Manma VDC for UP. The study revealed that the prevalence of UP was 22.6 %. The high prevalence of UP in this group of women could be due to various risk factors. The most important risk factors found by our study were low education level, number of children (multi parity) and rest after deliveries (less rest in post partum period) which were independently associated with the UP. Likewise, poverty, childbirth place (home delivery), age of marriage (early marriage) and smoking were also found significantly associated with UP.

Prevalence-Various studies show different prevalence of UP within the country. The Nepal Demographic and Health Survey 2006 found that 7% of the women aged 15 -49 years, were suffering from UP (8, 42). Another population based study conducted in eight hilly, mid hilly and the tarai region by IOM, UNFPA and WHO in 2006 shows an average prevalence of 10 % of UP (42, 43). A study Bonetti et al conducted at the far western region of Nepal also shows a prevalence of UP in one out of four women (25.1%) (39). Likewise, a clinic based report from Rural Health Development Project (RHDP) conducted in three districts from 2005 to 2008 shows 27.4 % of prevalence of UP in the region (44).

Risk Factors- There is a pattern of early marriage in Nepal. Our study also proved that about 80 % of the women got married before the age of 20 and 67 % delivered their first child before the age of 20. Around half of the women (48 %) have had three to five children upto the time of our study. Similar results have been found in a study conducted in Iran: About 80
% of the women had four or more pregnancies, and 83.8 % were married by the age of 20 years. Early age at marriage, early and repeated pregnancies and lack of access to medical facilities and low education level were the common risk factors in the study. (45) Very early marriage (in adolescence) and pregnancy (within first or second year of marriage) can be considered as serious health and social risk factor.(46) The risk of maternal mortality and morbidity are more frequent in pregnancies occurring at a young age. (46, 47) The risk of chronic complications like fistula and prolapse are also higher in teenage pregnancies. The mechanical stress due to repeated pregnancy and prolonged labour are considered as major predisposing factors for major reproductive morbidities such as uterine prolapse in teenage pregnancies. (48)

It has been reported from similar studies in India and Bangladesh that reproductive morbidity and gynaecological disorders have a very high prevalence in rural areas. (49, 50) In our study 72.2 % of the women were uneducated and 60.9 % of the women have three and more children, 69.6 % were smokers, 60.3 % were under poverty and had not enough income for food. TBA and family member were the attendants for 69.3% of the women during their childbirth and 59.5% of the women took less than 15 days of rest after delivery. Like in our study, the most commonly reported causes of the UP in Nepal are extensive physical stress during and after pregnancy, insufficient rest after delivery, less availability of skilled birth attendants, smoking, malnutrition and low maternal weight (27, 37, 38, 39).

**Traditional medicine** - Nearly 50 % of the respondents had used some sorts of treatment such as ingestion of different kind of herbs, foods and various kinds of sitting postures in a hospital based study in Nepal conducted by the Safe Motherhood Network Federation. It also showed that respondents tried TM before finally going to hospitals.(43) A study called “Listening to the felt needs Investigating genital prolapse in Western Nepal” by Bonetti et al
also reported that approximately one out of four women had tried TM to treat UP (39). Similar type of herbal preparations were found to be used for UP by eighty percent of the participants in another study conducted in Nepal (51). In our study 88 % of the women believe that TM also can treat the problem of UP and 63.9 % of the women gave preference to TM for the treatment of UP. The majority of the women reported that TM is cheap and effective. Unlike western allopathic medicine, herbal remedies are not only cheaper and readily available, but also fits well into the cultural and natural environment and is based on fundamental principles of the local belief system. That is why about 80 % of the population in the mountain region still depend on TM for their primary health care (52).
CHAPTER 6: CONCLUSION

Conclusion

This study has identified a 22.6 % prevalence of UP in Manma, the capital of Kalikot district of Nepal. The findings confirm the high prevalence of UP in the region. The majority of the women in our study group were uneducated, multi parous (> 3), poor and smokers. The most common risk factors for uterine prolapse seem to be low education level, multi parity, poverty, early age at marriage, smoking habits and less rest immediately after delivery. The majority of the women in our study still believe in TM for the treatment of UP, the reason behind this was that TM is considered cheap and effective. Cedrus deodara, Macrotyloma uniflorum, Oxalis latifolia, Oroxyllum indicum, Mangifera indica and Butea monosperma were found to be popular traditional remedies used for UP in study area.
CHAPTER 7: STRENGTHS AND LIMITATIONS

Strengths and Limitations

This is the first study done in the Manma VDC of Kalikot district regarding traditional medicine and its use in UP. We used a questionnaire for the data collection. A systematic random sampling method was employed to select the participants. The total required sample size was 385 but only 368 participants were included in our study. Four women did not wish to enroll in the study and 13 were not found during the time of data collection. Despite that, 95.5% of the women entered the study which is enough for the statistical analysis. Very rare literature, financial limitations and time constraints were limitations in our study.

Regarding the validity of the questionnaire, a pre test study was done before conducting the study in the same study area. Despite having a high response rate of participants there could have been a recall bias because of the nature of the study and also due to the social stigma. We assessed some past gynecological and obstetrical history to find the UP prevalence and also some sensitive issue like smoking habits, drinking habits, economic conditions by using designed questionnaires. Some women may have tried to hide their gynecological and obstetrical history and also their daily habits like smoking and alcohol, but we tried to minimize this bias by ensuring them full confidentiality and we also used a female interviewer (nurse) to make the participant more trustworthy in the response.

Regarding the external validity of the study, this was the first study in the region conducted for traditional medicines and their uses for UP. We hope this study can be a reference for further epidemiological studies. Manma, the study area, is the capital of the Kalikot district which lies in the mid western region of the Nepal. All the districts in this region have almost the same geography as well as population characteristics. Conclusively, this study can be regarded as a reference for further studies in the region.
CHAPTER 8: RECOMMENDATIONS

Recommendations

The following recommendations are made for future interventions:

A) Illiteracy and poverty were significantly associated with UP so these issues should be addressed at a national priority level.

B) Early marriage, multi parity, home delivery and less rest during and after pregnancy and delivery are common causes, so, an awareness program regarding family planning and reproductive health should be conducted for the target group.

C) Development of gynecological and obstetrical clinics in the rural areas is strongly recommended.

D) The majority of the population in Nepal still depends upon various traditional medicines because of their cultural beliefs and traditions. It can neither be eliminated nor replaced. So effects of TM should be further studied for their effectiveness or harmfulness, so that people can use TM safely.

E) It is strongly recommended to implement a clinic based health campaign to screen cases along with a treatment and prevention program.
REFERENCES.


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APPENDICES

Sample Questionnaire.

Namaste,
This is a survey on title “Use of Traditional Remedies for Genital Prolapse in Manma of Kalikot district”. So I would like to request you to complete the questionnaires below. This would be a completely volunteer participation and no direct benefit for you. I also would like to assure you that all the data provided to me will be kept anonymous so there is no any harm to you by any means. Thank you.

Name : Address:

Age: Education:

1. What kind of work you usually performed?

   a) Normal house wife,
   b) office work,
   c) hard work like in agricultural field, carrying loads ?
   d) Others if any
2. Are You married?
   a) Yes
   b) No

   How old were you when get married?

3. How many children you have? (living)
   a) Male
   b) Female
   c) no children

   Is there any
   a) Missed abortion
   b) Still birth
   c) Any other incident

4. Do you have any problems in menstrual cycles?
   a) Pain
   b) Irregular (early or late)
c) duration(prolong, short)
d) amount(heavy or scanty)
e) Other discharges.
f) no any problem

5. Do you have any problem of

a) Falling of womb?(feeling of something coming out from vagina).
b) Fullness of vagina.
c) Dragging sensation on lower pelvic or at back.
d) Feeling of easiness when lying down.
e) Increased vaginal discharges

How long you have been suffering from this type of problem.?

6. What will you prefer if you have the problem of Genital prolapsed.

a) will go to visit a doctor
b) Will try some home remedy myself.
c) will go to visit a traditional healer
d) Just let it go.
7. What do you prefer for the problem of genital prolapsed

a) Traditional remedies or medicines.

b) Conventional treatment from allopathy medical system.

8. How old were you when you gave birth to your first child?

9. Have you faced with any problem during the time of pregnancy? (can choose more than one option).

a) nausea, vomiting

b) pain abdomen.

c) bleeding from vagina

d) swelling of legs

e) high blood pressure

f) others if any
10. Did you face any problem during or after the time of delivery?

a) prolong labour pain
b) retained placenta
c) others if any

11. Was all your delivery normal (vaginal) or did surgery (LSCS) or used any other traditional method?

A) for first baby
b) for second baby
and others also if any relevant

12. Where you gave birth your children in

a) hospital
   home
   Other places if any

   If in home
   Was there any midwife or any other medical person presence during the delivery?
   a) yes
   b) No
13. How long time you took total rest before coming to normal work after giving birth?

a) minimum 15 days
b) 30 days
c) 45 days
d) 60 days
e) others if any

14. Do you smoke?

a) yes
b) No

If yes,
How many sticks (in average) per day from how long time period?

Did you smoke before?

a) yes
b) No

If yes,
How many sticks (in average) per day for how long time period?
Do you take alcohol?

a) Never
b) occasional
c) others

15. Is it enough for food from your family income?

16. Have you ever done any abortion for unwanted pregnancy?

a) yes
b) No

if yes, how many times? 

Where?

a) In hospital,
  private clinic,
  home,
  or other if any
By whom?
   a) by specialized doctors,
       traditional healer,
       other medical staff

Why?
   a) To get male child,
       by force of husband or other person
       with mutual understanding between partner,
       others causes if any

How?
   a) By taking oral medicine,
   b) By use of traditional medicine .(orally or vaginally)
   c) DnC
   d) Or any methods

17. Do you remember that the problem of womb falling was also present in your mother or any sisters in your family?
   a)yes
   b)No

   if yes
   a)In mother
18. Do you believe that traditional medicine cures the problem of Genital prolapsed?

Yes
No

19. Do you want to choose traditional medicine for the treatment of genital prolapsed?

a) yes
b) no

If yes
The reason behind this is
a) they are effective.
b) they are cheap.
c) they are easy to use or take.
d) there is no other option for treatment.
e) there is no side effects or harmful effects of using it.
e) others if any
If NO

The reason behind this is

a) they are not effective.

b) i don't believe it.

c) other if any

20. Could you please list the methods or the medicines used locally in genital prolapsed in your area.

| Name of the medicine or method | How to use? | For how long? | How you know this treatment |

THANK YOU.
प्रश्नवली क् स  

मिती

शिर्षक - कालिकोट जिल्ला मन्मा गविस का महिला हस्ता आइँज़न समस्या र त्यस्मा प्रयोग हुने घरआएसी उपचार सम्बन्धी अध्ययन

नमस्ते, म लुपेन्द्र पुरी हाल नोर्को गोम्सो विश्वविद्यालयमा स्नाकोट तह मा अध्ययनरथ छु। यसै क्रम मा मैले कालिकोट जिल्ला मन्मा गविस का महिला हस्ता आइँज़न समस्या र त्यस्मा प्रयोग हुने घरआएसी उपचार सम्बन्धी अध्ययन गर्न लागेको कुर जानकारी गराउदछु।

उदेश्य - अन्य गुलुकुलहरुको दजोमा प्रजानन स्वास्थ्यको अवस्था नेपालमा अत्यन्त दयनिय मानिन्छ। विभिन्न अध्ययनहरूले पति देखाएका छन कि नेपालका महिलाहस्ता आइँज़न अवस्था ठुलो समस्या को रूपमा देखाउर्जो काए। अङ्ग विशेषतः पहाडी जिल्ला हस्ता एको प्रकार व्यापक रूपमा देखा पर्छ। तरस्थ मैले एसै विषय मा अध्ययन गर्न लागेको छु।

गोपनियता - तपाईंको शाहचारित पूर्ण रूपमा स्वयम्सेवकको भूमिका मा हुनेछ र तपाईंले प्रदान गर्नुभएको सुचना हरू पूर्ण रूपमा गौण्य हुनेछन र हाम्रो अध्ययन मा तपाईंको नाम कतै उल्लेख हुने छैन।

लाभ - तपाईंले प्रदान गर्नु भएको सुचनाले रोग को अवस्था को बारेमा जानकारी प्रदान गर्नु र स्थानाधिकरण रूपमा प्रयोग हुने परम्परागत उपचार विद्युतै हो आकलन गर्न मदत पुर्छ। यसै बाट सरकार र विभिन्न स्थानाधिकारी त्यस जिल्ला को प्रजानन स्वास्थ्य को बारेमा अभिसम्पन्न निती तर्जुमा गर्न मदत पुर्छ।

यदि तपाईंलाई यसै समस्याको लागि जानासा भएमा हामी संग संपर्क गर्नुहोला हामी समाधान गर्नु प्रयास गर्नु छौ। तपाईंलाई यसै अध्ययनमा भागभागिनी कृपया अनिबार्यता हुने। अन्त्यमा पुनह तपाईंको शाहचारिता पूर्ण रूपमा स्वयम्सेवकको रूपमा हुनेछ भन्ने कुरा जानकारी गराउन चाहन्छ।

सहभागिताको लागि धन्यवाद।
Title: Use of Traditional Remedies for Genital Prolapse in Manma, the capital of Kalikot District: a community based population study.

Namaste,

I am Dr. Rupendra Puri. I am currently doing my Master of Public Health in University of Tromso, Norway. As a part of programme, I am conducting a research designed to learn about “Use of Traditional Remedies for Genital Prolapse in Manma, the capital of Kalikot District: a community based population study”.

Purpose and background: The condition of reproductive health is very poor in Nepal comparing to other Asian and developed countries. Various studies shows that the pelvic organ prolapse especially the uterine prolapse is really a burning issue among Nepalese women. The prevalence rate is higher in remote mountainous area. So i would like to measure the prevalence of uterine prolapsed in Manma VDC of Kalikot and also would like to know the various traditional methods used for the condition locally.

Confidentiality: Your participation in the study is completely voluntary and confidential. Your name will not be connected with information you provide or the findings of our Study.

Benefits: The informations you provide during this interview may provide an overview of prevalence of uterine prolapse and also the traditional methods used locally for the uterine prolapse among women of Manma VDC of Kalikot district. This might be helpful for government and different organizations working for your benefits to improve their strategies and implicate new policies in the field of reproductive health of the district.

If you have any questions about our research, I will answer them at any time. There is no compulsion to participate in the study. Again, your participation is completely voluntary and your responses to our questions will be anonymous.

We will very much appreciate your participation.

Thank you.