FACTORS RELATED TO UTERINE PROLAPSE AMONG MARRIED WOMEN OF CHILD BEARING AGE IN DANG DISTRICT NEPAL

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A Thesis Submitted in Partial Fulfillment of the Requirements
for the Degree of Master of Public Health program in Public Health
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ปัจจัยที่มีความสัมพันธ์ต่ออาการมดลูกหย่อนในกลุ่มหญิงสมรสแล้วในช่วงอายุที่สามารถมีบุตรได้ ในอำเภอดัง ประเทศเนปาล

นางสุดา เดฟโกตา

วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาสาธารณสุขศาสตรมหาบัณฑิต
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Field d of Study	Public Health
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สุดา เดฟโกตา:ปัจจัยที่มีความสัมพันธ์ต่ออาการมดลูกหย่อนในกลุ่มหญิงสมรสแล้วในช่วงอายุที่สามารถมีบุตรได้ในอำเภอดัง ประเทศเนปาล. (FACTORS RELATED TO UTERINE PROLAPSE AMONG MARRIED WOMEN OF CHILD BEARING AGE IN DANG DISTRICT NEPAL) อ.ที่ปรึกษาวิทยานิพนธ์หลัก: อ.ดร.เทพนาฏ พุ่มไพบูลย์, 109 หน้า.

อาการมดลูกหย่อนเป็นหนึ่งในภาวะกะบังลมหย่อนในสตรี การทำงานหนัก การได้รับสารอาหารไม่เพียงพอ การคลอดบุตรเมื่ออายุน้อย ระยะห่างระหว่างครรภ์น้อยและการขาดบุคลากรที่ได้รับการฝึกในการทำคลอดอาจเป็นสาเหตุให้เกิดอาการมดลูกหย่อนได้ การศึกษานี้มุ่งเน้นที่จะกำหนดปัจจัยที่เกี่ยวข้องกับการเกิดอาการมดลูกหย่อนในหญิงสมรสแล้วในช่วงอายุที่สามารถมีบุตรได้ คือ ในช่วงอายุ 15-49 ปีในอำเภอดัง ประเทศเนปาล การศึกษานี้ใช้รูปแบบการวิจัยเชิงพรรณนา ณ จุดเวลาใดเวลาหนึ่งแบบตัดขวาง และใช้แบบสอบถามสำรวจครัวเรือนในการสัมภาษณ์หญิงสมรสแล้วที่อยู่ในวัยที่สามารถมีบุตรได้จำนวน 385 คนในหมู่ที่ 1 และ 2 ของหมู่บ้านซัวดิยา อำเภอดังโดยการเลือกแบบสุ่มและทำการสัมภาษณ์ผู้ให้ข้อมูลหลักโดยสัมภาษณ์เชิงคุณภาพจากนักสังคมสงเคราะห์จำนวน 6 คน

ผลการศึกษาพบว่าหญิงสมรสแล้วร้อยละ 97 จากกลุ่มตัวอย่าง 385 คน ไม่มีอาการมดลูกหย่อน มีเพียง 9 คนเท่านั้นที่พบอาการดังกล่าว เนื่องจากลักษณะของข้อมูลและจำนวนหญิงที่มีอาการมดลูกหย่อนนั้นพบน้อย จึงวิเคราะห์ข้อมูลด้วย Fisher's Exact testเพื่อทดสอบความสัมพันธ์ระหว่างตัวแปรต้นและตัวแปรตาม พบว่าอายุของหญิงที่อยู่ในช่วงอายุที่สามารถมีบุตรได้มีความสัมพันธ์อย่างมีนัยสำคัญทางสถิติกับการเกิดอาการมดลูกหย่อน (p=0.021)อย่างไรก็ตามไม่พบความสัมพันธ์อย่างมีนัยสำคัญทางสถิติระหว่างรูปแบบการดำเนินชีวิตและการเข้าถึงและการใช้บริการด้านสุขภาพกับการเกิดอาการมดลูกหย่อนในหญิงสมรสที่อยู่ในช่วงอายุที่สามารถมีบุตรได้

สาขาวิชา สาธารณสุขศาสตร์ ลายมือชื่อนิสิต .....

ปีการศึกษา 2555 ลายมือชื่ออ.ที่ปรึกษาวิทยานิพนธ์หลัก .....

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SUDHA DEVKOTA:FACTORS RELATED TO UTERINE PROLAPSE AMONG MARRIED WOMEN OF CHILD BEARING AGE IN DANG DISTRICT, NEPAL, ADVISOR: TEPANATA PUMPAIBOOL,Ph.D., 109 pp.

Uterine Prolapse (UP) is a form of genital prolapse among females. The heavy workload, under nutrition, delivery at a young age, lack of spacing between pregnancies and absence of trained birth attendees are expected to contribute to UP. Study is focused to determine the factors related to UP among married women of child bearing age (15-49 yrs) in Dang district of Nepal. Thus, a descriptive cross sectional study design has been adopted and household survey questionnaire is introduced among randomly selected 385 married women of child bearing age of ward number 1 and 2 of Saudiyar Village Development Committee (VDC) of Dang district of Nepal. Similarly, Key Informant Interview (KII) has been done with 6 social workers to collect qualitative information.

Study had reported that out of the total 385 respondents; significant majority (97.7%) did not have uterine prolapse where as only 9 (2.3 %) of the women of child bearing age had uterine prolapse. Based in nature of data and due to small number of women suffering from UP, Fisher's Exact test has been done to test the relationship between dependent and independent variables. Significant relationship (p=0.021) has been observed between age of the child bearing women and occurrence of UP. However, there is not any significant relationship between the lifestyle related and access &utilization of health services factors with occurrence of uterine prolapse among the women of child bearing age.

Field of Study: Public Health Student's Signature .....
Academic Year: 2012 Advisor Signature .....

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LIST OF ABBREVIATIONS

ANC	:	Ante Natal Care
BMI	:	Body Mass Index
C/S	:	Cesarean Section
CAED	:	Center for Agro-Ecology and development
CBS	:	Central Bureau of Statistics
COPD	:	Chronic Obstructive Pulmonary Disease
DHO	:	District Health Office
FCHVs	:	Female Community Health Volunteers
FP	:	Family Planning
HDI	:	Human Development Index
HHs	:	Households
HP	:	Health Post
KII	:	Key Informant Interview
MCHWs	:	Mother and Child Health Workers
MoHP	:	Ministry of Health and Population
NDHS	:	Nepal Demographic Health Survey
NHRC	:	Nepal Health Research Council
PHCC	:	Primary Health Care Center
PNC	:	Post Natal Care
POP	:	Pelvic Organ Prolapse
RH	:	Reproductive Health
RTI	:	Reproductive Tract Infection
SHP	:	Sub Health Post
SLC	:	School Leaving Certificate
SPSS	:	Software Package for Social Science
STI	:	Sexually Transmitted Infection
TBAs	:	Trained Birth Attendants
TH	:	Traditional Healers
UP	:	Uterine Prolapse

VDCs	:	Village Development Committees
Ward No.	:	Ward Number
Yrs	:	Years

CHAPTER I
INTRODUCTION

1.1 Background

Nepal is one of the landlocked countries and total land area of Nepal is 147,181 square kilometers and occupies an area from 26º 22' to 30º 27' north latitude and 80º 4' to 88º 12' east longitude; elevations range from 90 meters to 8,848 meters. It is rectangular in shape and stretches 885 kilometers in length (east to west) and 193 kilometers in width (north to south) (CBS/Nepal,2010). According to the preliminary results of the 2011 Population Census of Nepal, the population of Nepal stands at 26.6 million (CBS/Nepal, 2012).

A large proportion of Nepalese population is predominantly engaged in agricultural sector. Nepal Demographic Health Survey (NDHS), 2011 data indicate that 68 percent of households own agricultural land, with rural households more likely to own land (71 percent) than urban households (45 percent) and 71 percent of households in the country possess farm animals. Approximately 80 percent of rural households own farm animals, as compared with 30 percent of urban households. Furthermore, a large proportion of the Nepalese population (37 percent) is under age 15 and 11 percent of the population is under five years, while persons age 65 and over account for about 6 percent of the total population. The concentration of the population is high in the 10-14 age group, creating pressure for schooling and adolescent care.

According to Central Bureau of Statistics (CBS/Nepal, 2012); the overall sex ratio (the number of males per 100 females) is 85. Forty one percent of women have never been to school, 23 percent have an incomplete primary education, 6 percent have completed primary school but not continued on to the next level of schooling, 25 percent have some secondary education or have completed secondary school and have not continued on, and about 5 percent have more than a secondary school education. While 7 percent of girls age 10-14 had no education, 12 percent of girls age 6-9 had

no education indicating that school enrollment is quite late among girls. A relatively low proportion of girls in the 6-9 age group have attended some primary education (88 percent) and about one in five men and about two in five women have never attended school (Ministry of Health and Population Nepal/New Era/ ICF International USA, 2012)

Likewise, 76 percent of women and 64 percent of men age 15-49 are currently married. A higher proportion of men (35 percent) have never been married compared to women (21 percent). In combination, divorce, separation, and widowhood are almost twice as high among women as among men (3 percent and less than 2 percent, respectively). In Nepal, marriage occurs between the age of 25-49 yrs among women and 55 percent of them were married by age 18, and 74 percent were married by age 20 yrs. According to NDHS, 2011, the median age at first marriage among women age 25-49 is 17.5 years and TFR for the three years preceding is 2.6 births per woman in Nepal which is considerably higher in rural areas (2.8 births per woman) comp[are to urban areas (1.6 births per woman). . The median age at first birth is 20.1 years for the youngest cohort of women (age 25-29) and almost one-quarter of Nepalese women (23 percent) have given birth before reaching age 18, while about half (48 percent) have given birth by age 20. The median age at first birth is about 20 years across all age cohorts (MoHP Nepal/New Era/ ICF International USA, 2012)

NDHS, 2011 survey result shows that 17 percent of women age 15-19 have already had a birth or are pregnant with their first child. The percentage of women who have begun childbearing increases rapidly with age, from 1 percent among women age 15 to 39 percent among women age 19. Teenage pregnancy is twice as high in rural areas as in urban areas. Teenage childbearing is lowest in the hill zone (16 percent) and highest in the terai (18 percent); however, teenage pregnancy in the terai zone has declined markedly, from 26 percent in 2001. Not surprisingly, early childbearing is inversely related to educational level. For example, teenagers with no education are about four times more likely to have begun childbearing than those with School Leaving Certificate (SLC) and higher education (32 percent and 8 percent,

respectively). The percentage of teenagers who have begun childbearing is highest (22 percent) in the middle wealth quintile and lowest in the wealthiest households (7 percent). At the national level, the proportion of teenage pregnancies has declined by about 10 percent in the last five years but 27 percent of currently married women have an unmet need for family planning services, with 10 percent having an unmet need for spacing and 17 percent having an unmet need for limiting (MoHP Nepal/New Era/ ICF International USA, 2012).

1.2 Statement of the problem

Uterine prolapse (UP) is defined as the descent of one or more vaginal segments: the anterior wall, the posterior wall and the apex of the vagina, with a protrusion of the pelvic organs into or out of the vagina (Swift, 2005). Uterus prolapse is mainly due to insufficiency of the pelvic floor and consists of a herniation of an adjacent pelvic organ into the vagina (Westergren et al., 2004).

Figure1: 2nd degree uterine prolapse

Figure 2: 3rd degree uterine prolapse

Uterine Prolapse (UP) is a form of genital prolapse which affects females all over the world. Global prevalence of UP is estimated to be 2-20 percent in women under age of 45 yrs. This condition is also called as Pelvic Organ Prolapse (POP) and is a common health problem of women all over the world. It is the downward descent of one or more of the female pelvic organs resulting in a protrusion of the pelvic organs into or out of the vagina (Bonetti et al., 2004). It can affect the anterior vaginal wall, the posterior vaginal wall and the uterus or apex of the vagina, or a combination of these (Figure1 and 2).

Though uterine prolapse is not an immediately life threatening condition but condition seriously affects to physical, mental, social and economical health and productivity of women and family , which finally influences to the quality of life of the women. UP condition affects to perform basic activities such as urinating, walking, defecation, standing, sitting and sexual intercourse causing pain and difficulty among the victims (Subba et al., 2003).

Most cases of POP in the western world occur in women in their post-menopause when weakening of the connective tissue support, caused by factors such as vaginal deliveries, pelvic surgery and obesity manifests as a result of changes related to ageing (Hendrix et al., 2002; Jelovsek et al., 2007) whereas prevalence rates of UP is 4-12 % in the general population in developed countries have been reported (MacLennan et al., 2000)

According to the NDHS (2011) survey report; up to 7 percent of women of reproductive age (15- 49 yrs) were found suffering from UP. It is estimated that about 600,000 women in Nepal are suffering from uterine prolapse and about 200,000 women of reproductive age are eligible for curative surgery of uterine prolapse problem. More than 1 million of Nepali women suffer from uterine prolapse, and the majority of these patients are of reproductive age. According to a report on "Unveiling the veil" by the Center for Agro-Ecology and development (CAED) among 2,268 women in Siraha and Saptari Districts in Nepal, 37% of women have uterine prolapse (CAED, 2006). Another report from Nepal revealed that 40% of women with uterine prolapse are of reproductive age having given birth to their first child (Subba et al., 2003).

A hospital-based study carried on 1997 from the Maternity Hospital in Kathmandu investigated the risk factors, beliefs, treatment and care practices of women with prolapse. Out of the 1,147 gynecological patients attending the hospital during the study period, 110 (9.6%) were found to have prolapse. The most significant factors associated with the onset of prolapse were heavy work (94.5%), and lifting

heavy weights during the post-partum period. The great majority (72.7%) of the women had developed prolapse before menopause and 23.7% were 15–25 years old at onset. Similar findings were documented in a community- based reproductive morbidity study commissioned by UNFPA in 1999 (UNFPA, 1999)

The heavy workload, under nutrition, delivery at a young age, lack of spacing between pregnancies and absence of trained birth attendees are expected to contribute to this high prevalence of POP in Nepal. Resting before childbirth is not common and women are usually expected to continue physical labor within a few days after delivery. Furthermore, women in Nepal are responsible for the bulk of housekeeping and farming (Bonetti et al., 2002; Bodner-Adler et al., 2007). In Nepal, as in other developing countries, medical facilities are not, or hardly, available for the majority of people (Bonetti et al., 2002; Furuta and Salway , 2006). This scarcity of health care resources and the taboo on talking about reproductive health issues implicate that many women in Nepal with POP remain untreated and under reported.

Another report states that about six in 10 mothers receive antenatal care from a skilled provider, a significant improvement from 24 percent in 1996. Fifty percent of women make four or more antenatal care visits during their pregnancy, a five-fold increase in the past 15 years. The median duration of pregnancy for the first antenatal visit is 3.7 months. Eighty-two percent of mothers with a birth in five years preceding the survey were protected against neonatal tetanus. More than one in three births in the past five years has been assisted by a skilled provider. Skilled birth attendance has doubled over this period. In the two years before the survey, 45 percent of women received postnatal care for their last birth in the first two days after delivery. Only 38 percent of women are aware that abortion is legal in Nepal. In addition, their knowledge of the specific circumstances under which abortion is legal is poor (MoHP Nepal/New Era/ ICF International USA, 2012).

Eighteen percent of women are malnourished, that is, they fall below the Body Mass Index (BMI) cutoff of 18.5. Fourteen percent of women are overweight or

obese. Women's nutritional status has improved only slightly over the years. Thirty-five percent of women age 15-49 are anemic, 29 percent are mildly anemic, 6 percent are moderately anemic, and less than 1 percent is severely anemic (MoHP/New Era/ ICF International USA, 2012)

More than half of currently married employed women who earn cash make independent decisions about how to spend their earnings. Only 46 percent of currently married women participate in decisions pertaining to their own health care, major household purchases, and visits to their family or relatives. Contraceptive use increases with women's empowerment. Unmet need for family planning decreases with improvements in women's empowerment. Access to antenatal care, delivery assistance from a skilled provider, and postnatal care within the first two days of delivery increase with increasing women's empowerment which can reduce the risk of UP (MoHP/New Era/ ICF International USA, 2012)

Nepali woman, living in remote districts, reaches her 20s; she usually is the mother of several children and often suffering from a pelvic organ prolapse (POP). In a region in West Nepal, 25% of the visitors of free female health care clinics was diagnosed with first-, second-and third-degree uterine prolapse and procidentia. In Bajhang, which is another deprived region of West Nepal, 51.6% of the visitors of a medical camp for women presented with a gynecological problem of which 36% concerned utero-vaginal prolapse (Tuladhar, 2005).

Majority of Nepali girl is expected to do more work from an earlier age and is less likely to be sent to school than her brothers. She will be married off at the earliest opportunity, frequently in her early teens and sent to live with her husband′s family where she will be expected to do the bulk of the physical work. Her family and social status will be directly related to her ability to produce sons and to work hard, and any decisions related to her personal well-being, health, food intake or other activities will be taken by her husband or mother-in-law and family members (Amatya, 2006).

In Nepal, uterine prolapse appears to be widespread, but little published evidence exists. (Boetti et al., 2004). Out of 2,072 women examined in West Nepal; one in four of these women had genital prolapse. The most commonly perceived and noted cause for uterine prolapse was lifting heavy loads, even during the postpartum period. Most reports describe that heavy household and farm working during pregnancy, as well as pre- and post delivery, as the main causes and risk factors for uterine prolapse among women in Nepal. Furthermore, lack of access of skilled attendants during delivery to assist, frequent conceiving of conceptions, giving birth too many children during life, and lack of proper nutritious food were also responsible for uterine prolapse (Boetti et al., 2004; CAED, 2006, Subba et al., 2003). Therefore this study is focused to find out the factors affecting to uterine prolapse among married women of child bearing age group (15-49 yrs) of Dang district of Nepal.

1.3 Rationale of the study

- The National Health Policy of the Ministry of Health and Population/Nepal explains that "in the reproductive health service programme, emphasis will be given to family planning, maternal and child services, prevention and control of sexual disease and HIV/AIDS and other diseases related to reproductive health as well as health education and publicity." (MoHP/Nepal, 1991).
- Second Long Term Health Plan of Nepal (1997-2017) published by Ministry of Health and Population/Nepal has also stated that Government of Nepal is committed to improve health status of the population of the most vulnerable groups, particularly those whose health needs often are not met - women and children, the rural population, the poor, the underprivileged and the marginalized population (MoHP/Nepal, 1998).
- The Three Year Interim Plan (2007/2008– 2009/2010) of Ministry of Health and Population/Nepal seeks to establish the right of the citizen to free basic health care services. Public health issues preventive, promotional and curative health services-will be implemented as per the principles of primary health services (MoHP/Nepal, 2008).

- Ministry of Health and Population/Nepal has given top priority to prevent and provide treatment for uterine prolapse cases. Beside these Ministry of Health and Population/Nepal has developed and endorsed Guideline for prevention and surgical treatment of Uterine prolapsed (MoHP/Family Health Division, Nepal, 2008) in which there is provision of incentives for women who seek treatment for uterine prolapse.
- So prevention and treatment of uterine prolapse is one of the top priority health programmes of Nepal and findings of this study will be very useful to health planners, managers and service users.

1.4 Operational definitions of study variables

Age: Life spent by respondents in completed years.

Religion: Type of religion of the respondents.

Ethnicity/Caste: Type of caste of the respondents.

Educational status: illiterate or informal or completed level or grade of formal education of the respondents.

Age of marriage: Age of the respondent when she got married in completed years.

Number of parity: Total number of children delivered by the respondents.

Family types: Family structure or pattern of the respondents which are nuclear joint and extended family.

Economical status: Annual income of the family of the respondent from different sources in Nepalese rupees.

Occupation: Type of work done by respondent for survival.

Decision making process in family: Process and level of involvement of the respondent to seek health care during illness and pregnancy.

Beliefs: Internal feeling and permanent perception to certain thing and event of the respondents.

Smoking habit: Tobacco consumption practice of the respondent

Exercise: Practice of doing physical exercise (Kagel) by the respondent to prevent UP

Source of information: Attachment with media or individual or groups from where respondent get health information and message.

Access of services: Geographical, socio-cultural and economical access of the respondent to public health facility.

Health service utilization: ANC, FP, Institutional or home delivery, PNC services used by the respondent during last baby or currently.

Knowledge about UP: Knowing institutions, persons, and health information related to uterine prolapse.

1.5 Research questions

What are the factors related to uterine prolapses among married women of child bearing age in a Dang district of Nepal?

1.6 Hypothesis

1. There is no association between socio-economic factors and uterine prolapse among married women of child bearing age.
2. There is no association between life style related factors and uterine prolapse among married women of child bearing age.
3. There is no association between factors related to access & utilization of health services and uterine prolapse among married women of child bearing age.

1.7 Study objectives

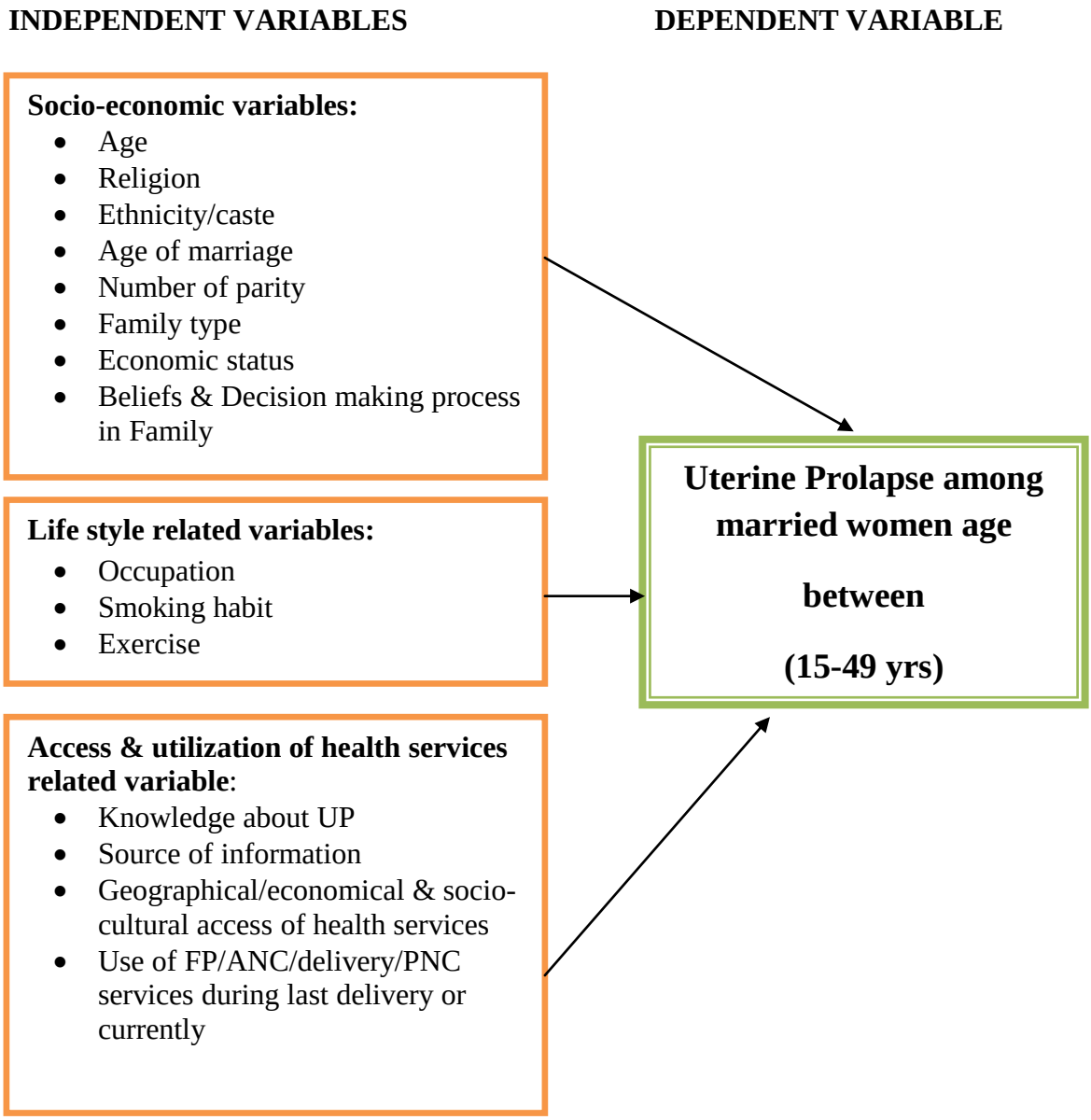
1.7.1 General objective

To determine the factors related to prevalence of uterine prolapse among married women of child bearing age (15-49 yrs) in a Dang district, Nepal

1.7.2. Specific objectives

1. To find out the socio-economic factors related to prevalence of uterine prolapse among married women of child bearing age.
2. To find out the life style related factors related to prevalence of uterine prolapse among married women of child bearing age.
3. To find out the factors related to access and utilization of health services before & during pregnancy and PNC period in relation to prevalence of uterine prolapse among married women of child bearing age.

1.8 Conceptual framework



CHAPTER II
LITERATURE REVIEW

2.1 Uterine prolapse and its magnitude

Uterine prolapse (UP) is also called genital prolapse or uterus prolapse or pelvic organ prolapse. When a weakened pelvic musculature can no longer support the proper positioning of the pelvic organs, most commonly the vagina and uterus than it descent down during UP. Uterine prolapse is commonly classified into three degree: when the cervix appears at the vaginal opening only while the woman is bearing down is called first degree; second degree UP is defined by the cervix descending to the vulva; when the cervix protrudes beyond the vaginal canal and the entire uterus may extend beyond the vulva is defined as third degree uterine prolapse. Uterine prolapse is also frequently related to the prolapse of the rectum and/or bladder into the vaginal wall (Bonetti et al., 2004).

According to UNFPA and Sancharika Samuha in 2007, the development of Uterine Prolapse can be seen in the following categorical division:

First Phase: The uterus leaves its place but is still inside the vagina.
Second Phase: The uterus leaves its place and comes up to the opening of the vagina.
Third Phase: The uterus comes out of the vagina.

Similarly UNFPA and Sancharika Samuha (2007) also describes the following are symptoms of Uterine Prolapse:

- A feeling of heaviness in the lower abdomen;
- Pain in the lower abdomen;
- Vagina remains open; and
- Pain or uncomfortable feeling during sex.

While looking at the global prevalence of uterine prolapse, 30% of all women who have delivered a child are found affected with UP. For every maternal death, an estimated six to 15 women face debilitating morbidity. The incidence of UP is 17% in

Australia and U.S., 8.5% in France and 27% in Turkey. Thus global prevalence of UP is estimated in between 2 -20 % under the age of 25 years (Sah et al., 2010). Similarly, in another article Bonetti and others (2004) spell out that the global occurrence of uterine prolapse is estimated to be 2 to 20 percent among the women of under age 45 years.

UP encompass a broad range of debilitating conditions predominantly affecting middle-aged and elderly women. Over the next 30 years, it is predicted that increase in prevalence of UP demands more for services to care for female pelvic floor disorders will increase at twice the rate of growth of women between the ages of 30 and 89 years (Luber, 2001). In 1999, Samuelsson and colleagues, examined 487 women in Sweden and the results of this study showed 30.8 percent of the prevalence of any degree uterine prolapse. Only 2 percent of all women had a UP that reached the introits (Samuelsson,et al., 1999). Likewise, uterine prolapse is also one of the most widespread reproductive health problems among women in Nepal and it is estimated that over 1 million of Nepalese women suffering from the pelvic organ prolapse disease (Bodner-Adler et al., 2007).

At present, 600,000 women in Nepal are affected by the disease; and among them, 200,000 require immediate treatment (UNFPA and Sancharika Samuha, 2007). A study of field-based health camps in 10 districts of Nepal conducted by the Safe Motherhood Network revealed the following statistics about women afflicted by Uterine Prolapse: among the 415 patients who came for health check-ups, 70 percent represented women from the hilly region and 30 percent represented women from the plains; fifty-eight percent were Brahmin/Chettris, while the rest were from indigenous groups and Dalits; although the disease is usually detected among Nepali women aged 25 to 50 years, the study found that a 16 year-old girl and 80 year old woman were also among the patients. Study also states that 86 percent of the women were already married by the age of nineteen and among these women, 31 percent were women between the ages of 20 and 24 and 19 percent were women between the ages of 15 and 19; ninety-five percent of the women had carried large and heavy loads within 45

days of child birth; Sixty-one percent of the women had between three and five children (UNFPA and Sancharika Samuha, 2007).

According to UNFPA and Sancharika Samuha (2005), 600,000 women in Nepal suffer from UP and 200,000 women need immediate surgery. A high 69.1% of the women have first degree pelvic organ prolapse (POP), and the other 30.9% suffer from second and third degree uterovaginal prolapsed (UVP). 16.9% respectively, while 1.4% have procidentia. Schaaf and others (2007) reported that in a region in West Nepal, 25% of the visitors of free female health care clinics were diagnosed with first, second and third degree UP and procidentia. In Bajhang, another deprived region in West Nepal, 51.6% of the visitors of a medical camp for women have gynecological problem of which 36% concerned UP (Bodner-Adler et al., 2007). In 2004, Bonetti, Erpelding, and Pathak conducted a clinic-based study, which examined 2,072 women with gynecological complaints. They found that one fourth had UP, of which 95% self-reported their prolapse in Nepal (Bonetti, et al., 2004).

Another study done in remote area of Nepal reveals that there is one in fourth women complained of UP, and one in four were diagnosed with UP. Over one fifth of women are reported the onset of prolapse before the age of 20 years (Government of Nepal, GTZ, and UNFPA, 2002)

2.2 Causes of uterine prolapse

Uterovaginal prolapse is the downward displacement of uterus from its normal anatomical position and it's etiology is not known (Okonkwo et al., 2003).The exact cause of uterine prolapse is unknown, but giving birth to more children, excess intra-abdominal pressure, tissue atrophy secondary to ageing and estrogen loss, joint hyper mobility and congenital ligament weakness are some of the contributing causes for uterine prolapse (Banu, 1997; Fritzinger et al., 1997; Nichols and Randall 1996). Another study carried out in US disclosed 20 percent of uterine prolapse among post-menopausal women group (Davila, 1996). In a 1993 physician diagnosis in Egypt

found that 56 percent out of 509 ever-married women between the ages of 14 and 60 had uterine prolapse (Younis et al., 1993).

Likewise, 694 parous non-pregnant women in Istanbul were examined in 1997. Out of those 694; 27 percent of them have severe ‘‘pelvic relaxation’’ (Bulut et al., 1997). Another study was done among 440 women under the age of 35 yrs during 1997 in southern India and 3.4 percent of them had prolapse (Bhatia et al., 1997). In a 2000 study in northern India, of 2,990 married women surveyed for prolapse and uterine prolapse was noticed in 7.6 percent (Kumar et al., 2000).

Similarly other studies has showed that parity and obesity were strongly associated with increased risk for uterine prolapsed (Hendrix et al., 2002).The loss of uterine support is resulting from early marriage, unassisted home delivery, lack of health facilities, social taboos, unbalanced and non-nutritious diet, multiple child birth, heavy manual work in the immediate puerperium in the majority of rural Nepalese women (Gurung et al., 2007; Panta, 2011). Most of them do not attend a health facility for regular antenatal care or delivery. The recovery period after delivery is denoted by ethnic prescriptions and household needs that disregard the woman’s physical readiness to resume work (Earth, 2002). Especially extensive physical labor, smoking while having chronic obstructive pulmonary disease and low maternal weight due to lack of nutritious food are mainly responsible for this common disease (Bodner-Adler et al., 2007).

Inaccessibility to quality maternal health care (Skilled Birth Attendant and Emergency Obstetric Care), poverty, gender discrimination related to health (RH/maternal care), nutrition (life cycle), workload during post natal period and domestic violence are also found related to prevalence of uterine prolapse. In particular, no additional food during pregnancy and post natal period, absence of work load sharing during pregnancy and inadequate post natal care contribute to UP. Prolonged labor, birth of big babies, unsafe abortions, sexual intercourse immediately after delivery, tightening of stomach using *patuka* (a piece of cloth used to wrap

around the stomach) after delivery (UNFPA and Sancharika Samuha, 2007; Earth and Stahpit, 2002), hypertension and diabetes are supposed to be other causal factors of UP (Bodner-Adler et al., 2007).

The results from the study conducted in Western Nepal confirm that UP as a significant health problem. The most common perceived cause of UP was lifting heavy loads, including during the post-partum period. The adverse effects reported included difficulty urinating, abdominal pain, backache, painful intercourse, burning urination, white discharge, foul-smelling discharge, itching, and difficulty in sitting, walking, standing and lifting.

Similarly, a study conducted in 2000 in Tamil Nadu, India, found that of 37 women who self reported as uterine prolapse and 32 of them were diagnosed with the uterine prolapse (Ravindran et al., 2000), it suggests a high correlation between self-reported and diagnosed prolapse. Age at onset of uterine prolapse is also a factor for self reporting but it was commonly thought that most of the uterine prolapse problem occurs during post-menopausal, but growing facts suggests that in some countries and cultures, uterine prolapse occurs at much younger ages. For example, in the Tamil Nadu study,19 of uterine prolapse diagnosed women were aged between 15-50 yrs, and the mean age at which women first developed symptoms was found 26.2 yrs. Same study of Tamil Nadu states that many of them had suffered from the condition for more than ten years (mean 12.3 yrs. Ten out of 37 of the women stated that they had developed symptoms after their first delivery and 3 had prolapse after their second delivery, 11 after their third delivery, 9 after their fourth to sixth delivery, and 2 women had suffered from uterine prolapse after their ninth delivery. In same study, out of the 32 uterine prolapse suffered women, 18 of them had perceived heavy manual labor following delivery as the major causes including difficult labor, accidents, first birth at a young age, frequent childbearing and surgery as minor cause for their uterine prolapse (Ravindran et al., 2000).

Swift, 2000 reported that higher age, increasing parity, increasing number of vaginal births, delivery of a macrosomic infant, postmenopausal status and hypertension are associated with a statistically significant trend toward increased pelvic organ prolapse among the women. Women's age, strength of pelvic floor muscle and, giving birth to more children and maximum birth weight of child were found significantly and independently associated with the presence of uterine prolapse, whereas woman's weight and sustained hysterectomy were not associated to the prolapse (Samuelsson et al., 1999). The results of a study from Italy indicate that the risk of uterovaginal prolapse increases with the number of vaginal births and is higher in overweight women (Progetto Menopausa Italia Study Group, 2000).

In contrast to these studies, malnutrition was found dominant risk factor for uterine prolapse in Nepal, and a great percentage of women with prolapse were of reproductive age having given birth to their first child. In summary, the occurrence as well as the risk factors for uterine prolapse differs between data from Europe/USA and Nepal (Bodner-Adler et al., 2007).

In Nepal, extensive physical labor, especially during and after pregnancy, low availability of skilled birth attendants and rapid succession of pregnancies and malnutrition due to lack of nutritious food were mostly reported common cause for uterine prolapse (Bonetti et al., 2004; Westergren et al., 2004; CAED, 2006).

Another study done in Nepal in 2007 also states that extensive physical labor during pregnancy and immediately after delivery, low availability of skilled birth attendants, smoking while having Chronic Obstructive Pulmonary Disease (COPD) and low maternal weight due to lack of nutritious food are mainly responsible for this common disease. Furthermore, most of the heavy work, weight lifting, long walking and household works is done by the women in Nepal, and in addition, the exhausting work at the rice fields is the typical work of a Nepalese woman which exaggerates the chances of having uterine prolapse (Bodner-Adler et al., 2007).

Furthermore, majority of the Nepalese women do not have access of information and health services. They don't know the cause of uterine prolapse and it can be treated because they are often too embarrassed to ask for help from family and others (Bodner-Adler et al., 2007). A study done in Bhaktapur hospital of Nepal find out that nearly half of the women suffering with uterine prolapse were smokers. While smoking and uterine prolapse seem to be associated because chronic cough increases the pressure in the abdomen and finally to the uterine prolapse and another most common cause of prolapse was lifting heavy loads during daily activities by the women. This study also reported that 64.3 percent of women with uterine prolapse had rest for only about 1 month duration after delivery, while 26.73 percent of others had started working in field and agricultural farming after 2-3 weeks of delivery (Subba et al., 2003).

Therefore, the main causes/reasons for Uterine Prolapse are the following:

- Carrying heavy loads or strenuously working six weeks after child birth;
- A large number of child births or spacing successive child births too close to each other;
- Giving birth at a tender age;
- Lack of nutritious food during pregnancy and after child birth;
- Unsafe abortions;
- Applying pressure before the delivery stage;
- Pressing of the lower abdomen after child birth;
- Weakening of the pelvic floor where the uterus rests;
- Separation of the pelvis from the pelvic floor while giving birth, child-birth using tools, giving birth to a large baby through the vagina;
- Attempts to give birth by pressing the stomach in longer duration of the delivery period;
- Continuously coughing after child birth;
- Applying more pressure than required before the time of childbirth;
- Lifting heavy objects after child birth;

- ♦ Malnutrition, dysentery for a long period, lack of blood; and
- ♦ Lack of rest after child birth etc

Similarly, Uterine Prolapse can occur in women from a variety of backgrounds (e.g. plains or hills) ages (i.e. young and old), and characteristics (e.g. fat or thin), but the following women are more susceptible to the disease:

- Women who have not eaten sufficiently nutritious food;
- Women who carry heavy loads within six weeks after child birth;
- Women who give birth to many children and/or space successive births in inadequately short durations;
- Women who persistently smoke and/or cough; and
- At times but rarely, women who give birth for the first time sometimes find that their uterus can drop down during delivery or right after the delivery etc.

2.3 Problems arising from uterine prolapse

Comparatively very few reports are available about uterine prolapse in Nepal. In the 1970, mission hospital in Western Nepal reported that uterine prolapse is a condition that causes untold misery to thousands of women and therefore warrant treatment and prevention. This hospital examined suspected 15,00 women and nearly all of them had second and third degree prolapse so UP is most common but hidden health problem among Nepalese women (Watson, 1975). As in the Tamil Nadu study, a large percentage of the women (10 percent) suffering from uterine prolapse were below the age of 20 yrs (Ravindran et al., 2000). In 1997, data were collected in a health camp in Jumla, a remote region in mid-western Nepal. Among the 720 gynecological patients seen, 17 percent were diagnosed with uterine prolapse (Shakya, 1997).

The problems arising from uterine prolapse has great affect on daily activities and quality of life of the women. Uterine prolapse causes difficulty walking, sitting, lifting and squatting to the suffered women. Lower back pain, abdominal pain, painful intercourse and difficulty urinating and defecating are also reported by the women

suffering from uterine prolapse. Women with uterine prolapse frequently complain of something falling out or heaviness in the genital area (Smith et al., 1996; Ravindran et al., 2000; Watson, 1975). A study done in Nepal reveals that backache, pain during intercourse, abdominal pain, , white watery discharge, burning during urination and difficulty in lifting, sitting and standing, difficulty in voiding are the major problems or troubles experienced by the women with uterine prolapse (Bodner Adler et al., 2007).

Uterine prolapse not only occurred among more child birth giving women with insufficient spacing between births who were in their post-menopausal years, but also common in young women with no or only one birth, who worked carrying heavy loads. More than half (58.1%) of the women in the clinic-based study and 13 of the 24 women in the ethnographic study had completed two pregnancies or fewer when the prolapse occurred. Perceived causes strongly suggest that multiparity and post-menopause may not be primary causes of prolapse in Nepal, but rather that an increase in intra-abdominal pressure, especially during the immediate post-partum period, is a contributing cause of and risk for genital prolapse. The findings also provide a glimpse into the quality of life of women with prolapse. In the ethnographic study, it emerged that women's value within family and society was directly related to their ability to bear children and to work. Difficulty handling basic activities jeopardized the women's ability to support their families and had a great impact on their social, physical, familial and emotional lives. The breadth and frequency of complaints show that prolapse has an overarching negative effect on women's lives (Bonetti et al., 2004).

Another study conducted in Kathmandu Valley hospital, the median age at the time of clinical presentation was 50 years, and the median maternal weight was 45 kg. Most of the Up suffered women were smokers, and most of them were postmenopausal. Thirty-five percent of the UP suffered women had a chronic obstructive pulmonary disease (COPD), 16 percent were suffered from hypertension and 5 percent had diabetes mellitus.

The majority of the women with uterine prolapse were of Newari origin (84%), and nearly all women stated that they were working heavily during pregnancy as well as in the postpartum period (87%). This study spelled out that extensive physical labor during pregnancy and immediately after delivery, low availability of skilled birth attendants, smoking while having COPD and low maternal weight due to lack of nutritious food are mainly responsible for uterine prolapse (Bodner Adler et al., 2007).

Therefore the following problems arise from the development of Uterine Prolapse:

- Pain or difficulty while using the toilet as a result of the pulling of the urinary bladder along with the uterus;
- Pain or difficulty during intercourse. In addition, the possibility exists of the transmission of a sexual disease since the husband might have sex with other women if the uterus is large and fully outside;
- The delivery period may be difficult and longer as it will be very difficult for a woman who has Uterine Prolapse to give child birth. Therefore, many women must undergo child birth in a health institution or receive the assistance of health workers;
- Pain and difficulty while walking as at times, the uterus can come out while walking and due to friction of the two legs, a painful injury can occur which can be painful;
- Pain and difficulty while doing physical work as this can cause pressure to the stomach muscles which then push the uterus further down;
- When the uterus drops down, a balloon-like package comes out of the vagina and this can become attached or get rubbed against the inner part of the woman's clothes which may results in injury and discharge of foul-smelling water and blood;
- Pain can occur in the waistline area because of the pressure on the muscles when the uterus drops down; and
- The lower abdomen can also start to become painful because ofthe reasons aforementioned.

2.4 Prevention of uterus prolapse

Uterine prolapse is preventable conditions so following suggestions are offered as the preventive measures for uterine prolapse (UNFPA and Sancharika Samuha, 2007):

- **Eating nutritious food**: Women must eat nutritious food such as spinach, beans, milk, yoghurt, fruits, eggs, fish and meat, etc. Nutritious food is very important for pregnant women and for women after child birth which is widely available in the villages;
- **Short-delivery period**: If the delivery period exceeds more than 12 hours, a health worker must be consulted. Longer delivery periods will put pressure on vaginal and stomach muscles which will weaken them and possibly result in the dropping of the uterus;
- **Special exercise**: When a patient is diagnosed with first stage prolapse, the patient should avoid lifting heavy weights while Kegals exercise and yoga could also help. Likewise, when a patient is diagnosed with second degree prolapse, a vaginal pessary ring can be used until a patient is ready for surgery. In order to prevent the uterus from dropping, special exercise called 'Kagel' can be practiced (please see the Figure 3) for a detailed look into how to perform this exercise.

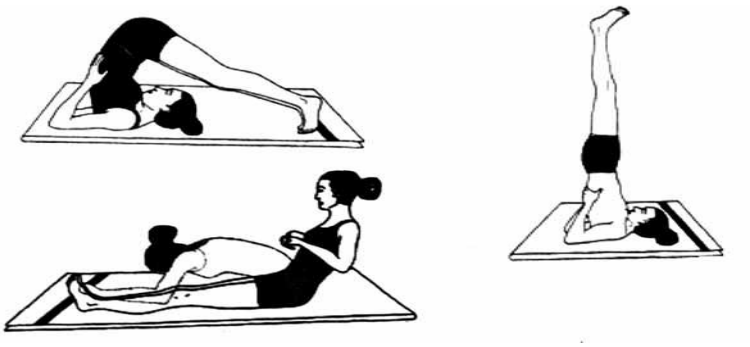


Figure 3: Special "Kagel: exercise to prevent Uterine Prolapse

- **Large liquid intake**: The intake of liquid is very important because this can clear the stomach and ease pressure on the muscles;

- **Not carrying heavy loads**: If there is a need to lift a heavy load, the knee should be used to lift the weight instead of the whole body. Alternatively, it is best to ask someone nearby to help lift the weight unto woman's back.
- **Receiving proper rest**: There is a need to receive appropriate rest during pregnancy and after child birth. Only light work should be done and heavy loads avoided. More rest should be taken during these times with a minimum of six weeks of rest after child birth.

2.5 Treatment of uterus prolapse

According to UNFPA and Sancharika Samuha, 2007 following are the treatment measure for uterine prolapse (Fig: 4);

1. Pessary: One way to treat uterine prolapse is with a pessary. A ring pessary is a plastic or rubber device that is inserted into the vagina which holds the uterus. After a health worker inserts this into the vagina, there is no need to do anything for three months. Every three months, it has to be taken out, cleaned properly and inserted back after boiling in hot water. If a woman becomes pregnant while the pessary is inserted then it must be taken out in a health institution;

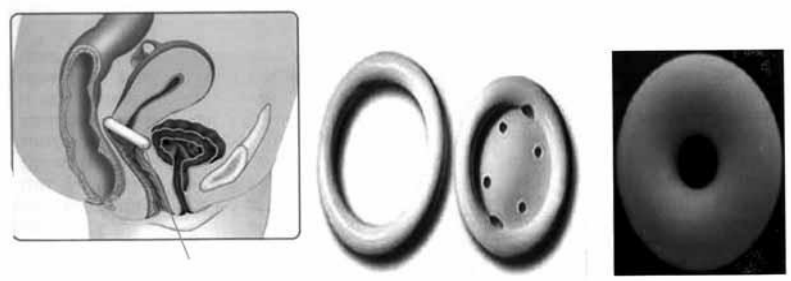


Figure 4 Pessary use in treatment of Uterine Prolapse

2. Consultation: A health institution must be consulted if a woman feels that her uterus is dropping or if someone else finds out that the uterus is dropping. It is

necessary to find out information about ring pessary and other treatment devices by visiting a nearby hospital, health post or sub-health post;

3. Hospital visit: The ring pessary cannot hold the uterus in a situation where the uterus is fully out. In this situation, a woman must bring herself to a hospital;

4. Surgery: Uterine Prolapse can also be treated through surgical procedures. Trained doctors can remove the uterus through surgery; and

5. Post-surgery considerations: After the surgery, women will be able to perform their normal work but will not be able to undergo menstruation or become pregnant.

CHAPTER III

METHODOLOGY

This chapter describes about the methods and designs related to study. So, it gives answers about how, where, related issues of this study. Furthermore, it also gives details about the variables under study, techniques & tools and data management & analysis process of this study.

3.1 Study area/ site

Dang is one of the districts, out of 75 district of Nepal. It is divided into two municipalities and 39 Village Development Committees (VDCs). Dang is multiethnic and one of the low Human Development Index (HDI) district of Nepal.

Table 1 Households & population distribution of Saudiyar VDC by sex

Ward No.	Total number of households (HHs)	Sex wise distribution of population (yrs)		Total population
		Male	Female	
1	232	665	642	1,307
2	248	620	621	1,241
3	269	712	757	1,469
4	238	694	702	1,396
5	313	832	821	1,653
6	190	548	563	1,111
7	287	651	678	1,329
8	237	698	706	1,404
9	264	773	774	1,547
Total	2,278	6,193	6,264	12,457

Source: VDC profile of Saudiyar VDC, 2011

Last year (2010/11), District Health Office (DHO) has carried out screening tests for Uterine Prolapse in this Saudiyar VDC among the women of child bearing

age (15-49 years) and total 159 women were screened. Out of those, 20 (12.6 %) women had certain degree of uterine prolapse and were referred to the hospital for treatment. So, Saudiyar VDC of Dang district has been selected based on above evidence in consultation with DHO. Most of the people of this VDC are endogenous *Tharus* and remain are other caste/ethnicity. Saudiyar VDC is composed of nine units i.e., wards. After selection of VDC, ward number 1 & 2 of Saudiyar VDC has been randomly selected for this study.

As per the VDC record/profile of Saudiyar VDC Office, socio-demographic feature of Saudiyar VDC is given in Table 1. Saudiyar VDC has total 2278 households with 12457 populations. Furthermore, the study site (ward number 1 and 2 of Saudiyar VDC) has total 480 households (232 in ward-1 and 248 in ward-2) with total 2,548 population, which is comprise of 1285 male and 1263 female population. Furthermore, distribution of population of study site by caste (Table 2), and level of education (Table 3) is as follow;

Table 2 Population distribution of study site by caste

Ward No.	Total HHs	Caste								Total
		Bra	Chh	Tha	Mag	Kam	Dama	Yog	Others	
1	232	295	628	115	190	36	43	-	-	1,307
2	248	403	226	452	84	10	15	29	22	1,241
Total	480	698	854	567	274	46	58	29	22	2,548

Bra = Brahmin; Chh = Chhetri; Tha = Tharu; Mag = Magar; Kam = Kami; Dam = Damai; Yog = Yogi

Source: VDC profile of Saudiyar VDC, 2011

Table 2 shows that majority of the people of study site belong to Cheetri (33.5 %) by caste, followed by Brahmin (27.4%), Tharu (22.3%) and remaining were Magar, Kami, Dami, Yogi & others.

Large majority of the population of study area are literate followed by primary and lower secondary level of education (Table 3)

Table 3 Population distribution of study site by level of education

Ward No.	Total HHs	Level of education								Total
		Il	L	P	LS	S	HS	B	M	
1	232	104	1,203	196	181	231	102	36	15	2,068
2	248	155	1,086	221	165	112	55	44	17	1,855
Total	480	259	2,289	417	346	343	157	80	32	3,923

Il = illiterate; L = literate; P = primary level; LS = lower secondary level; S = secondary level; HS = higher secondary level; B = level 12 to Bachelor; M = Master level and above

Source: VDC profile of Saudiyar VDC, 2011

3.2 Study design

Descriptive, cross sectional study design has been adopted to answer the research question of this study.

3.3 Study methods

Both qualitative and quantitative research methods have been be applied for the study. Key Informant Interview (KII) is used as qualitative and Household survey has been applied as quantitative method in this study.

3.4 Study population

- All married women of child bearing age groups (15 to 49 yrs) of ward number 1 and 2 of Saudiyar VDC of Dang District of Nepal were the study population for survey method of data collection.

- All school teachers, Female Community Health Volunteer (FCHVs), Mother and Child Health Workers (MCHWs) and In-charge of health facilities of study area were study population for Key Informant Interview (KII) method of data collection.

3.5 Sampling techniques and sample size

Firstly, name list of married women of child bearing age (15-49 yrs) of every households of ward 1 and 2 of Saudiyar VDC were identified from Village Development Committee and Female Community Health Volunteer register records. According to record of VDC, total female population of study site is found 1,263 (49, 6%). Whereas, women of child bearing age (15-49 yrs) were 786 (30.8%) out of 1263. Then after, total households and name list of these 786 women was prepared(Table 4).

Table: 4 Distribution of study population by sex

Ward No.	Total number of households (HHs)	Sex wise distribution of population (yrs)		Total population
		Male	Female	
1	232	665	642	1,307
2	248	620	621	1,241
Total	480	1,285	1,263	2,548

Source: VDC profile of Saudiyar VDC, 2011

Secondly, out of those listed women of child bearing age (15-49 yrs); who were found migrated out (3 women of child bearing age) from the study site were identified with the help of migration records of the VDC and those migrated 3 women were excluded from the list and final list was developed. So, finally 783 women of child bearing age were prepared and for each woman numbering was done from 1 to 783. Thirdly, this list was the sampling frame for the study and the sample size has been be determined by using following equation (Yamane, 1973),

$$n = \frac{Z_{\alpha}^{2} pq}{d^2}$$

Where,

n = desired sample size

z = standard normal deviate, usually considered 1.96 at 95% confidence interval

α =level of statistical significance

p = proportion of the target population with particular character. Since there was no study on factors related to prevalence of uterine prolapse so it was taken as 50% (p = 0.5).

q = 1-p (0.5)

d = desired degree of accuracy, considered 0.05.

By using this equation; sample size (n) = $(1.96)^2$ 0.5 x 0.5 / $(0.05)^2$ = 384.16. Therefore, the estimated sample size for Household survey is 385 for this study.

By using systematic random sampling method, 385 women were selected out of 783 in two frequency interval from study population for this study for HH survey. First women was selected/identified by using random number, then after each women were selected in the gap the of 2.Therefore, this sample size covers 49.2 percent of women of child bearing age (15-49 yrs) of study site (ward 1 & 2 of Saudiyar VDC). If any of the selected women were found absent in home for long time, alternative women were included for HH survey from adjoining house.

Similarly, total 6 KII respondents were selected purposively from study site for this study. Among them one was the Public health facility (Saudiyar Sub health post) In-charge of Saudiyar VDC, one Mother and Child Health Worker (MCHW) of same health facility, two were female teachers of the schools and two were the Female Community Health Volunteer (FCHVs) of ward1 and 2 of Saudiyar VDC.

3.6 Variable under study

Based on literature review following dependent and independent variables has been included for the study, which answers the research question.

a) Independent variables

Socio-economic variables: age, religion, ethnicity/caste, educational status, age of marriage, number of parity, family types, economical status, beliefs & decision making process in family.

Life style related variables: Occupation, Smoking habit & Exercise

Access & utilization of health services related variables: knowledge about preventive measure of UP, source of information, economical/ socio-cultural & economical access of health services and use of FP/ANC/delivery/PNC services during last baby or currently

b) Dependent variable

Uterine prolapse among married women of child bearing age (15-49 yrs) is the dependent variable for this study.

3.7 Study period

The study has been completed in between October 2012 to April 2013

3.8 Inclusion criteria

- All married women of child bearing age (15-49 yrs) living within ward 1 & 2 of Saudiyar VDC of dang district and selected for the study through systemic random sampling methods are included for household survey method of data collection.
- Selected women who were available at households during data collection have been included for household survey.
- Health facility In-charge, Mother and Child Health Worker (MCHW) of Saudiyar VDC were selected purposively of Key Informant Interview (KII). Similarly, school teachers and Community Health Volunteers of study site (ward 1 & 2) have been also included purposively for KII method of data collection.

3.9Exclusion criteria

- The respondents who are found unable to communicate verbally and orally to interview appropriately were excluded from the study.

3.10 Data collection techniques and tools

Both *quantitative* and *qualitative* techniques and tools were developed and implemented to collect the data based on research question and objectives.

Quantitative method: As Quantitative method, Household (HH) survey has been adopted in this study. A set of household questionnaire were developed to interview with women in HH survey and tool includes close ended & open ended questions. Household survey tool were implemented among the selected respondents (married women of 15-49 yrs) of households. All of the selected women for survey were interviewed and screened for uterine prolapse during survey by study team and PI (please refer appendices: 1 for HH survey tool)

Qualitative method: Qualitative method applied for the study includes Key Informant Interview (KII). KII were done with health facility In-charge, MCHW, school teachers and Female Community Health Volunteer. For KII method of data collection, a set of KII guideline (open ended) were developed based on research questions and objectives. Total 6 KIIs were done for the study. KII method of data collection has generated qualitative information (please refer appendices: 2 for KII tool).

Qualitative data generated from KII have answered related to reasoning like why and during analysis qualitative so, qualitative finding has been blended with quantitative which also helped to enhance the validity of the study.

3.11 Data collection process

Coordination with DHO helped for the support of local level public health facility during the study. For the study, ten research assistants (5 per wards) were hired locally and trained for 2 days about how to administered questionnaire and

objectives which helped to boost their capacity and participation on the study. They were also trained about the procedure and process regarding to screening of uterine prolapse. All ten research assistants were from nursing background that has important and positive influence while communicating and interviewing with women about UP related issues in local context including uterine prolapse screening process. After completion of training of research assistants, pretest of the household questionnaire was done in ward no 7 of Saudiyar VDC among 40 women of child bearing age.

Necessary correction in survey tool was made based on the feedback of pretesting of tools; it helped to design the tool accordance to local context and also enhanced reliability of the study. Before conducting the interview, each research participant were described about the objectives of the study and it's implication in detail then after face to face survey questionnaire were administered and interview were done. PI was directly involved throughout the study and close supervision was done during the study. At the end of the day, all tools were cross checked by the PI for data quality. Completed tools were sealed and kept for data processing.

3.12 Data management and analysis process

Processing: Collected data were verified and coded daily after completing the field activities. Prior to the data entry, data were cleaned in a meeting with the research assistants at district. A cleaned data were entered into SPSS 16. The findings are processed/analyzed using computer software, standard statistical tools, manually and were entered in computer programming for triangulation, relevancy, consistency, accuracy and scientific proceedings.

For Quantitative data, entry file are prepared using SPSS 16. Appropriate check codes were prepared to check data entry. The collected data has been entered to SPSS 16. The data has been summarized & presented using appropriate statistical techniques.

For Qualitative data, qualitative record & information has been transcribed and thematic analysis is done, which has been blended with quantitative findings side by side. A narrative, verbatim generated from qualitative information has been presented in appropriate sections while analysis and discussing the findings.

Analysis: The quantitative data are analyzed in accordance with the distribution and nature of data. Descriptive statistic has been used to analyze data which describe the frequency, percentage and proportion. Fisher Exact test has been done based on nature of data which helped to determine the association among independent and dependent variables.

Data generated from KII has analyzed by content analysis using thematic analysis approach which helped to discover key ideas pattern and relationships from the interview results. The findings of qualitative information have been presented in narrative forms, verbatim and quotations. Both quantitative and qualitative finding has been blended while doing discussion & analysis.

3.13 Validity and reliability test

Validity test: A set of questionnaire were developed accordance to operation definition of independent variables and research objectives. Set of data collection tool had specific and measureable form of questions to assess the accuracy of the study.Filled questionnaire were checked and verified by PI and concerned professionals for validity content, clarification appropriateness and accuracy. The expert's validity was confirmed by three experts in maternal and reproductive health background from Chulalongkorn University and DHO of Dang district.

Relativity test: A pre-test of survey tools were done by trained research assistants among the women of child bearing age groups on ward-7 of Saudiyar VDC of Dang district. During the Data collection tools (survey questionnaire and KII guideline) were revised after the pre-test accordance to the objectives and study variables. To get the reliable information, the questions were translated in Nepali

language without changing essence of each question and were asked in simple Nepali or in local language.

3.14 Ethical consideration

Before starting data collection, a formal letters of ethical approval from Nepal Health Research Council (NHRC)/Kathmandu has been received at central level (please refer appendix 3). At district level, coordination with DHO has done and it's correspondence letter to Saudiyar SHP also helped for local level support during the study (refer appendix 4). Study objectives were clearly explained to each respondent. Data were collected only after the verbal consent of the respondent and objectives of the survey were clearly understood by them. Ethical considerations were maintained by obtaining verbal approval from the study respondents and participants. All data collected from each individual were kept private and confidential.

3.15 Limitation of the study

- As the study was conducted in one of the VDC of the Dang districts thus the result of the study cannot be generalized to the population of Dang district who has different status than this study population.
- In Nepalese culture uterine prolapse is the issue of the shyness, thus respondents might have contributed to information distortion.
- The snapshot nature of this cross-sectional study, it doesn't provide a good basis for establishing causality because they are based on prevalent rather than incident cases. Thus this study can reveal the presence or absence of a relationship between the study variables and prevalent (existing) of UP only.
- Social desirability bias of human nature likely to make fake-answers in survey questionnaires studies (i.e. under and over reported of annual income of the family, educational status, age).
- Respondents might have given impressive answers and express based on their book learning attitude and practices. For example-ANC visits during last pregnancy/currently, use of FP services after last delivery/currently and place of delivery during last pregnancy related answers.

- ♦ Screening of the all women was not performed by doctors and trained nurses were also involved in this process thus proportion of the prevalence might have been affected and resulted to the low prevalence of UP.

3.16 Benefits of the study

- The study has assessed the factors related to uterine prolapse among married women of child bearing age (25-49 yrs) so findings helps to the people of study area to think, plan and promote UP prevention and treatment measure in future.
- The result of the study is also beneficial for the DHO and other organizations working in UP related issues during planning and implementation activities in Saudiyar VDC
- Findings are also helpful for health managers and workers in developing strategies and improve the demand of RH services to prevent the occurrence of uterin

CHAPTER IV

RESULTS

This chapter provides the result of both quantitative and qualitative data analysis. A descriptive statistics are used to demonstrate the proportion of quantitative data. Using content analysis approach the qualitative data are analyzed. So, finding of the study is presented below in accordance with the objectives of the study.

4.1 Socio-demographic characteristics of Households (HHs)

Table 5 reveals that the total household population of the 385 respondents is 1,971 and average family size is 5.1. Highest proportion (40.3%) of the household population was among 15-30 yrs age group, whereas lowest proportion (2.5%) of household population was among above 60 yrs age group.

By sex, female population is 2.8 percent less than male (51.4%). By level of education, highest proportion of the household population has passed grade one to five (20.1%) followed by six to eight grade (17.5%) (Table 5).

Table 5 Background characteristics of household population

	Frequency	Percentage
Age		
0-15	590	29.9
15-30	794	40.3
30-45	353	17.9
45-60	185	9.4
60 above	49	2.5
Total	1,971	100

Source: Household survey, 2013

Table 5 (continued) Background characteristics of household population

	Frequency	Percentage
Sex		
Male	1,013	51.4
Female	958	48.6
Total	1,971	100.0
Education level		
Cannot read and write	319	16.2
Can read and write/literate	285	14.5
Passed grade 1-5	397	20.1
Passed grade 6-8	345	17.5
Passed grade 9-10	306	15.5
Passed grade 11-12	107	5.4
Passed grade 13 and above	73	3.7
Ineligible or below school going age	139	7.1
Total	1,971	100.0
Occupation		
Service	100	5.5
Agriculture/animal & poultry farm	362	19.8
Business	38	2.1
Daily labor/wages	98	5.3
House wife	348	19.0
Student	661	36.1
Not described	65	3.5
Tailoring	20	1.1
Foreign employment	140	7.6
Total	1,832	100.0

Source: Household survey, 2013

Table 5 (continued) Background characteristics of household population

	Frequency	Percentage
Marital status		
Never married	587	43.5
Currently married	1,042	52.8
Divorced	15	0.8
Separated	25	1.3
Widow/widower	32	1.6
Total	1,701	100.0

Source: Household survey, 2013

Study has revealed that 16.2 percent of the populations were unable to read and write/illiterate and very low proportion (3.7%) of household population has passed grade 14 and above. Similarly, by occupation, more than one third (36.1%) of the household members were student followed by agriculture/farming (19.8%) and housewife (19.0%) and foreign employment (7.6%) was found in remarkable proportion compare to other categories. By marital status more than half (52.8%) of the household members were currently married and more than two fifth (43.5%) were never married whereas divorcee/separated were in very less proportion compare to other categories (Table 5).

4.2 Quantitative findings

4.2.1 Socio-economic factors affecting to UP

Under the socio-economic variables; age, religion, ethnicity/caste, educational status, age of marriage, number of parity, family types, annual income of the family, beliefs & decision making process in family of the respondent women of child bearing age were under study and findings are as follow;

At the end of the interview, all 385 women of child bearing age were examined for uterine prolapse at their own home by the study team. Significant

majority (97.7%) did not have uterine prolapse where as only 9 (2.3 %) of the women of child bearing age had uterine prolapse. Out of those women who had identified uterine prolapse, large majority 6 of UP women had first degree of uterine prolapsed, 2 second degree uterine prolapse and 1 third degree uterine prolapsed, respectively. Out of the uterine prolapsed women, 6 women were above the 40 years of age followed by age between 30 to 40 yrs (3 women). None of the women aged below 30 years old had uterine prolapse (Table 6).

Table 6 Distribution of respondents by age

Age of the respondent (yrs)	Occurrence of UP n (%)				
	No UP	1st degree	2nd degree	3rd degree	Total
Below 20	24 (6.2)	0 (0.0)	0 (0.0)	0 (0.0)	24 (6.2)
20-30	140 (36.4)	0 (0.0)	0 (0.0)	0 (0.0)	140 (36.4)
30-40	105 (27.3)	2 (0.5)	1 (0.3)	0 (0.0)	108 (28.1)
above 40	107 (27.8)	4 (1.0)	1 (0.3)	1 (0.3)	113 (29.4)
Total	376 (97.7)	6 (1.6)	2 (0.5)	1 (0.3)	385 (100.0)

Source: Household survey, 2013

Then, ages of the respondents both with and without UP were categorized in two groups i.e., below 40 years and above 40 years to test for a relationship between occurrence of UP and age of child bearing women using Fisher's Exact test. The significant relationship ($p<0.021$) was found between uterine prolapse and age of the child bearing women (Table 7).

Table 8 showed that all most all (99.0%) of the respondents was Hindu followed by Buddhist (0.5%) and Christen (0.5%). All 6 women who has uterine prolapse, were Hindu (100.0%) and none of Buddhist and Christian had uterine prolapse by religion.

Table 7 Fisher's Exact Test between age and UP

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	6.188[a]	1	.013		
Continuity Correction[b]	4.483	1	.034		
Likelihood Ratio	5.483	1	.019		
Fisher's Exact Test				**.021**	**.021**
Linear-by-Linear Association	6.172	1	.013		
N of Valid Cases[b]	385				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 2.64.

b. Computed only for a 2x2 table

Table 8 Distribution of respondents by religion

Religion of the respondents	Occurrence of UP n (%)				
	No UP	1st degree	2nd degree	3rd degree	Total
Hindu	372 (96.6)	6 (1.6)	2 (0.5)	1 (0.3)	381 (99.0)
Buddhist	2 (0.5)	0 (0.0)	0 (0.0)	0 (0.0)	2 (0.5)
Christian	2 (0.5)	0 (0.0)	0 (0.0)	0 (0.0)	108 (28.1)
Total	376 (97.6)	6 (1.6)	2 (0.5)	1 (0.3)	385 (100.0)

Source: Household survey, 2013

By caste and ethnicity of the respondent, remarkable majority (69.4%) of the respondents were Tharu followed by Brahmin/Chettri (16.6%), Dalit/untouchable (6.0%) and Gurung/Rai/Magar (4.4%). Study has reported that out of 9 uterine prolapsed women, 7 (78.8%) were Tharu and 2 (22.2%) were Dalit/untouchable by caste/ethnicity (Table 9).

Table 9 Distribution of respondents by caste/ethnicity

Caste of the respondents	Occurrence of UP n (%)				
	No UP	1st degree	2nd degree	3rd degree	Total
Brahmin/Chettri	64(16.6)	0(0.0)	0(0.0)	0(0.0)	64(16.6)
Gurung/magar/rai	17(4.4)	0(0.0)	0(0.0)	0(0.0)	17(4.4)
Tharu	260(67.5)	5(1.3)	2(0.5)	0(0.0)	267(69.3)
Newar	3(0.8)	0(0.0)	0(0.0)	0(0.0)	3(0.8)
Giri/puri/sanyasi	11(2.9)	0(0.0)	0(0.0)	0(0.0)	11(2.9)
Dalit/untouchable	21(5.5)	1(0.3)	0(0.0)	1(0.3)	23(6.1)
Total	376(97.7)	6(1.6)	2(0.5)	1(0.3)	385(100.0)

Source: Household survey, 2013

Table 10 Fisher's Exact Test between caste/ethnicity and UP

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.308[a]	1	.579		
Continuity Correction[b]	.036	1	.850		
Likelihood Ratio	.327	1	.568		
Fisher's Exact Test				**.728**	**.444**
Linear-by-Linear Association	.307	1	.579		
N of Valid Cases[b]	385				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 2.76.

b. Computed only for a 2x2 table

Caste/ethnicity of the respondents were categorized in two groups i.e., Tharus and others for Fisher's Exact test. The large value (p=0.728) of Fisher's Exact test indicate that uterine prolapse and caste/ethnicity of child bearing women are

independent to each other. Thus, there is not significant relationship between uterine prolapse and caste/ethnicity of the child bearing women (Table 10)

Table 11 Distribution of respondents by educational status

Educational status	Occurrence of UP n (%)				
	No UP	1st degree	2nd degree	3rd degree	Total
Cannot read and write/Illiterate	114 (29.6)	2 (0.5)	1 (0.3)	1 (0.3)	118 (30.7)
Can read and write but have not attended formal education	94 (24.4)	4 (1.0)	1 (0.3)	0 (0.0)	99 (25.7)
Passes grade 1-5	54 (14.0)	0 (0.0)	0 (0.0)	0 (0.0)	54 (14.0)
Passed grade 6-8	45 (11.7)	0 (0.0)	0 (0.0)	0 (0.0)	45 (11.7)
Passed grade 9-10	35 (9.1)	0 (0.0)	0 (0.0)	0 (0.0)	35 (9.1)
Passed grade 11-12	31 (8.1)	0 (0.0)	0 (0.0)	0 (0.0)	31 (8.1)
Passed grade 13 and above	3 (0.8)	0 (0.0)	0 (0.0)	0 (0.0)	3 (0.8)
Total	376 (97.7)	6 (1.6)	2 (0.5)	1 (0.3)	385 (100.0)

Source: Household survey, 2013

Table 11 also showed that majority of the respondents were illiterate (30.6%) followed by literate but have not attended any formal school in life (25.7%). Study has reported that more than half (56.3%) of the respondents have not gone to school in their life for formal school education. Out of the uterine prolapsed women; 5 (55.6%) were only able to read and write but have not attended formal education and remaining 4 (44.4%) of the uterine prolapse were not able to read and write/illiterate by education level. None of the other educated categories of women had noticed uterine prolapse.

Educational status of the respondents were categorized in two groups i.e., Cannot read & write and can read & write for Fisher's Exact test. The large value (p = 0.465) of Fisher's Exact test indicate that uterine prolapse and educational level of child bearing women are independent to each other. Thus, there is not significant relationship between uterine prolapse and educational level of the child bearing women (Table 12).

Table 12 Fisher's Exact Test between educational level and UP

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.825[a]	1	.364		
Continuity Correction[b]	.294	1	.587		
Likelihood Ratio	.774	1	.379		
Fisher's Exact Test				**.465**	**.284**
Linear-by-Linear Association	.823	1	.364		
N of Valid Cases[b]	385				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 2.76.

b. Computed only for a 2x2 table

Table 13 revealed that more than two third (67.8%) of the respondents had been married in between the age of 15-20 years followed by below 15 years (19.0%) and 11.7 percent were got married in between the age of 21-25 yrs.

Table 13 Distribution of respondents by age of marriage

Age of the Marriage of the respondents (Yrs)	Occurrence of UP n (%)				
	No UP	1st degree	2nd degree	3rd degree	Total
Below 15	69(17.9)	4(1.1)	0(0.0)	0(0.0)	73(19.0)
15-20	256(66.5)	2(0.5)	2(0.5)	1(0.3)	261(67.8)
21-25	45(11.7)	0(0.0)	0(0.0)	0(0.0)	45(11.7)
26-30	6(1.6)	0(0.0)	0(0.0)	0(0.0)	6(1.6)
Total	376(97.7)	6(1.6)	2(0.5)	1(0.3)	385(100.0)

Source: Household survey, 2013

Study has also shown that out of the total uterine prolapse women (9), 5 of them had got married in between the age of 16-20 yrs followed by below 15 years of age. None of the women getting marriage at above 20 yrs of age had uterine prolapse (Table 13).

Table 14 Fisher's Exact Test between age of marriage and UP

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3.895[a]	1	.048		
Continuity Correction[b]	2.382	1	.123		
Likelihood Ratio	3.131	1	.077		
Fisher's Exact Test				**.070**	**.070**
Linear-by-Linear Association	3.885	1	.049		
N of Valid Cases[b]	385				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 1.71.

b. Computed only for a 2x2 table

Ages of marriage of the child bearing women were categorized in two groups i.e., below 15 years and above 15 years for Fisher's Exact test. The large value ($p = 0.070$) of Fisher's Exact test indicate that there is not significant relationship between uterine prolapse and age of marriage of the child bearing women (Table 14).

Table 15 Distribution of respondents by number of parity

Number of parity of the respondents	Occurrence of UP n (%)				
	No UP	1st degree	2nd degree	3rd degree	Total
1- parity	112 (29.1)	3 (0.8)	1 (0.3)	0 (0.0)	116 (30.1)
2- parity	131 (34.0)	1 (0.3)	0 (0.0)	0 (0.0)	132 (34.3)
3-parity	77 (20.0)	1 (0.3)	0 (0.0)	0 (0.0)	78 (20.3)
4-parity	24 (6.2)	1 (0.3)	0 (0.0)	1 (0.3)	6 (1.6)
5- parity	32 (8.3)	0 (0.0)	1 (0.3)	0 (0.0)	33 (8.6)
Total	376 (97.6)	6 (1.6)	2 (0.5)	1 (0.3)	385 (100.0)

Source: Household survey, 2013

Table 15 reveals that more than one third (34.3%) of the women had one parity followed by two parity (30.1%) and three (20.3%). Study has also reported that out of the 9 uterine prolapse women, 4 (44.4%) were from one parity category followed by 2 (22.2%) among four parity and 1 (11.1%) among both two and three parity categories.

Table 16 Fisher's Exact Tests between number of parity and UP

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.316[a]	1	.574		
Continuity Correction[b]	.044	1	.834		
Likelihood Ratio	.306	1	.580		
Fisher's Exact Test				**.727**	**.405**
Linear-by-Linear Association	.315	1	.575		
N of Valid Cases[b]	385				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 3.20.

b. Computed only for a 2x2 table

Numbers of parity of the respondents were categorized in two groups i.e., 2 or/and less than 2 and more than 2 for Fisher's Exact test. The large value ($p > 0.05$)

of Fisher's Exact test indicate that there is not significant relationship between uterine prolapse and numbers of parity of the child bearing women (Table 16).

Table 17 disclosed that half (50.4%) of the respondent have the annual family income in between the range of 100,000 to 500,000 NRs and 44.9 percent had below 100,000 and very few (4.7%) of them had annual income more than 500,000 NRs. Out of total 9 uterine prolapsed women, 5 (55.5%) families of those uterine prolapse women had annual income between NRs. 100,000 to 500,000. Similarly, 2 families of the women having uterine prolapse had below 100,000 NRs and 500,000 to 1,000,000 NRs annual income. None of the women's family having above 1,000,000 NRS annual income had uterine prolapsed.

Table 17 Distribution of respondents by annual income of family

Annual income of the family (NRs)	Occurrence of UP n (%)				
	No UP	1st degree	2nd degree	3rd degree	Total
Below 100,000	171 (44.1)	0 (0.0)	1 (0.3)	0 (0.0)	173 (44.9)
100,000 to 500,000	189 (49.1)	4 (1.0)	1 (0.3)	0 (0.0)	194 (50.4)
500,000 to 1,000,000	13 (3.4)	2 (0.5)	0 (0.0)	0 (0.0)	15 (3.9)
Above 1,000,000	3 (0.8)	0 (0.0)	0 (0.0)	0 (0.0)	3 (0.8)
Total	376 (97.6)	6 (1.6)	2 (0.5)	1 (0.3)	385 (100.0)

Source: Household survey, 2013

Annual income of the family of the respondents were categorized in two groups i.e., less or/and 500,000 and more than 500,000 for Fisher's Exact test. The large value ($p = 0.061$) of Fisher's Exact test indicate that there is not significant relationship between uterine prolapse and annual income of the family of the child bearing women (Table 18).

Table 18 Fisher's Exact Test between annual income of family and UP

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	6.366[a]	1	.012		
Continuity Correction[b]	2.973	1	.085		
Likelihood Ratio	3.540	1	.060		
Fisher's Exact Test				**.061**	**.061**
Linear-by-Linear Association	6.350	1	.012		
N of Valid Cases[b]	385				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is .42.

b. Computed only for a 2x2 table

Study reveals that more than half (53.5%) of the respondents live in nuclear family and 42.1 percent in joint family structure, whereas very few respondents (4.4%) were found living in extended family structures. Out of the total 9 uterine prolapse respondents, 5 (55.5%) has joint family structures followed by 3 (33.3%) nuclear and 1 (1.1%) extended by family type (Table 19).

Table 19 Distribution of respondents by type of the family

Type of family	Occurrence of UP n (%)				
	No UP	1st degree	2nd degree	3rd degree	Total
Nuclear	203 (52.7)	1 (0.3)	1 (0.3)	1 (0.3)	206 (53.5)
Joint	157 (40.8)	4 (1.0)	1 (0.3)	0 (0.0)	162 (42.1)
Extended	16 (4.2)	1 (0.3)	0 (0.0)	0 (0.0)	17 (4.4)
Total	376 (97.6)	6 (1.6)	2 (0.5)	1 (0.3)	385 (100.0)

Source: Household survey, 2013

The large Chi-Square significance level ($p > .05$) indicates that uterine prolapse and type of family of the child bearing women are independent to each other. Thus, there is not significant relationship between uterine prolapse and type family of the child bearing women (Table 20).

Table 20 Chi-Square Tests between type of family and UP

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.034[a]	2	.362
Likelihood Ratio	1.833	2	.400
Linear-by-Linear Association	1.962	1	.161
N of Valid Cases	385		

a. 3 cells (50.0%) have expected count less than 5. The minimum expected count is .40.

Table 21 Health seeking behavior during illness

Health seeking behavior	Frequency	Percentage
Home treatment	2	0.5
Traditional healers	16	4.2
SHP	125	32.5
HP	35	9.1
PHCC	11	2.9
Public hospital	72	18.7
Private hospitals/clinics/hospitals	113	29.2
Local drug retail shop	11	2.9
Total	385	100.0

SHP = sub health post; HP = health post; PHCC = primary health care center

Source: Household survey, 2013

Finding given in Table 21 shows; out of total 385 respondents, major source of health care during illness was SHP (32.5%), Private hospital/clinic (29.2%) and public hospitals (18.7%) during illness. HP (9.1%), Traditional healers (4.2%), local drug retail shops (2.9%) were other source for treatment during illness of the respondents.

Table 22 Reasons for visiting to health facilities during illness

	Frequencies	Percentage
Reasons for visiting to health facilities during illness		
Nearby from home	191	35.5
Health workers are always available	8	1.5
Treatment cost is cheaper	45	8.4
Good treatment	117	21.7
Good past experience	147	27.3
Friendly behaviour of service providers	9	1.7
Health care provide by females health workers	21	3.9
Total	538	100.0

Source: Household survey, 2013

As stated in Table 22, major reasons for visiting health facilities during illness were nearby from home (35.5%), good past experiences (27.3%) and good treatment (21.7%).

Table 23 reveals that; out of the 385 women of child bearing age, more than two fifth (43.4%) of them belief on traditional healing practices during illness. Reasons for doing belief on traditional healers were; traditional healing cures child illness (44.5%) followed by minor illness (42.8%), major illness (8.3%) and women related illness (4.5%).

Due to good past experience, more than half (59.5%) of the women of child bearing age seek care from traditional/local healers for their pregnancies. Out of 218, 26.6% of respondents seek services from traditional healers during pregnancy because of nearness and cheaper (12.4%). Nearly to one quarter (24.7%) of the respondents belief that TH/local healers are capable to provide service to pregnant women, while 45.7 percent were not able to tell anything on it (Table 24).

Table 23 Beliefs of the respondents about traditional healers

	Frequency	Percentage
Do they belief on traditional healers (TH)?		
Yes	218	43.4
No	167	56.6
Total	385	100.0
Belief about the illness cured by TH		
Illness of children	97	44.5
For minor illness	93	42.7
For major illness	18	8.3
For illness related to female	10	4.5
Total	218	100.0

TH = traditional healers

Source: Household survey, 2013

Table 24 Reasons and beliefs about local healers/TH on services to pregnant women

	Frequency	Percentage
Reason of seeking care from TH		
Nearby	58	26.6
Always available	3	1.4
Cheaper	27	12.4
Good past experience of	130	59.6
Total	218	100.0
Belief about the services given by TH/local birth attendant to pregnant women		
Yes, they care can give	95	24.7
No, they cannot give	114	29.6
Cannot say	176	45.7
Total	385	100.0

TH = traditional healers

Source: Household survey, 2013

Table 25 reveals that in majority of the family; women (39.2%) herself use to make decisions on pregnancy/delivery related issues, followed to the decisions made by husbands (32.5%). While decisions made by the father/mother in law and jointly by all family members were only 14 percent and 13.5 percent respectively during pregnancy/delivery cases. Similarly, majority of the respondent stated that husbands use to make decisions in family. Out of the total 9 cases noticed of uterine prolapse during survey, self decision making in family category had 3 (33.3%) uterine prolapse cases followed by 2 (22.2%) each in decision making by father/mother in-law, husband and jointly categories.

Table 25 Distribution of respondents about decision making and its reasons in family

Decision maker in family	Occurrence of UP n (%)				
	No UP	1st degree	2nd degree	3rd degree	Total
Father/mother in law	52 (13.5)	2 (0.5)	0 (0.0)	0 (0.0)	54 (14.0)
Husband	123 (31.9)	1 (0.3)	1 (0.3)	0 (0.0)	125 (32.5)
Self	148 (38.4)	2 (0.5)	0 (0.0)	1 (0.3)	151 (39.2)
Other relatives/ family member	3 (0.8)	0 (0.0)	0 (0.0)	0 (0.0)	3 (0.8)
Jointly	50 (13.0)	1 (0.3)	1 (0.3)	0 (0.0)	52 (13.5)
Total	376 (97.6)	6 (1.6)	2 (0.5)	1 (0.3)	385 (100.0)

Source: Household survey, 2013

Decision makers of the family of the respondents were categorized in two groups i.e., in family and out of the family for Fisher's Exact test. The large value ($p = 0.622$) of Fisher's Exact test indicated that uterine prolapse and decision makers of the family are independent to each other. Thus, there is not significant relationship between uterine prolapse and decision makers of the family (Table 26).

Table 26 Fisher's Exact Test between decision making in family and UP

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.474[a]	1	.491		
Continuity Correction[b]	.043	1	.836		
Likelihood Ratio	.418	1	.518		
Fisher's Exact Test				**.622**	**.376**
Linear-by-Linear Association	.473	1	.492		
N of Valid Cases[b]	385				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 1.29.

b. Computed only for a 2x2 table

4.2.2 Life style related factors affecting to UP

Occupation, smoking habit & exercise are the life style related factors affecting uterine prolapse among the women of child bearing age in this study. Large majority (61.8%) of the respondents were engaged as housewife/house core activities and one quarter(25.2%) of them were involved in agriculture/animal husbandry related occupation followed by daily labor/wages (5.7%), public/private employment (2.9%) and business (2.1) (Table 27).

Table 27 Distribution of respondents by occupation

Occupation of the respondents	Occurrence of UP n (%)				
	No UP	1st degree	2nd degree	3rd degree	Total
Paid employment	11(2.9)	0(0.0)	0(0.0)	0(0.0)	11(2.9)
Agriculture	96(24.9)	1(0.3)	0(0.0)	0(0.0)	97(25.2)
Business	8(2.1)	0(0.0)	0(0.0)	0(0.0)	8(2.1)
Daily labor/wages	18(4.7)	1(0.3)	2(0.5)	1(0.3)	22(5.7)
Housewife/housework	234(60.8)	4(1.0)	0(0.0)	0(0.0)	238(61.8)
Student	7(1.8)	0(0.0)	0(0.0)	0(0.0)	7(1.8)
Tailoring	2(0.5)	0(0.0)	0(0.0)	0(0.0)	2(0.5)
Total	376(97.6)	6(1.6)	2(0.5)	1(0.3)	385(100.0)

Source: Household survey, 2013

Table 27 also reveals that out of the total 9 respondents having uterine prolapse, 4 (44.4%) respondents were from each labor/daily wages and house work category by occupation followed by 1 (11.1%) among agriculture/animal husbandry/poultry farming.

Table 28 showed that a remarkable majority (92.5%) of the respondents had never smoked any tobacco products. While 4.4 percent of them are currently smoking tobacco products and 3.3 percent have smoked in past but quieted now. Similar all of all 9 (100.0%) uterine prolapse women had never smoked any tobacco during their life.

Table 28 Distribution of respondents by smoking habit

Smoking habit	Occurrence of UP n (%)				
	No UP	1st degree	2nd degree	3rd degree	Total
Currently smoking	16 (4.2)	0 (0.0)	0 (0.0)	0 (0.0)	16 (4.2)
Smoked in past but quit now	13 (3.3)	0 (0.0)	0 (0.0)	0 (0.0)	97 (25.2)
Never smoked	347 (90.1)	6 (1.6)	2 (0.5)	1 (0.3)	356 (92.5)
Total	376 (97.6)	6 (1.6)	2 (0.5)	1 (0.3)	385 (100.0)

Source: Household survey, 2013

Tables 29 show that out of the currently smokers, majority (37.5%) of the respondents use to smoke more than 6 stick of tobacco within a day.

Table 29 Distribution of respondents by amount of sticks smoking

	Frequency	Percentage
nount of sticks currently smoking per day		
up to 2 sticks	4	25.0
3 sticks	2	12.5
4 sticks	4	25.0
Above 6 sticks	6	37.5
Total	16	100.0

Source: Household survey, 2013

Likewise, one quarter of them use to smoke either more than 4 sticks per day or up to 2 sticks each day, while 12.5 percent of the respondents smoke 3 sticks per day (Table 29).

Table 30 disclose that significant proportion of the respondent (94.3%) had not practice of exercise to prevent uterine prolapse and only 5.7 percent of them had practice of the exercise to prevent uterine prolapse. All of all 9 (100.0%) respondents having uterine prolapse had not done any exercise to prevent uterine prolapse.

Table 30 Distribution of respondents by practices of doing exercise to prevent UP

Doing exercise to prevent UP	Occurrence of UP n (%)				
	No UP	1st degree	2nd degree	3rd degree	Total
Yes	22 (5.7)	0 (0.0)	0 (0.0)	0 (0.0)	22 (5.7)
No	354 (91.9)	6 (1.6)	2 (0.5)	1 (0.3)	363 (94.3)
Total	376 (97.6)	6 (1.6)	2 (0.5)	1 (0.3)	385 (100.0)

Source: Household survey, 2013

Table 31 Distribution of respondents by type of exercise performed to prevent UP and reasons for not doing exercise

	Frequency	Percentage
Type of exercise performed by respondents		
Physical exercise	21	95.5
Special exercise to prevent uterine prolapse	1	4.5
Total	22	100
Reasons for not doing any exercise to prevent UP		
Not experienced before	93	25.6
No knowledge about physical exercise	270	74.4
Total	363	100.0

Source: Household survey, 2013

Out of 22 exercise practicing respondents, only one person had performed special exercise to prevent uterine prolapse while a significant proportion (95.5%) of them had performed only physical exercise. Similarly, out of the 363 respondents who had not performed any type of exercise; one third (74.4%) of them stated that they had no knowledge about physical exercise (74.4%) to prevent uterine prolapse followed by not felt any experience of need (25.6%) (Table31).

Table 32 Distribution of respondents by usual types of work done in daily life

	Frequencies*	Percentage
Usual types of work done by respondents		
Heavy weight lifting	87	16.8
Regular standing	10	1.9
Long distance walking	35	6.8
Official work	7	1.4
House work	378	73.1
Total	517	100.0

*Source: Household survey, 201**
Frequency exceed more than numbers of respondents (385) due to multiple responses

Majority of the respondents (73.1%) use to do housework in daily life followed by heavy weight lifting works (16.8%) and long distance walking works (6.8%) and remaining were doing regular standing (1.9%) & official work (1.4%) in daily life (Table 32).

Table 33 revealed that more than three quarters (76.6%) of them had started to do work within the 30 days after delivery followed by 11.7 percent started between 30-60 day after delivery and in between 60-90 days (10.9%) after delivery.

Table 33 Distribution of respondents by duration of starting to work after delivery

	Frequency	Percentage
Started to work after delivery		
within 30 days	295	76.6
between 30-60 days	45	11.7
between 60-90 days	42	10.9
between 90-120 days	1	0.3
between 120-150 days	2	0.5
Total	385	100.0

Source: Household survey, 2013

Table 34 Distribution of respondents by types of work performed and restricted during pregnancy

	Frequency*	Percentage
Types of work performed		
House work	379	37.2
Agriculture/forest work	288	28.3
Carry heavy load	180	17.6
Every work	172	16.9
Total	1,019	100.0
Types of work restricted		
Heavy work	208	63.4
Distance walking	105	32.0
Agriculture/forest going works	12	3.7
Any type of work	3	0.9
Total	328	100.0

Source: Household survey, 2013
** Frequency exceed/decrease more than numbers of respondents (385) due to multiple responses*

Table 35 shows that large proportion of the respondents (251.3%) never received nutrient food during pregnancy. While, 130.8 percent received nutrient food daily followed by occasionally (102.3%), 2-3 times a week (68.6%), 2-3 times a month (59.1%) and once a week (47.1%) during pregnancy. Study also revealed that the large proportion of the respondent never received nutrient food such as milk, egg, ghee, fruits and nuts, with exception for green vegetables; most of them consumed it daily (85.5%).

Table 35 Distribution of respondents by types of food consumed during pregnancy

Types of foods	Daily %	2-3 times in week %	Once in a week %	2-3 times in month %	Once in month %	Occasionally %	Never %
Milk	24.7	6.8	3.4	3.1	4.7	21.0	36.4
Egg	1.8	12.5	11.9	14.0	11.7	20.0	28.1
Meat	4.2	14.5	16.1	22.3	17.4	18.4	7.0
Ghee	10.9	10.6	6.5	3.9	3.4	15.6	49.1
Fruits	2.9	12.2	6.8	15.3	2.9	27.5	32.5
Green vegetable	85.5	11.7	2.1	0.5	0.0	0.3	0.0
Nuts and almonds	0.8	0.3	0.3	0.0	0.5	0.0	98.2
Total	130.8	68.6	47.1	59.1	40.6	102.8	251.3

Source: Household survey, 2013

4.2.3 Factors related to access & utilization of health services related to UP

Factors affecting to uterine prolapse which are related to access and utilization of health services before and after delivery includes knowledge about preventive measure of UP, source of information, economical/ socio-cultural &

economical access of health services and use of FP/ANC/delivery/PNC services during last baby or currently by the respondents and they are analyzed and discussed below.

Remarkable proportions of the respondents (35.6%) have not heard about uterine prolapse. Similarly, major source of the information for the respondent was Radio (73.1%) followed by Neighbors (32.5%), Television (17.7%) and other relatives (16.5%) (Table36).

Table 36 Distribution of respondents by awareness & source of information about UP

	Frequency	Percentage
Heard about uterine prolapsed		
Yes	248	64.4
No	137	35.6
Total	385	100.0
Source of information about UP		
Radio	182	73.1
Television	44	17.7
Magazine/papers/books	13	5.2
Family members	30	12.0
Other relatives	41	16.5
Neighbors	81	32.5
Total	385	100.0

Source: Household survey, 2013

Table37 Distribution of respondents by knowledge about symptoms of UP

	Frequency	Percentage*
Knowledge about symptoms of UP		
Difficulties in walking	232	61.2
Difficulty in sexual intercourse	109	28.8
Feeling of something coming out from vagina	129	34.0
Ulcer in genitalia	14	3.7
Do not know	87	23.0
Total	571	150.7

Source: Household survey, 2013

** Percentage exceed more 100 due to multiple responses*

Regarding to the knowledge of the respondents about symptoms of uterine prolapse; 61.2 percent of them expressed difficulty in walking as the symptoms of uterine prolapse followed by feeling of something coming out from vagina (34.0%), difficulty in sexual intercourse (28.8 %) as the symptoms of uterine prolapse. While, 23 percent of them were not known to any symptoms of uterine prolapse (Table37).

Table 38 Distribution of respondents by knowledge about the causes of UP

	Frequency	Percentage*
Knowledge about causes of UP		
More child birth(vaginal)	172	45.5
Heavy work load during post partum period	160	42.3
Poor nutrition	87	23.0
STI/RTI	26	6.9
Poor sanitation	61	16.1
Don't know	85	22.5
Total	591	156.3

Source: Household survey, 2013

** Percentage exceed more 100 due to multiple responses*

Table 38 disclose that large majority (45.5%) of the respondent stated that more child birth as the cause of uterine prolapse followed by heavy work load during post partum period (42.3%), poor nutrition (23.0%), poor sanitation (16.1%) and STI/RTI (6.1) as the cause of uterine prolapse. But 22.5 percent of the respondents were unknown about the causes of uterine prolapse.

Regarding to the knowledge about source of treatment of uterine prolapse, large majority of the respondents (88.3%) expressed as doctors or modern service providers as the sources of treatment for uterine prolapse but 1.3 percent stated local herbal remedy it is the source of tratment. Ten percent of respondents were unknown about the source of treatment of the uterine prolapse (Table 39).

Table 39 Distribution of respondents by knowledge about treatment source of UP

	Frequency	Percentage
Treatment source for UP		
Doctors or modern health care provider	340	88.3
Local herbal	5	1.3
Don’t know	40	10.4
Total	385	100.0

Source: Household survey, 2013

Table 40 Distribution of respondents by distance and mode of travel to reach nearby health facility

	Frequency	Percentage
Time taken to reach the nearby health facility		
Less than 10 minutes	233	60.5
Between 10-20 minutes	67	17.4
Between 20-30 minutes	81	21.5
Above 30 minutes	4	0.6
Total	385	100.0
Mode of travel to reach nearby health facility		
By foot	341	88.6
Cycle	4	1
By public transport	40	10.4
Total	385	100.0

Source: Household survey, 2013

Table40 revealed, six out of ten of the respondents (60.5%) can reach to the nearby health facility within 10 minutes from their house. Whereas, for 21.5 percent of them took 20-30 minutes, 17.4 percent of the respondents took 10-20 minutes and 0.6 percent of the respondents took more than 30 minutes from their house to nearby health facility for the treatment.

Large majority (81.5%) of the respondents were either satisfied (63.6%) or fully satisfied (17.9%) to utilize the nearby health facility. Whereas, 18.5 percent of them were unsatisfied (15.6) and fully unsatisfied (2.9%) with utilization of their nearby health facility (Table 41).

Table41 Distribution of respondents by perceived level of satisfaction to nearby health facility

Perceived level of satisfaction on health services	Occurrence of UP n (%)				
	No UP	1st degree	2nd degree	3rd degree	Total
Fully satisfied	67(17.4)	2(0.5)	0(0.0)	0(0.0)	69(17.9)
Satisfied	238(61.8)	4(1.0)	2(0.5)	1(0.3)	245(63.6)
Unsatisfied	60(15.6)	0(0.0)	0(0.0)	0(0.0)	60(15.6)
Fully unsatisfied	11(2.9)	0(0.0)	0(0.0)	0(0.0)	11(2.9)
Total	376(97.6)	6(1.6)	2(0.5)	1(0.3)	385(100.0)

Source: Household survey, 2013

Respondents were asked about the reasons for not visiting to nearby health facility. Out of 316 respondents; more than six out of ten (62.3%) stated that drug were not available at health facility, so they do not visit nearby health facility. Similarly, far away from home (11.1%), irregular staffs (8.9%) and not benefited from last visit (7.3%) were other reasons stated by the respondents who did not visit the nearby health facilities for treatment (Table 42).

Table42 Reasons for not visiting to nearby health facility for treatment

	Frequency	Percentage
Reasons for not visiting to nearby health facility		
Far away from home	35	11.1
Staffs are irregular	28	8.9
Drugs are not available	197	62.3
Expensive/costly	1	0.3
Not benefitted in past	23	7.3
Bitter past experience of	7	2.3
Unfriendly behavior of health workers	8	2.5
Unavailability of female health care providers	9	2.8
Opening hrs do not suit	8	2.5
Total	316	100.0

Source: Household survey, 2013

Table43 reveals that out of total 385 respondents; 380 were been pregnant in their life. So, out of 380 respondents, six out of ten (61.1 %) had visited ANC during last pregnancy, however more than one quarter (38.9%) had not visited. Out of total 9 UP cases, 5(55.5%) of women had UP though they have used ANC services however 44.4 percent have not visited ANC and have identified as UP during screening.

Table 43 Distribution of respondents by ANC visits during last pregnancy/currently

ANC visits during last pregnancy/currently	Occurrence of UP n (%)				
	No UP	1st degree	2nd degree	3rd degree	Total
Yes	144 (37.9)	2 (0.5)	1 (0.3)	1 (0.3)	22 (5.7)
No	227 (59.7)	4 (1.1)	1 (0.3)	0 (0.0)	363 (94.3)
Total	371 (97.6)	6 (1.6)	2 (0.5)	1 (0.3)	380 (100.0)

Source: Household survey, 2013

ANC visits during last pregnancy/currently by respondents were categorized in two groups i.e., No ANC visiting and ANC visiting groups. The large value (p = 0.740) of Fisher's Exact test indicate that uterine prolapse and ANC visits during last pregnancy/currently are independent to each other. Thus, there is not significant relationship between uterine prolapse and ANC visits during last pregnancy/currently.

Table 44 Fisher's Exact Test between ANC visit during last pregnancy and UP

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.117[a]	1	.732		
Continuity Correction[b]	.000	1	1.000		
Likelihood Ratio	.115	1	.734		
Fisher's Exact Test				**.740**	**.491**
Linear-by-Linear Association	.117	1	.732		
N of Valid Cases[b]	380				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 3.51.

b. Computed only for a 2x2 table

Table45 reveals that overall seven out of ten have used FP services however three out of ten did not. Surprisingly, out of 9 uterine prolapse respondents, 6 (66.6%) have used FP services and remaining 3 (33.3%) of women having uterine prolapse had not use FP services after last delivery or currently.

Table 45 Distribution of respondents by use of FP services after last delivery/currently

FP services after last delivery/currently	Occurrence of UP n (%)				
	No UP	1st degree	2nd degree	3rd degree	Total
Yes	111 (28.8)	2 (0.5)	1 (0.3)	0 (0.0)	114 (29.6)
No	265 (68.8)	4 (1.0)	1 (0.3)	1 (0.3)	271 (70.4)
Total	376 (97.6)	6 (1.6)	2 (0.5)	1 (0.3)	385 (100.0)

Source: Household survey, 2013

Use of FP services after last delivery/currently by respondents was categorized in two groups i.e., Not use FP services and use FP services. The large value (p = 0.728) of Fisher's Exact test indicate that uterine prolapse and use of FP services after last delivery/currently are independent to each other. Thus, there is not significant relationship between uterine prolapse and use of FP services after last delivery/currently.

Table 46 Fisher's Exact Test between Use of FP services and UP

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.061[a]	1	.804		
Continuity Correction[b]	.000	1	1.000		
Likelihood Ratio	.060	1	.807		
Fisher's Exact Test				**.728**	**.528**
Linear-by-Linear Association	.061	1	.805		
N of Valid Cases[b]	385				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 2.66.
b. Computed only for a 2x2 table

Table 47 Distribution of respondents by reasons for not using FP services after last delivery

	Frequency	Percentage
Reasons for not using FP service after last delivery		
Husband was not at home/out of home for long time	61	53.5
Desire of next child	20	17.5
Denied/not support by husband	5	4.4
No knowledge	28	24.6
Total	114	100

Source: Household survey, 2013

Table 47 disclosed that out of family planning non user respondents (144); majority of the respondents (53.5%) expressed that their husband was not in house as reason for not using family planning services. Similarly, desire of next child (17.5%) and denied/ not support by husband (4.4%) were other reasons expressed by the respondents for not using family planning services. But nearly to a quater (24.6%) of the respondents has no knowledge about family planning service so they do not use it.

Out of 380 respondents who had given birth of a child in their life; more than three quarters (71.6%) had given birth to child at home followed by public health institutions (27.9 %) and private health institutions (0.5%). Out of 9 uterine prolepses having respondents, 7 (77.7%) of them had home delivery in past followed by 2 (22.2%) delivery at public health institutions (Table49).

Place of delivery during last pregnancy of the respondents was categorized in two groups i.e., home delivery and health institution delivery. The large value ($p = 1.000$) of Fisher's Exact test indicate that uterine prolapse and place of delivery during

last pregnancy are independent to each other. Thus, there is not significant relationship between uterine prolapse and place of delivery during last pregnancy.

Table48 Distribution of respondents by place of delivery during last pregnancy

Place of delivery during last pregnancy	Occurrence of UP n (%)				
	No UP	1st degree	2nd degree	3rd degree	Total
Home	265 (69.7)	4 (1.1)	2 (0.5)	1 (0.3)	272 (71.6)
Public health institution	104 (27.4)	2 (0.5)	0 (0.0)	0 (0.0)	106 (27.9)
Private health institution	2 (0.5)	0 (0.0)	0 (0.0)	0 (0.0)	2 (0.5)
Total	371 (97.6)	6 (1.6)	2 (0.5)	1 (0.3)	380 (100.0)

Source: Household survey, 2013

T**able 49** Fisher's Exact Tests between Place of delivery and UP

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.174[a]	1	.676		
Continuity Correction[b]	.002	1	.965		
Likelihood Ratio	.183	1	.669		
Fisher's Exact Test				**1.000**	**.505**
Linear-by-Linear Association	.174	1	.677		
N of Valid Cases[b]	380				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 2.56.

b. Computed only for a 2x2 table

Out of home delivered respondents (272), reasons stated by respondents for home delivery includes; perceived safe to the home delivery (27.9%) followed by complication was not perceived (21.6%), no time to reach health institution (11.2%), family not interested for institutional delivery (8.7%) etc. But 8.7 percent of the respondent has not knowledge about institutional delivery so they gave birth at hom

during their last delivery. Similarly out of total delivered respondents (380), they were assisted by Trained Birth Attendants (26.0%) followed by family member and neighbor (23.2%), Nurse (22.9%) and Doctors (4.7%) during last delivery either at home or at health institutions (Table51).

Table 51 shows that out of total child delivered respondents (380); remarkable majorities (87.6%) of the delivery were normal without episiotomy followed by normal with episiotomy (9.2%), complicated but not operated (2.4%) and operated (0.8%).

Table50 Distribution of respondents by reasons for home delivery and person assisted for delivery

	Frequency*	Percentage
Reasons of choosing home delivery		
Did not get time to reach health institution	43	11.2
No complication perceived/easy delivery	82	21.6
Perceived safe delivery at home	106	27.9
Family were not interested for institutional delivery	33	8.7
No provision of going hospital	30	7.9
Did not get help	14	3.7
Lack of money	21	5.5
Far from home	9	2.4
Shyness	9	2.4
Don't know	33	8.7
Total	380	100.0
Person assisted during delivery		
Family members	88	23.2
Trained Birth Attendants (TBAs)	99	26.0
Neighbors	88	23.2
Doctors	18	4.7
Nurse	87	22.9
Total	380	100.0

Source: Household survey, 2013, frequency exceed due to multiple answers*

Table 51 Distribution of respondents by type of delivery

	Frequency	Percentage
Type of last delivery		
Normal without episiotomy	333	87.6
Normal with episiotomy	35	9.2
Complicated but not operated	9	2.4
Operation was done (C/S)	3	0.8
Total	380	100.0

Source: Household survey, 2013

Table 52 Distribution of respondents by PNC checkup visits and reasons not going for PNC check up

	Frequency	Percentage
PNC check up visit		
Yes	73	19.2
No	307	80.8
Total	380	100.0
Reason for not going PNC check up		
No complication	148	48.2
Never called by health providers	46	15.0
Lack of money	11	3.6
No knowledge	80	26.1
Far from home	5	1.6
No permission to go from family members	15	4.8
Shyness	2	0.7
Total	307	100.0

Source: Household survey, 2013

Table52 show that remarkable majority (80.8%) of the child delivered respondents did not visit for PNC checkup after delivery whereas only 19.2 percent

went for PNC checkup. Similarly respondents were also asked about the reasons for not visiting for PNC checkup

Out of not going PNC checkup respondents (307); nearly to half (48.2%) stated that they did not perceived any complication after delivery so did not went for PNC. Other reasons stated for not going for PNC were; have not knowledge about PNC (26.1%) followed by never call by health workers for PNC (15.0%), no permission from family members (4.8%) and lack of money (3.6%) as the reasons for not going for PNC checkup (Table 53).

4.3 Qualitative findings

Key Informant Interview (KII) was the method used to collect qualitative information. KII was done with 6 persons which includes; 1 Sub Health Post Incharge, 1 MCHW, 2 FCHVs, and 2 School teachers. KII finding are analyzed based on themes.

> Most of the people ask to go to health facility for health care to the women but they do not ask about the financial condition of them. How a poor and uneducated woman knows about the problem and decides herself about the treatment when she does not have single piney to pay for travel and service?

Firstly, information generated from KIIs was transcribed in English. Themes were indentified and grouped in three, major area as per objectives of the study i.e., socio-economic, lifestyle and access & utilization of health services.

4.3.1 Socio-economic factors affecting UP

During KIIs socio-economic factors were explored. Most of the KII participants (4/6) mentioned that due to the ethnic/caste related reasons there are practices of early marriage among Tharus and other untouchable caste.

> *Uneducated women have less earning capacity compare to educated women so educational status and financial condition of women are interrelated. A poor and uneducated woman has more chances of having UP because they know less about the issues related to UP and will not have money to go for treatment.*
>
> *- KII participant (FCHV of 56 yrs, Female)*

However, few of them (2/6) argued economic viable women have more chances of having better education and influence on decision making in family. Two of the participants also shared that vegetable farming is increasing than before in this area and most of the women use to produce and sell vegetable products to the market which has brought change in their economic capacity and influence in family decisions.

One of the participants also explained that the illiterate women of the study area are also involved in non literacy class these days, where they learn to read and write Nepali alphabet along with health message which has changed their ways of thing and doing in daily life. In this context, economic condition and education are interrelated to each other because to purchase better health services in time and to know about the preventive measures & source of remedy during UP education have role.

> *We have traditional practice of early marriage. Chances of having more children is higher in such cases so this practice should be changed to reduce UP among women*
>
> *-KII participant (SHP In-charge of 36 yrs, Male)*

One of the participant think that giving birth to more children makes weak health of the women and gives ill health so chances of having UP is higher among them. Majority (6/7) of them agreed that in small family; taking care of members is better and financial condition is better than large family size and decision making is also better in small family size.

Participant also suggested that beliefs about the UP are different among women living in this area; such as going to traditional healers, shyness about the problem but these days due to other reasons such as exposure to media and communication women's beliefs are changing. So in summary, socio-economic factors have effect in uterine prolapse.

4.3.2 Lifestyle related factors affecting UP

All most all (5/6) KII participants mentioned that most of the women who are working as housewife and farming have to carry load during their daily work and also walk for long distance. Few of them (2/6) stated that women who are engaged in paid service do not have to walk and use to sit in chair. So women working in field and farming have more chances of having UP compare to other. Half of the participants (3/6) stated that educated and office going type of women mostly do not smoke but other type of the women such as housewife use to smoke. They also describe that smoking makes weak health & loss of appetite and weak women has more chance of having UP.

> *Most of the women of this area have to work in farm and rare of them are service holder. While working in farm women have to carry loads and bend/stand during work. In most of the cases women get engaged in farm and housework after name putting ceremony of newly born child, which is organized after 11-12 days of birth.*
>
> *-KII participant (School teacher of 38 yrs. Female)*

All most all (5/6) KII participants were not known to special exercise to prevent UP and also pointed that women of this areas are not aware about the such exercise to prevent UP.

Two of the KII participant mentioned that women engaged in farming and housework have more exercise compare to other. More than half (4/6) explain, nutrition has role in UP. Few of them (2/6) also mentioned that women use to take food at last, after having food of all family members in most of the family so they do not have sufficient food in most of the instances.

Most of the KII participants disclosed that in most of the family, availability of nutrient food is related to the income of the family. In most of the family there is practice of giving chicken soup, ghee and milk product for delivered women for 7- 15 days after delivery of child. KII participants disclosed that giving nutrient food for women is the issues related to ethnic group and financial capacity of the family

> *Some year ago, smoking was common among rural women but these days it has been reduced due to change in health awareness but very few of them use to smoke while taking rest during farm work and after having food in the morning and the evening. I think, in most of the instances women smoke lesser*

> *Women get less food because they have to feed family members before they eat. Whatever is produced and available in farm or purchased from market, people use to take so they don't consider about nutrient value. I think eating of nutritional food by women is also related to availability and purchasing capacity of family.*

In Tharu ethnic group they use to keep chicken, duck where as Brahmin/Chettri keep cow and buffaloes so Tharu women receive meat products and other receive milk product commonly during pregnancy and after delivery.

All most all KII (6/6) agreed that fruits are really used in the family but green vegetable grown in kitchen garden are commonly used in the family so women receive food what are available in their farm but some of the paid service holder women also purchase from the market.

4.3.2 Factors related to access & utilization of health services affecting UP

All most all KII participants agreed that most common sources of information were radio and Television and two of them also mentioned that neighbor, friend and relatives were other source of health information in this area.

> *Due to low level of awareness and education; poor women has less information about UP prevention and its source of treatment.*
>
> *-KII, SHP In-charge, 36 yrs, Male*

Two of the KII participant mentioned that knowledge about the UP such as prevention is very low among the people of this area however majority (4/6) stated that symptoms of UP are shared to family and friends more these days because of

change in educational status and cultural issues in societies. They also disclose that educated women have better knowledge than uneducated

Majority of the KII (4/6) respondents answered that FP users have been increased these days but it is less among illiterate and poor women because of less awareness and cultural beliefs such as son preference. Two of the KII respondents stated that practice ANC visit is better than before but people of this areas belief in trained health worker for delivery so institutional delivery is less compare to ANC. Two of the FCHVs stated that health institution are far and some of the time it is not opened and health workers are not available at SHP so women have to delivered with the support of others. Majority of the respondents mentioned that educated and less poor people goes to hospital where delivery services are availability for 24 hrs. For complicated delivery also some of the women visit to there as stated by SHP In-charge. Half of the KII participants mentioned, chance of PNC is very nominal because people use to think that if there is not any problem after delivery why to go for that?

Half of the KII participants responded that there are traditional birth attendances in communities who are female. People have faith and beliefs on those healing practices because of easily and always available for delivery so in most of the poor women and at night time delivery cases people use to take support from them. Two of the teachers stated that people feel comfort to take support from that traditional birth attendance because of being in the same community, female in gender and cheaper than other source of support.

All most all KII participants (5/6) agreed that though there is free delivery and UP services for women and they also receive certain money as transport support. Two of them mentioned that lack of female health worker at health institution, unavailability of drugs and health works are the causes for not visiting local health facilities. One of the KII respondents answered that though services are said free but women have to pay for drugs and high charge for ambulance/transportation and transport support given by government does not cover that cost.

> *Hospital is far and some of the time SHP is not opened, health workers are not available so women have to deliver with the support of others. Mostly, educated and less poor women visit hospital; where 24 hrs delivery services are availability.*
>
> *-KII, FCHV, 43, Female*

CHAPTER V
DISCUSSION

This was a cross sectional study carried among 385 married women of child bearing age in ward number 1 and 2 of Shaudiyar VDC of Dang district of Nepal. Overall objective of this study was to determine the socio-economic, lifestyle factors along with the access & utilization of health services among those groups of women in relation to prevalence of uterine prolapse. Thus this study explored the relationship between socio-economic, lifestyles and access & utilization related factors to prevalence of uterine prolapse. Results of this study will be used to promote awareness among community people by implementing agencies and health institutions. Similarly, results of the study will also be used in planning and developing intervention programmes related to uterine prolapse by policy makers and health managers.

As mentioned in result section, out of the total 385 women of child bearing age, 380 has given birth to at least child during their life span while five were married but were Nullipara. Similarly, during screening examination of all 385 women; it was found that significant majority (97.7%) do not have uterine prolapse where as only 9 (2.3 %) of them had uterine prolapse. Even though the small proportion of uterine prolapse cases was found in this study, the relationship between socio-economic factors and factors related to life style, access and utilization of health services and the occurrence of uterine prolapsed in women of child bearing age had been tested.

Socio-economic factors related to prevalence of UP

In this study age of the women were categorized in four groups based on the national standard of Central Bureau of Statistics of Nepal. Three of 9 women with uterine prolapse were above the 40 yrs of age followed by age between 30 to 40 yrs (3 women). None of the women had uterine prolapse below the age of 30 years of age. Significant relationship between age of the child bearing women and prevalence of uterine prolapse has been observed. This implied that the child bearing women age above 40 years old seem to have a higher chance to develop uterine prolapsed than

women in other age groups. This result is consistent with the study done in Tamil Nadu of India (Ravindran, et al., 2000) and other studies (Younis, et al., 1993; Bhatia, et al., 1997; Swift, 2000).

Religion is also considered as an important factors as it also determine prevalence of UP. Study results showed that all of all uterine prolepses were Hindus women (99.0%),thus the analysis of the relationship between religion and the prevalence of UP could not be performed. However,the religion may reflect the life style of women and their belief. This may be an indirect effect on the practice of delivery and women health care which xould relate to the prevalence of UP

Ethnicity/caste is prevalent in Nepal and has been grouped in six categories. Result showed that remarkable majority (69.4%) of the women were Tharu followed by Brahmin/chhetrri (16.6%), Dalit/untouchable (6.0%). However this result does not replicate with others' studies (Darshan, 2009; Shrestha, 2009 and Tamrakar, 2012). This might be due to the difference in caste distribution of the study population.

Educational level of the women has effect on knowledge and behavior thus it is considered as a factors for prevalence of uterine prolapse. Study result has showed that 55.6% of women were only able to read and write and remaining 44.4% of the uterine prolapsed women were not able to read and write. Thus, no significant relationship between education and level of prevalence of UP. However, the result showed that higher education level, lower chance of UP occurrence. Even the UP women who cannot read and write had the same incident of UP as women who can read and write but have not attended formal education, the severity in the former group is tended to more severe. This result is not compatible with the result with UNFPA and Sancharika Samuha (2007) and Tamrakar (2012) which stated that education level has an effect on the prevalence of UP. This might be due to the nature of respondent because most of the female of rural community do not like to show that they are literate to others.

Early age of marriage is found as major factor for UP. Age of the marriage of the women has been grouped in four categories. Study result showed that 55.5% of the women with UP had got married in between the age of 15-20 yrs followed by below 15 years of age (44%). Similar finding has been replicated in study done in Nepal by Tamrakar,A., (2012) and Shrestha,A.D, (2009).

People living in rural communities of Nepal generally lack awareness and they believe that children are gifts of God. They are also unaware about family planning. Thus, number of parity has been considered another factor for uterine prolapsed Spence Jones et al.,(1994).Result showed that 44.4% of uterine prolapsed can occurred in women with any number of parity (1-5 parity/ies). Moreover, there was no relationship found between number of parity and prevalence of UP in this study. However it is not comparable with result with Safe Motherhood Network Federation, (SMNF) Beyond Beijing Committee (BBC), Tribhhuvan University Teaching Hospital (TUTH) (2009) and Tamrakar (2012) and parity might be related indirectly with other variables for high prevalence of uterine prolapse.

Economic status affect to decision making and economical access of the services along with work load of the women thus it has been considered a factor related to uterine prolapse in the study. More than half (55.5%) families of those uterine prolapse women had annual income between NRs. 100,000 to 500,000. Result of the study is similar to Shrestha's (2009) and Khatri's (2011) in which higher the annual income has resulted lower the uterine prolapse has been observed. Thus the study is compatible with the study of Woodman et al.,(2006).

Respondents living in joint families had more workload despite the fact that there were many other family members to share the workload in Nepal. Additionally and generally, it is also true that daughter-in-laws were given the responsibility of performing most of the tasks in the household. More than half (55.5%) has joint family structures followed by nuclear (33.3%) and extended (1.1%). Results are not similar to the findings of Safe Motherhood Network Federation, (SMNF) Beyond

Beijing Committee (BBC), Tribhhuvan University Teaching Hospital (TUTH) (2009), Shrestha (2009) and Khatri (2011). This is due to the better liberty and freedom to the women in Tharu community compares other caste/ethnicity groups in Nepal and family type might be related to uterine prolapse indirectly through other variables.

Major source of health care during illness was SHP (32.5%), Private hospital/clinic (29.2%) and public hospitals (18.7%) during illness, HP (9.1%), Traditional healers (4.2%), local drug retail shops (2.9%). Similarly result showed that more than two fifth (43.4%) of the women belief on traditional healing practices during illness. This result shows that health institutions are the major sources of health care during illness but remarkable proportions of the women have faith to traditional healing practice. Similarly nearly to one quarter (24.7%) of the women belief that TH/local healers are capable to provide service to pregnant women and it affect negatively to the early detection of uterine prolapse among the women. This result is similar to the finding of Shrestha,A.D.,(2009).

Decision making process in family is also related to family type and other variables. This study result has disclosed that only 39.2 percent of the women make decisions on their own for pregnancy/delivery related issues. In such situation she have to ask for others while seeking care from health institutions as well thus low proportion of decision making by women have effect on prevalence of uterine prolapse. Similar result have been observed by Khatri (2011) done in remote district of Nepal.

Lifestyle related factors related to prevalence of UP

Life style related factors has effect on occurrence of uterine prolapse among women because these factors determines the nature of work done by the women and those work might be risk to uterine prolapse. Similarly smoking habit and exercise doing practices has also influence on health promotion of the women and finally to prevalence of uterine prolapse.

Occupation determines the income capacity and type of work performed by women thus occupation has been considered as factor to the prevalence of uterine prolapse. This study result has showed that remarkable proportions of the women (44.4%) were engaged on labor/daily wages and house work which is one of the risk factor for UP. Furthermore, more than three quarters of women started to work within the 30 days after delivery. Similar results has been observed in the study done by other (Gautam et al., 2012; Darshan, 2009; Shrestha,A.D.,(2009).

This result has showed that 100.0% uterine prolapse women had never smoked any tobacco during their life and study findings of Hendrix, 2002 has also reported that 52 percent of the women having uterine prolapse has never smoked in their life. However study finding of Wieslander and colleagues (2005) is not comparable with this result in which they have suggest that smoking-induced activation of vaginal macrophage may increase be involved in the pathogenesis of prolapse in women who smoke. Smoking of tobacco might be indirectly affecting to the prevalence of the uterine prolapse because chronic coughing is also related to the use of tobacco; whereas chronic coughing is a major risk factor of uterine prolapse.Thus,by proportion these lifestyles related factors have influences on prevalence of uterine prolapse(Rana et al.,2001).

Study results that large proportion of the respondent never received nutrient food such as milk, egg, ghee, fruits and nuts, with exception for green vegetables; most of them consumed it daily (85.5%) and it t is similar to the results of Bonetti and others (2004), Westergren and others (2004) and CAED (2006).

Study has reported that all of all (100.0%) women having uterine prolapse had not done any exercise to prevent uterine prolapse. However report published UNFPA & Sancharika Samuha, (2007) has suggested performing Kegals exercise and yoga could to prevent uterine prolapse. This result might be due to the indirect relation of Kegals exercise with other variables related to uterine prolapse

Factors related to access & utilization of health services and prevalence of UP

Uterine prolapse is highly stigmatized in Nepalese community, the family and women hesitates to engage in prevention and treatment activities. If women, family and community are aware of the issues, it will be easier to women and family to make decision on right direction (Radl et al., 2012).

Remarkable proportions of the women (35.6%) have not heard about uterine prolapse. Six out of ten (61.2%) of them expressed difficulty in walking as the symptoms of uterine prolapse followed by feeling of something coming out from vagina (34.0%), difficulty in sexual intercourse (28.8 %). Similarly, remarkable majority (23%) of them were not known to any symptoms of uterine prolapse and result is near to the results of Baruwal (2010) and it should also be noted that very few study have been done on the subject related to knowledge of uterine prolapse to prevalence of UP.

Uterine prolapse is highly stigmatized in Nepalese community, the family and women hesitates to engage in prevention and treatment activities. If women, family and community are aware of the issues, it will be easier to women and family to make decision on right direction (Radl et al., 2012). Previous study has reported that the factors influencing to uterine prolapse have been pointed as accessibility and utilization of health services. In this context, knowledge about UP, ANC visit during last pregnancy/currently, use of FP services after last delivery or currently, place of delivery during last pregnancy were not found significant to uterine prolapse.

This study results that out of total 385 respondents; 380 were been pregnant in their life. Near to the half (45.5%) of women had UP though they have not used ANC services this result is similar to the results of Safe Motherhood Network Federation, (SMNF) Beyond Beijing Committee (BBC), Tribhhuvan University Teaching Hospital (TUTH) (2009) in which almost 80% of the women had no antenatal check-up who had screened as uterine prolapse.

Study results that six out of ten (66.6%) women have used FP services having uterine prolapse after last delivery or currently. Previous study has reported that utilization of ANC services, use of FP services, delivered by trained health worker and/or institutional delivery and absence of work load during pregnancy and adequate post natal care contribute to reduce the occurrence of uterine prolapse (Shrestha, 2009).

This study results that more than three quarters (76.1%) of women had given birth to child at home and eight out of ten of them had not received PNC services after delivery This results is near to the study done by others (Earth and Sthapit,2002; Bodner-Adler, et al., 2007; Shrestha, 2009; Family Health Division, SAIPAL and WHO, 2011; Radl et al., 2012) in which the higher proportion of uterine prolapse has been also observed among home delivered women.

People of Nepal usually do not visit to the health facilities for minor illness and government has established health facilities in every VDCs with female health care providers in Nepal. However, Saudhiyar SHP is located to the center of the VDC thus there is less problem from geographic access and availability of female care provider. Availability of care providers in this study was regular and staffs of the Saudhiyar SHP are from local community which has made women easy to ask for services during UP. This deputation local staffs in SHP have increased socio-cultural and availability of staffs and better access of services to the women. Furthermore, Government of Nepal has made free services for the people up to District level health facilities including UP services thus people should not pay for health care.

Key Informant Interview with health facility in-charge, FCHVs, MCHWs and school teachers also reveals that factors under socio-economic, lifestyle and access and utilization of health services have influence on prevalence of uterine prolapse. However, lifestyle and accessibility to the services is changing faster in the study society thus significant result might not have been achieved in this study but results of the study are compatible to previous similar study. Similarly, rapid change in

education and combination has also influenced to the occurrence of uterine prolapse. Some of the variables under the study were directly related to the prevalence of uterine prolapse and other study variables are related to the uterine prolapse indirectly linking with study variables.

CHAPTER VI
CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

Out of total respondents, significant majority (97.7%) of the women of child bearing age (15-49 yrs) didn't have uterine prolapse and only 9 (2.3 %) of them has uterine prolapse. Out of total women those having uterine prolapse, large proportion 6 have first degree of uterine prolapse followed by 2 women with second degree of uterine prolapsed and 1 women with third degree uterine prolapsed.

Socio-economic factors

- There is significant relationship between age of the child bearing women and occurrence of uterine prolapse.
- Particular type of caste/ethnicity, lower educational level, early marriage, higher number of parities, low annual income, joint family structure are other major socio-economic factors affecting to uterine prolapse. But decision making pattern family has not remarkable affect in uterine prolapse.
- Sub health post, private and public health institutions are major source of treatment during illness but some ethnic (tharu) group and people have strong faith on traditional/local healers because of always and easily available, beliefs, nearness and cheaper.

Lifestyle related factors

- Housework, heavy weight lifting works and long distance walking works are the common daily life activities; however few of educated are involved in paid employment or table work.
- There is not any significant relationship between occurrence of uterine prolapse and lifestyle related factors.

- Labor/daily wages and house work/housewife are major occupations affecting to uterine prolapse.
- Lack of nutritious food for women during pregnancy has been noticed which have affect on UP.
- Similarly, all of all women having uterine prolapse had not done any exercise to prevent uterine prolapse so practice of doing exercise to prevent uterine prolapse have also remarkable influence on uterine prolapse However, tobacco smoking habit do not have any affect on the women suffering from UP in this study..
- More than three quarters of women started to work within the 30 days after delivery. Housework is the major activities done during pregnancy period followed by agriculture/forest and carrying heavy load. However, heavy work, distance walking and agriculture/forest going were restricted during pregnancy.

Access and utilization of health services

- There is not any significant relationship between the factors under access and utilization of health services and uterine prolapse; thus none of the factors under access and utilization of health services group have affect on occurrence of uterine prolapse among the women of child bearing age.
- Level of awareness about uterine prolapse is low and radio, neighbors, television & other relatives are major sources of information.
- Three quarter have knowledge about symptoms and cause of uterine prolapse; while nearly to one forth of women have not knowledge about symptoms and causes of UP.
- Doctors or modern service providers are the sources of treatment for uterine prolapse for large majority of UP women however few of them also use local herbal remedy for it. One of ten is unknown about the source of treatment of the uterine prolapse.
- Large majority are either satisfied and/or fully satisfied from nearby health facility. Whereas, nearly to two of ten of them were either unsatisfied and/or fully unsatisfied with their nearby health facility. Unavailability of drug, far away from

home, irregular staffs and not benefited from last visit are the major reasons for not visiting nearby health facility.

- Surprisingly, out of 9 uterine prolapse respondents, 6 have used FP services and remaining of women having uterine prolapse had not use FP services after last delivery or currently. Nearly to six of ten of them visited for ANC checkup.
- Nearly to three quarters were home deliveries, one quarter to public health institutions and rare on private health institutions delivery. Perceived safe to the home delivery, complication was not perceived, no time to reach health institution and family not interested for institutional delivery are the major reasons for home delivery.
- Trained Birth Attendants are the major attendants for delivery followed by family member and neighbor, nurse and doctors.
- Remarkable majorities of the delivery were normal without episiotomy followed by normal with episiotomy, complicated but not operated and operated (C/S).
- Remarkable majority did not visit for PNC checkup after delivery. Not perceived any complication, have not knowledge about PNC, did not informed by health workers, no permission from family members and lack of money are reasons for not visiting for PNC checkup.

6.2 Recommendations

Socio-economic issues

- Health, education and development programme should be planned and implemented focusing to girl and women educational promotion, prohibition on early child marriage and promotion of use of spacing and permanent methods of FP in community.
- Health services delivered from public sectors should be made community friendly and socio-economic acceptable and affordable.

Lifestyle related issues

- Plan and implementation of programme focused to promotion of kitchen garden and income generating activities for supply of nutritious food and to bring change in nature of house work.

- Implementation of Behavioral Change and Communication (BCC) activities to bring change in level of awareness regarding to precaution during pregnancy and after delivery at household level through the involvement of Mother's Groups and social organization to break culture of silence.

Access and utilization related issues

- Implementation of community awareness raising programme through community participation at household level to bring change about knowledge on uterine prolapse and promotion of ANC and institutional delivery
- Health policy makers and managers should make ensured of quality service along with regular supply of commodities/drugs and regularity of staffs in health facilities.
- Local healers/attendants should be trained about the health issues and they should be developed as referral focal person from community to health facilities.

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Appendices

Appendix A

FACTORS RELATED TO UTERINE PROLAPSE AMONG MARRIED WOMEN OF CHILD BEARING AGE (15-45 yrs) IN DANG DISTRICT, NEPAL

Namaste (Hello)!

My name is _____

I am here to take interview for thesis of Master's in Public Health. This thesis is related to women health particularly to Uterus prolapse. Major objective of this study is to find out the factors affecting to uterus prolapse among married women of child bearing age of this Village Development Committee. For this purpose we have selected you by using Systematic Random Sampling Method (SRSM). So, I would like to get some information regarding your personal and family life in connection with the uterine prolapse issues. The outcomes of the information that you will give us will be used for thesis writing and article publication. Information shared with us will not harm to you and your family and it will be remaining confidential and will be used in research. Analysis will be done in group not at individual level.

This interview is completely voluntary, but your support and cooperation is very important to make the study complete and successful. Furthermore, this is an opportunity for you to share your experience and knowledge with your friends in the community and outside.

Do you agree to participate in this research?

1. Yes *(start interview)*
2. No *(end interview and move to next household)*

A). Demographic characteristics of the household (please *tick mark on the serial number of the respondent*)

S.N	Names	Age *(in completed yrs)*	Sex *(M/F)*	*Education level *(In completed grade for above 5 yrs)*	**Caste/ Ethnicity	***Occupation *(for above 5 yrs only)*	****Marital status
1							
2							
3							
4							
5							
6							
7							
8							
9							

Coding:*Education level:	****Caste/Ethnicity:**	*****Occupation:**	******Marital status:**
0= Cannot read & write	*1= Brahmin/Cheetri*	*1= Service*	*1= Never married*
1= Can read & write but have not attended formal education	*2= Gurung/Manager/Rai/Limbu*	*2= Agriculture/animal husbandry/poultry*	*2= Currently married*
2= Passes Grade 1-5	*3= Tharu*	*3= Business*	*3= Divorced*
3= Passed Grade 6- 8	*4= Madhesi*	*4= Daily labour/wages*	*4= Separated*
4= Passes Grade 9-10	*5= Newar*	*5= House wife*	*5= Widow/widower*
5= Passed Grade 11-12	*6= Giri/Puri/sanyasi*	*6= Student*	
6 = Passed Grade 13 and above	*7= Dalit*	*7= None*	
	8= Others(specify)	*8= Others(specify)*	

B) Socio--demographic characteristics of the respondent

1. Age at the time of marriage …….(in completed yrs)
2. Number of parity ……..(in numbers)
3. What is your family type?
    1) Nuclear
    2) Joint
    3) Extended

4. What are the sources of annual income of your family?

SN	Sources of income	Annual income(in NRs)
1	Agriculture	
2	Animal Husbandry	
3	Poultry	
4	Vegetable farming	
5	Service	
6	Business	
7	Daily Wages	
8	Remittent	
9		
10		

5. Who normally makes decision on seeking health care during pregnancy & delivery?
    1) Father /Mother in Law
    2) Husband
    3) Yourself
    4) Other relatives/family members
    5) Jointly

6. Usually where do your family members go for treatment during illness?
    1) Not anywhere, home treatment
    2) Traditional healers
    3) SHP
    4) HP
    5) PHCC
    6) Public hospital
    7) Private hospitals/clinics/nursing homes

8) Local drug retail shops

9) Others (specify)…….

7. Why do they go there? *(Possibility of multiple answers*)

1) Nearby

2) Always available

3) Cheaper

4) Good treatment

5) Belief/past experience of

6) Friendly behavior

7) Availability of Female health care providers

8) Others (specify)…….

8. Do you seek health care from traditional healers (TH)?

1) Yes

2) No (Go to Q.N.-11)

9. For what type of illness or health problems do you seek care from traditional healers?

1) Illness of children

2) For minor illness

3) For major illness

3) For illness related to male

4) For illness related to female

5) Others (specify)…….

10. Why?

1) Nearby

2) Always available

3) Cheaper

4) Good treatment

5) Belief/past experience of

6) Friendly behavior

7) Others (specify)…….

11. Do think that traditional healers or local birth attendance can provide service to pregnant women?

1) Yes

2) No

3) Can't say/no idea (Go to Q.N.:13)

12. How? Why?

C) Lifestyle related factors

13. Do you smoke or use tobacco?

1) Yes currently using

2) Used in past but not using currently (Go Q N 15)

3) Never used tobacco (Go Q N 15)

14. Usually, how many sticks do you smoke in a day?

---------- Numbers of sticks

15. Any exercises are you doing to prevent uterine prolapse?

1) Yes

2) No (Go to Q.N. 17)

16. If yes, what types of exercise are you doing to prevent uterine prolapse?

1) Physical exercise

2) Special exercise to prevent uterine prolapse

17. If No, Why?

18. Usually what types of work you use to do in your daily life*? (Possibility of multiple answers)*

1) Heavy weight lifting

2) Regular standing

3) Long distance walking

4) Official work

5) Normal house work

6) Others (specify)…….

19. After how many days of your last delivery, you started to do usual work as normal women?

……. Days

20. During your last pregnancy what types of work you usually did and did not?

Work done	Work restricted

21. During your last pregnancy what types of nutritious food you usually ate within a week?

(Read possible options to the respondents)

Types of food	Daily	2-3 times in a week	1 times in a week	2-3 times in a month	Once a month	Occasionally	Never
Milk							
Egg							
Meat							
Ghee							
Fruits							
Green vegetables							
Other (specify)……..							

D) Access & utilization of health services related factors

22. Have you ever heard or known about uterus prolapse?

1) Yes

2) No (Go Q.N. 24)

23. If yes, from where did you hear about it? (*Possibility of multiple answers)*

1) Radio

2) Television

3) Magazine/papers/books

4) Family members

5) Other relatives

6) Neighbors

7) Others (specify)……

24. What is uterine prolapse? *(Possibility of multiple answers*)

1) Pain in lower abdomen
2) Any discharge from genitalia
3) Ulcer in genitalia
4) Something tends to expel out from vagina
5) Don't know
6) Others (specify)……..

25. What are the causes of uterine prolapse? *(Possibility of multiple answers*)

1) More child birth (vaginal)
2) Heavy work load during post partum period
3) Poor nutrition
4) STIs/RTI
5) Poor sanitation
6) Don't know
7) Other (specify)……

26. What are the sign and symptoms of uterine prolapse? *(Possibility of multiple answers*)

1) Difficulties in walking
2) Difficulties in sexual intercourse
3) Feeling of something coming out from vagina
4) Ulcer in genitalia
5) Don't know
6) Other (specify)……

27. Where should to go for treatment of uterine prolapse?

1) Doctor or modern health care providers
2) Traditional faith healer
3) Local Herbal
4) Not needed to go anywhere
5) Don't know
6) Other (specify)……

28. How much time does it take to reach the nearby public health facility from your house?

…… (In hours).

29. What is the common mode of transportation to reach there?

1) By foot
2) By cycle

3) By public transport

4) Others (specify)…….

30. Are there any female staffs to provide service to the women?

1) Yes

2) No

31. Is opening hrs of that public health facility is convenience for you?

1) Yes

2) No

32. Do you have visited there for health services? If yes, for what purpose?

1) FP services

2) For treatment of children

3) For own treatment

4) Others (specify)…….

33. What do you say about the overall aspect of the service that you are receiving from that public health facility?

1) Fully satisfied

2) Satisfied

3) Unsatisfied

4) Fully Unsatisfied)

34. Why you felt unsatisfied/fully unsatisfied?

1) Unfriendly behavior of staff

2) No drugs

3) No staffs

4) Others (specify)…….

35. What are the issues/reasons/causes that restrict or prevent you to receive services from public health facilities?

1) Far away from home

2) Staffs are irregular

3) Drugs are not available

3) Expensive/costly

4) Not benefited in past

5) Bitter past experience of

6) Unfriendly behavior

7) Unavailability of Female health care providers

8) Family do not allow

8) Others (specify)…….

36. Did or do you are using FP services after birth of last child or currently?

1) Yes (Go QN. 38)

2) No

37. If no Why?

(Don't ask Q. N. 38 to 39 to the women who had never been pregnant)

38. How many children that you have

…… number

39 Did you visited for ANC check up during last pregnancy?

1) Yes

2) No (Go QN. 41)

40. If yes, where did you visited and how many ANC visit you did?

1) Public health facility…….. Times

2) Private hospital…….times

3) Private clinics…….times

4) Other (specify)…….times

(Don't ask Q. N. 41 to 46 to the women who had never been delivered baby)

41. Where did you give birth to your last child?

1) Home

2) Public health institutions

3) Private health institutions

4) Others (specify)……

42. Why?

43. Who assisted you for that delivery?

1) Family member

2) TBAs

3) Neighbors

4) Doctor

5) Nurse

6) Others (specify)…….

44. Your last delivery was;

1) Normal without episiotomy

2) Normal with episiotomy

3) Complicated but not operated

4) Operation was done

45. What was the birth weight of the last baby?

1) Home delivery so not weighted

2) Do not remember

3)……. gram

46. Did you visit for PNC check up after that delivery?

1) Yes **(**Go Q.N. 48**)**

2) No

47. Why?

48. Result of UP screening /examination*? (Tick any one option after doing examination/screening at the end of the interview)*

1) No UP

2) 1st degree UP

3) 2nd degree UP

4) 3rd degree UP

Appendix B

Key Informant Interview (KII) with Health Facility In-charge/Mother and Child Health Worker/ Female Community Health Volunteer and School Teachers

1. **Name of Interviewee:**
2. **Age:**
3. **Sex:**
4. **Education:**
5. **Position(if any):**
6. **Date:**
7. **Starting time:**
8. **Ending time:**

Beginning: *Start with the socialization; greeting, introduction and recent news of the locality. After this clearly spell out the objective of this study:*

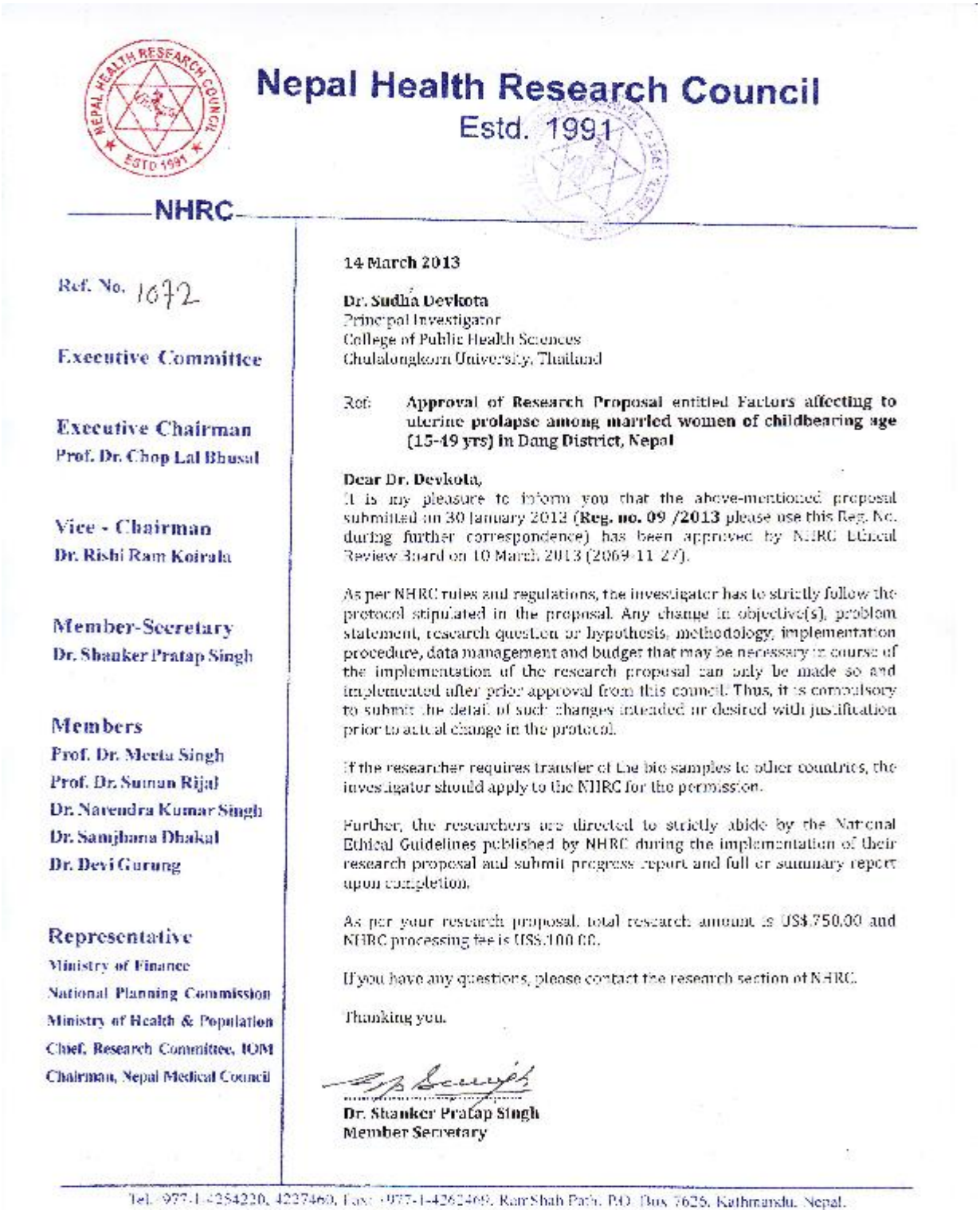
Objective

1. To find out the socio-economic factors related to uterine prolapse among married women of child bearing age (15-49 yrs)
2. To find out the life style related factors related to uterine prolapse among married women of child bearing age (15-49 yrs)
3. To find out the factors related to access and utilization of health services before & during pregnancy in relation to uterine prolapse among married women of child bearing age (15-49 yrs)

Main themes /issues for interview;

1. What are the major health problems of women of this VDC?
2. How much uterine prolapse is common in this community?
3. Why? What are the major reasons for that problem in this community? *(Probe: social, economical, life style, access & utilization of health service related issues???)*
4. In your experiences, are there any differences in prevalence of uterine prolapse *(Probe: by caste/ethnicity, age, religion, education and family income etc)*
5. How these factors cause differences in prevalence of uterine prolapse among women? Can you explain about the status of female within the family of this community? *(Probe: age of marriage, education, diet, type of work and work load etc)*
6. What are the common sources of health care services in this community? Why? *(Probe: public, private, TH etc)*
7. What is your opinion about the health care seeking by women during pregnancy and delivery? Why?
8. Why do you think so? (Probe: any reasons????)
9. Why female have less access and utilization of health in this community? *(Probe: social, cultural and health facility related issues???)*
10. How could we minimize the prevalence of uterine prolapse in this community?
11. Are any things that you want to say regarding to causes of uterine prolapsing?

Appendix C



Nepal Health Research Council
Estd. 1991

NHRC

Ref. No. 1672

14 March 2013

Dr. Sudha Devkota
Principal Investigator
College of Public Health Sciences
Chulalongkorn University, Thailand

Ref: **Approval of Research Proposal entitled Factors affecting to uterine prolapse among married women of childbearing age (15-49 yrs) in Dang District, Nepal**

Dear Dr. Devkota,
It is my pleasure to inform you that the above-mentioned proposal submitted on 30 January 2013 (**Reg. no. 09 /2013** please use this Reg. No. during further correspondence) has been approved by NHRC Ethical Review Board on 10 March 2013 (2069-11-27).

As per NHRC rules and regulations, the investigator has to strictly follow the protocol stipulated in the proposal. Any change in objective(s), problem statement, research question or hypothesis, methodology, implementation procedure, data management and budget that may be necessary in course of the implementation of the research proposal can only be made so and implemented after prior approval from this council. Thus, it is compulsory to submit the detail of such changes intended or desired with justification prior to actual change in the protocol.

If the researcher requires transfer of the bio samples to other countries, the investigator should apply to the NHRC for the permission.

Further, the researchers are directed to strictly abide by the National Ethical Guidelines published by NHRC during the implementation of their research proposal and submit progress report and full or summary report upon completion.

As per your research proposal, total research amount is US$.750.00 and NHRC processing fee is US$.100.00.

If you have any questions, please contact the research section of NHRC.

Thanking you.

Dr. Shanker Pratap Singh
Member Secretary

Tel.: 977-1-4254220, 4227460, Fax: 977-1-4262469, Ram Shah Path, P.O. Box 7626, Kathmandu, Nepal.

Appendix D

Phone: +977-82-562039

Government Of Nepal
Ministry of Health & Population
Mid West Regional Health Directorate
District Public Health Office
Dang, Ghorahi

To Whom It May Concern

This is to certify that Dr. Sudha Devkota has successfully completed information collection in Saudiyar Village Development Committee of Dang District, Nepal as a part of her thesis entitled "Factors affecting to uterine prolapse among married women of child bearing age (15-49 years).

Sagar Prasad Ghimire
Senior Public Health Administrator

Appendix E

VITAE

Name	:	Dr. Sudha Devkota
Date of Birth	:	2nd June ,1968
Birth Place	:	Pulchowk Lalitpur,Bagmati
E-mail	:	sudha_devkota@yahoo.com
Nationality	:	Nepali
Sex	:	Female
Language	:	Nepali,English,Russain and Hindi
Qualification	:	MD ,1995
		Lugansk State University,Ukraine

Training:

Epidemiology and Control of Tropical Diseases(Aug 4-22 2008) Thailand)

HIV/AIDS Clinical management (9-18 March,2008)

CAC	-	May 1-17 2006
CemOC	-	2004 (6 months) Patan Hospital+ AMDA Butwal
PAC	-	2002/Jan 4-9 Maternity Hospital
Minilap	-	1996/Dec 17-1995 Jan 7 NHTC

Work Experience:

Present post	-	Medical superintendent, Salyan District hospital.

Nominated by the Nepal government, Health Ministry to study MPH in Thailand on 2011/Dec/28, and the fellow is a student and studying MPH in Chulalongkorn University, Thailand since 2012/May/17 till date..