Uterine Prolapse in Doti District of Nepal

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Submitted by

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Acronyms

ADRA	Adventist Development and Relief Agency
AIDS	Acquired Immune Deficiency Syndrome
ANC	Ante Natal Care
CAED	Centre for Agro –Ecology and Development Nepal
Co-PI	Co-Principal Investigator
CREHPA	Centre for Research on Environment, Health and Population Activities
FPAN	Family Planning Association of Nepal
GTZ	German Technical Co-operation
HIV	Human Immune Deficiency Virus
HSSP	Health Sector Support Programme
ICPD	International Conference on Population and Development
IEC	Information Education and Communication
MWRA	Married Women of Reproductive Age
NC	Natal Care
NHRC	Nepal Health Research Council
PHECT	Public Health Concern Trust
PI	Principal Investigator
PNC	Post Natal Care
POP	Pelvic Organ Prolapse
RH	Reproductive Health
RM	Reproductive Morbidity
SBA	Skilled Birth Attendant
SPSS	Statistical Package for Social Sciences
STD	Sexually Transmitted Disease
STI	Sexually Transmitted Infection
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
UP	Uterine Prolapse
UVP	Utero-Vaginal Prolapse
VDC	Village Development Committee

ABSTRACT

Introduction

Pelvic organ prolapse is the widespread chronic problem among women in Nepal; particularly among adult and old women of hilly areas. There are 600,000 diagnosed cases of symptomatic Utero-vaginal prolapse. Uterine Prolapse is a condition when the uterus drops from its normal position in the pelvic cavity, descending into and eventually, in extreme stages, out of the vagina. The major purpose of the study was to assess the prevalence and factors associated with Uterine Prolapse in Doti district of Nepal.

Methods

This was the community based descriptive cross sectional study conducted among the 360 women of the Doti district who have experienced at least once a pregnancy during her life. Three stage stratified sampling procedure was adopted. Face to face interview was conducted with respondents using pre-tested, structured interview schedule. Data were analyzed by statistical package for Social Sciences (16 Version) and results were presented in table and figures. Percentage, mean, median, Chi Square test, Fisher's exact test, one way ANOVA, correlation coefficient and regression analyses were applied.

Results

Prevalence of uterine prolapse was reported to be 35.97 %. Median duration of suffering was 5.5 years. Majorities of the respondents were over 35 year's age. Visible protrusion was reported by more than 52% cases. All the respondents reported backache, something coming down per vagina and pain around the waist region (> 98%) as major symptoms

Family size, literacy status, income, caste, age of respondents, age at marriage; numbers of children, parity, type of delivery, time to resume work after delivery, and associated diseases after delivery were independently and significantly associated with uterine prolapse ($p<0.05$). The strongest variation was observed due to parity of women followed by type of second and fourth delivery; moreover type of delivery at first, second, third and fourth child birth, age at marriage, numbers of children, parity of women, age at first

child birth have was observed to be the strongest associative factors accountings for 40 percent variations.

Less than 40% had received treatment of uterine prolapse and most of them received services from hospitals followed by mobile camps. Only 65 % who were treated against uterine prolapse were satisfied with services that they received, nevertheless only 34.6% were fully satisfied.

Conclusions

Uterine prolapse was observed among large numbers of women; among these almost all were married before the age of 20 years. Illiterates and high parity women were suffered greatly. The perceived service satisfaction was reported to be low among respondents. Women's empowerment, limiting frequent pregnancies and provision of educational opportunities are recommended for the prevention of uterine prolapse.

Key words: Uterine Prolapse, Associated Factors, Perceived Satisfaction

CHAPTER ONE: INTRODUCTION

1.1 Background

With the advent of International Conference on Population and Development (ICPD) in Cairo 1994, reproductive health (RH) and women's health in general was looked at in a more holistic way. Its most significant achievement was the shift in orientation from fertility reduction and population policies to reproductive health and the socio-cultural factors that affect reproductive health. There was also emphasis on reproductive rights, women's empowerment, gender and equity. The concept of reproductive health as a central component of women's development was further endorsed during the Fourth World Congress on Women held in Beijing 1995.[1]

World Health Organization estimates that the reproductive ill health accounts 33 percent for women as compared to 12.3 percent for males. Despite these significant figures, there are no illustrative information reported in this concern in South East Asian Countries; neglecting the context of reproductive health and associated consequences. However, some efforts to define, describe, estimate the burden of diseases being in account. Reproductive ill health is a major health problem and least addressed by general public due to taboo and ignorance.[2]

The reproductive morbidity refers to the diseases that affect reproductive system, although not necessarily as a consequences of reproduction. Reproductive morbidities classified as obstetric/maternal morbidity (it covers morbidity related to pregnancy or aggravated by the pregnancy or its management but not from the accident or incidental causes), gynecological morbidity (any condition, disease or dysfunction of the reproductive system that is not related to pregnancy or abortion or child birth but may be related to sexual behaviour) and contraceptive morbidity (it covers the conditions that results from efforts to limit fertility, whether they are traditional or modern).[2] Magnitude of reproductive morbidity has not been adequately defined. Findings further states that osteoporosis, uterine prolapse and other gynaecological complications contribute significantly to reproductive morbidity.[1]

Pelvic organ prolapse is a very common condition, particularly among adult and old women. It is estimated that half of women who have children experience some form of prolapse in later life, but many women don't seek help. So, the actual number of women affected by prolapse is unknown. Prolapse may also be called uterine prolapse, genital prolapse, uterovaginal prolapse, pelvic relaxation, pelvic floor dysfunction, urogenital prolapse or vaginal wall prolapse. Pelvic organ prolapse occurs when the pelvic floor muscles become weak or damaged and can no longer support the pelvic organs. The uterus is the only organ that actually falls into the vagina. When the bladder and bowel slip out of place, they push up against the walls of the vagina. While prolapse is not considered a life threatening condition, it may cause a great deal of discomfort and distress. Different forms of Pelvic organ prolapse may be vaginal prolapse, Cystocele, Urethrocele, Enterocele, Rectocele, Uterine prolapse and Vaginal Vault prolapse.[3]

Uterus (or uterine) Prolapse (UP) is widespread chronic problem among women in Nepal, particularly in hilly areas. It is defined as falling of the womb, when the muscles of the pelvis are strained to a point where they can no longer support the positioning of the uterus. The uterus drops from its normal position in the pelvic cavity, descending into and eventually, in extreme stages, out of the vagina. It is a progressive condition that typically occurs in post menopausal women in most countries. However, it can also occur in younger age group and frequently does in Nepal. Some evidences suggest that there are extensive problems of Uterus Prolapse among women but these remain unexposed due to shyness and negligence to the health of women.[1]

Medically, four stages of Uterine Prolapse are defined:

Stage I: Descent of the uterus to any point in the vagina above the hymen.

Stage II: Descent to the hymen: descend of uterus in pressure and goes back to position if manual support is given.

Stage III: Descent beyond the hymen: descends frequently and continuously.

Stage IV: Total aversion or procidentia.[4]

A woman with complaints of uterus prolapse present with either of one or more signs and symptoms in an individual. In mild cases, it is hardly possible to notice a bulge. When progressive features may appear such as:

- A feeling of fullness or pressure in pelvis and vagina, especially when standing for long periods of time.
- Increased discomfort on strain, coughs, bear down or lift.
- A bulge of tissue that, in severe cases, protrudes through vaginal opening. The resulting soft bulge may feel walnut or even grapefruit-sized, and often goes away when lies down.
- A feeling of incomplete voiding of urine.
- Loss of urinary control with coughing, laughing or sneezing (stress incontinence). In severe cases, a women unable to control urination at all.
- Recurrent bladder infections.
- Pain or urinary leakage during sexual intercourse. [4]

Uterine prolapse is always accompanied by some degree of vaginal wall prolapse. No one definite cause of the problem has been firmly established, as women from different economic strata, a wide range of ages, belonging to various ethnic groups and from all ecological regions from east to west suffer from it. Experience indicated that it is the result of hard physical labour, such as carrying heavy loads, especially during and immediately after child birth. Other often-cited causes are prolonged labour during childbirth, forced delivery by untrained persons, lack of postpartum rest, insufficient spacing between births, bearing a large number of children with inadequate spacing and poor nutrition.[5]

Uterine Prolapse has yet to be addressed because of the lack of understanding of gender concepts among people in the concerned bodies, policy-making level and the implementation level. The continued lack of awareness among women and discrimination against them persist, Uterine Prolapse cases continue to increase day by day. The main reasons for Uterine Prolapse are the followings:

- Carrying heavy loads or strenuously working six weeks within 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 abdomen in longer duration of the delivery period;
- Continuously coughing after child birth;
- Applying more pressure than required before the time of child birth;
- Lifting heavy objects after child birth;
- Malnutrition, dysentery for a long period, lack of blood; and
- Lack of rest after child birth.[4]

Generally, women in Nepal have three levels of responsibility such as reproduction and child rearing, household maintenance and earning. Under traditional gender divisions of labour women tend to concentrate more on their reproductive roles and household responsibilities. As a role of reproduction, they are expected to give child birth and rear the children. Due to prevailing cultures and social norms of the society, many women have either no access to care for reproductive health problems or limited access. As a predominantly patriarchal society, institutions such as education, the legal system and even health services are heavily influenced by these norms and values. The consequences of this system can be seen in social indicators such as literacy, child mortality, maternal mortality and morbidity amongst women. So, their problems remain hidden which leads them into poor health and consequences are seen in either new born child or her own health. In absence of proper care and support during pregnancy and child birth, the

outcomes of pregnancy leads into complication such as falling of uterus outside of vagina, heavy bleeding leading into deaths.[6]

1.2 Statement of the Problem

The global prevalence of genital prolapse is estimated to be 2-20% in women under age 45 years. It is one of the commonest reproductive morbidity in developing country with its very high prevalence among women.[7,8] Although, the extent of problem is less common in developed countries, in the United States, over 390,000 surgeries occur annually for corrections of genitourinary prolapse. In China, uterine prolapse is one of two female diseases for which the government provides free care. Evidences show that genital prolapse is present in at least 20% of postmenopausal American women. Physician diagnosis found 56% of the study population suffered from genital prolapse in Egypt in late 1990s.[1] Prolapse of uterus and associated organs are mainly attributed to complications of pregnancies and child birth. Common predisposing factors are multiparity, early postpartum strenuous activity, advanced age and menopause. Genital Prolapse is mainly due to insufficiency of the pelvic floor and consists of a herniation of an adjacent pelvic organ into the vagina.[7, 8]

More than one million Nepal women suffer from uterine prolapse, and the majorities of these patients are of reproductive age.[6] The extent of Utero-vaginal prolapse (UVP) is very common among Nepalese women. There are about 600,000 patients suffering from this gynecological condition, amongst which 200, 00 require immediate correction. The incidence rises in elderly. The exact prevalence of prolapse is difficult to determine because often prolapse is not complained about.[9] In Nepal, genital prolapse appears to be widespread, but little published evidence exists to buttress this claim.[7] Bonetti et al. in 2002 examined 2,072 women in West Nepal and detected that one in four of these women had genital prolapse. The most commonly perceived cause of prolapse is lifting heavy loads, including in the postpartum period. Most reports describe heavy household and farm working during pregnancy, as well as pre and post-delivery, as the main causes and risk factors.[1] The clinic-based study conducted among 2,072 women who presented with gynaecological complaints and received a diagnosis in western Nepal, one in four of

them had genital prolapse, of whom 95% had self-reported the prolapse.[7] This problem exists throughout Nepal and drastically affects women's quality of life.[6] A study from west Nepal revealed that 40% of women with uterine prolapse are of reproductive age having given birth to their first child and the extent of problem is more among women of disadvantaged and marginalized women.[5] Similarly, of 50 women attending in family planning clinic , 14% of them were diagnosed with uterus prolapsed in Doti district and 29.45% of the 274 women admitted in maternity hospital have self reported pelvic organ prolapse[1].

Women comprise slightly over 50% of total population of Nepal, but the country has one of highest indices of son preference in the world. The consequences of this system can be seen in social indicators such as literacy, child mortality, maternal mortality and morbidity amongst women.[6] Situation of Nepali women leaves much to be desired. Women's health, and in particular their reproductive health, is severely affected by their low familial and social status, patriarchal perspectives, traditional values, illiteracy, poverty, etc. Among the health problems faced by women related to reproductive health, Uterine Prolapse is a complex condition that is often kept in secret because of the shame of the condition affecting a sensitive part of the woman's body. Many women fear condemnation from their communities and families and until today, discussion and debate surrounding the disease does not openly occur within the family and society.[8, 9]

Studies indicated that approximately 70% of women of childbearing age are anemic, a result of early childbearing (an estimated 40% have given birth to at least one child between the ages of 15 to 19) and because of poor maternal health care and nutrition. One out of every 185 pregnant women die because of pregnancy and child-birth related complications and many more suffer from disabilities related to these responsibilities. Some common morbidity includes pelvic organ prolapse, reproductive tract infections, etc. For women living with these conditions, life's basic activities are a challenge. Urinating, defecating, walking, standing and sitting are difficult and painful, which in turn loads to various forms of psycho-social and physical disorders.[6]

Uterine Prolapse is widespread across the country and has affected women in the mountains, hills, plains and the valleys of Nepal. In addition, Uterine Prolapse makes no distinction between young and old women, and women as old as eighty have been found to be among the sufferers[5]. The problem of uterine prolapse is one of the issues of concern for all women, civil society and the government itself.

1.3 Objectives

General

To assess the prevalence and factors associated with Uterine Prolapse in Doti district of Nepal

Specific

- To determine the prevalence of Uterine Prolapse among women,
- To explore factors associated with Uterine Prolapse,
- To identify the perceived health service satisfaction among women treated against Uterine Prolapse.

1.4 Research Questions

i. What is the prevalence of Uterine Prolapse in Doti district?
ii. What are the factors associated with Uterine Prolapse?
iii. What is the level of service satisfaction among those who treated against Uterine Prolapse?

1.5 Rationale / Justification

- Reproductive role of the woman is one of the indispensable functions for the continuity of life. Pregnancy and childbirth is the physiological process but the consequences may be unpredictable. In order to identify the morbidities related to reproductive health of woman, this study contributes significantly by identifying such associated factors.
- Termination of pregnancy into successful outcomes is the fundamental to the reproductive processes but this is always not so. Mismanagement of pregnancy,

delivery and lack of proper care immediately after birth many turn into complications such as uterine prolapse, post partum hemorrhage, psychosis, infections etc. Early identification of these problems guides to devise new interventions and serve as basis of prioritization to plan intervention strategies.

- Health status of woman defines the health status of her offspring. Good health of the child and mother can be devised only if the mother has wellbeing in every dimension of health. This study plays a vital role to identify the factors related to uterine prolapse on the basis of which prompt action can be taken to preserve and restore the reproductive health of women.
- Status of woman in Nepalese society is poor and access to health care is limited. Their reproductive health problems of women still remain neglected issues despite of various interventions being implemented. Uterine prolapse is largely hidden problems and these issues are not openly shared. Hence, it is hidden problem. This study was a small effort to generate some facts related to uterus prolapse and act as a tool for advocacy and empowerment.
- Uterine prolapse is preventable and if not addressed timely, this may have serious consequences leading to death or it may decrease the quality of life. Thus, it is very important to study the factors related to uterine prolapse.

CHAPTER TWO: LITERATURE REVIEW

2.1 Literature Search Process

Literatures are the relevant information related to the study. On these bases, further inquiries were followed. Literatures were searched in the light of objectives. Only most relevant, updated and the information of similar setting have been incorporated in this study.

Literatures are arranged on relevancy basis. Theoretical foundations and contexts are written in first and then findings related to this study are listed on second and policy, practices related findings have been presented accordingly.

Relevant literatures were cited from different sources such as library of National Academy for Medical science, Nepal Health research council, Majorities of background information are gathered from books, then the information are recorded in note book and then computerized. Internet based literature were cited by following key words such as uterus, prolapse, associated factors, satisfaction, etc. Mainly Google search engine, web of WHO, PUBMED, website of NHRC, UNFPA, ADRA Nepal etc were followed. Once related article identified, cross links were followed to get more information. Literatures cited from the internet were saved in pen drive and then copied in CD. Many articles were reviewed and their salient findings pertaining to the objectives of the study were included.

2.2 Theoretical Literatures

"Reproductive health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes." The following components fall under reproductive health:

- Safe sex;
- Capability to reproduce and the freedom to decide if, when and how often to do so;
- Full information and access to safe, effective, affordable and acceptable methods of family planning of their choice, as well as other legal methods for regulation of

fertility; and Access to appropriate health-care services that will enable women to go safely through pregnancy and child birth and provide couples with the best chance of having a healthy infant.[5]

Pregnancy and childbirth is a physiological phenomena, nevertheless it does not remain complication free. Uterine prolapse is one of the chronic problems of women which make themselves uneasiness to be the members in the society. This is mainly attributed to poor management of delivery and resuming heavy work soon after following child birth. Normally uterus is supported by pelvic floor muscles and become very prominent at matured stage. There is physiological and physical change soon after following pregnancy. Pelvic muscles become more elastic and flexible in order to maintain the physiology of pregnancy. This period is very sensitive and requires attention to terminate it into successful consequences.[4]

Uterine prolapse may occur among those who do not have experienced pregnancy and child birth, most are parous and higher prevalence among old age women and the incidence of major degrees of prolapse requiring surgery is much higher in the older age groups. Symptoms may develop after delivery or be delayed until after the menopause, when regressive changes associated with advancing years and possibly in particular with oestrogen deficiency, are the final cause of the pelvic floor weakness.[10]

Uterine prolapse is a common disorder, due to the mechanical breakdown, not always permanent, in the supports of any one or all of the following structures-uterus, bladder, bladder-urethral junction, pouch of Douglas, rectum, and anal canal. The explanation of all types of uterovaginal prolapse is herniation of the relevant structure: uterus, bladder, rectum, or pouch of Douglas through the supporting pelvic muscle and fascial diaphragm. Consequently they are unable to support the uterus and vaginal vault during the normal stress of daily life, and as a result the cervix descends progressively, but usually slowly, down the vagina. The examination of the vulva usually reveals a gaping in introitus, a slack vagina with cystocele and rectocele, often a lacerated, eroded, or infected cervix, and varying degrees of uterine and vault descent. A simple recommended classification is

three stages or degrees: firstly, the uterus, pouch of Douglas, and vault descend down the vagina but the cervix remains inside the introitus; secondly, the cervix protrudes at the vulva when the patient strains; and, thirdly, this is synonymous with procidentia. The whole uterus is prolapsed outside the vulva with resultant eversion of the vagina.[10]

The degree of prolapse found at examination is not necessarily correlated with the severity of the symptoms. Considerable prolapse is often seen in patients who maintain they are symptom-free, just as others with minimal prolapse claim to be severely distressed by symptoms such as a sense of something falling out; a lump at the vulva which is always worse on standing or straining and usually disappears when the patient lies down; frequency, stress or urgency incontinence; and occasional retention. Dyspareunia and loss of libido are often admitted on questioning but seldom complained of. Backache is rarely a symptom, though dragging discomfort in the sacral area and thighs may be associated with severe prolapse.[10]

Despite the severity of symptoms the condition can improve spontaneously and dramatically immediately after delivery until cure is complete. Spontaneous cure is sometimes associated with pregnancy, though by contrast silent damage occurring at the time of delivery is often responsible at least in part for symptoms many years later. In the meantime a ring keeps her comfortable. It does not cure but acts as a splint just as the intact hymen preserves the dignity and adds to the comfort in her cloisters of the elderly nuns whose cervix is arrested at the vaginal introitus by the unruptured membrane.[10]

2.3 Review of related Literatures

Eva C. Samuelsson et al. studied the prevalence of genital prolapse and possible related factors in a general population of women 20 to 59 years of age in Sweden. The prevalence of any degree of prolapse was 30.8%. Only 2% of all women had a prolapse that reached the introitus. In a set of multivariate analyses, age ($P < .0001$), parity ($P < .0001$), and pelvic floor muscle strength ($P < .01$) and among parous women associated with presence of prolapse.[11]

Rortveit G et al. performed a population based study. Symptomatic prevalence of pelvic organ prolapse was determined by self report of a feeling of bulge, pressure or protrusion, or a visible bulge from the vagina and risk factors were assessed by self report and personnel interview. The study revealed that 6% women experienced prolapse and about 50% of them have moderate or great distress, and 35% reported that symptoms affected at least one physical or social or sexual activity. The risk of prolapse increased with the vaginal deliveries, presence of constipation, poor health. [12]

Kumari S. conducted a study to estimate the prevalence of self reported uterine prolapse and treatment seeking behaviors of the married women of Dadu Majra Colony, Chandigarh, India. Only 7.6 % women reported the symptoms of prolapse and 57% of them had not taken any treatment, 21% consulted doctor and rest of them went to traditional birth attendants. The prevalence was significantly higher among women with higher parity. Reasons for no consultation were shyness, lack of cooperation by husband, lack of time and lack of money. [13]

Serge P. Marinkovic et al reviewed 97 articles using key words cystocele, uterine prolapse, vault prolapse, enterocele or rectocele to identify definition, classification, incidence, symptoms and evaluation. The analysis disclosed that Prolapse and urinary incontinence often occur concomitantly and cystocele, rectocele, enterocele, uterine descent or vaginal vault prolapse may also be present. [14]

Most of the few studies carried out in Nepal are clinic based, only giving an indication of prevalence and very few are population based. Some of the studies and their salient findings are presented here.

Reproductive morbidity encompasses obstetric morbidity including conditions during pregnancy, delivery and the post-partum period; and gynecological morbidity including conditions of the reproductive tract such as reproductive-tract infections, cervical cell changes, genital prolapse, malignancies and infertility. Study conducted in district hospital of Bajhang at Chainpur during the campaign period of 6 days in 2003 revealed

that total 530 women had attended the camp. Among them 273 (51.5%) had gynecological problems. Uterovaginal prolapse was the leading morbidity found in 97 women (18.3%) and reproductive tract infections (13.9%).[15]

Marahatta R.K. reported that prevalence of female genital prolapse was 7.55% among the women over age 20 years. Maximum numbers of women were having children eight and more (48.51%). Seventy nine percent of women with genital prolapse had all children born at home without help. About 26.73% started working in field in 2-3 weeks after delivery. The use of pessary is 25% among female with genital prolapse and few were following medical advice to change the ring.[8]

Pant PR. reported that majorities of the patients suffering from prolapse were deprived Bishwakarma, (45.54%) followed by Brahmins (38.08%). Hospital deliveries were negligible and prolong labor was found among 16% Bishwakarma as compared to 10.83% among Brahmins. The magnitude of problem is higher among Bishwakarma than Brahmins.[9]

A study conducted by safe motherhood network in 2004 in 10 districts of western Nepal revealed that 33% of women who have uterine Prolapse require immediate treatment. Majorities (70%) of the women from hilly area were having Prolapse as compared to 30% of plain. 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. Uterine Prolapse was more prevalent among women who were deprived of general health services; generally uterine prolapse occurred because of a lack of nutritious food, appropriate rest, health services and care; and Lack of health education was also one of the factors for the high prevalence of the disease.[16]

One in every four women had genital prolapse, of them 95% had self-reported the prolapse. The most commonly perceived causes of prolapse were lifting heavy loads, including in the post-partum period. The adverse effects reported included difficulty urinating, abdominal pain, backache, painful intercourse, burning upon urination, white

watery discharge, foul-smelling discharge, itching, and difficulty lifting, sitting, walking and standing.[7]

Barbara Bodner Adler et al. conducted a study with an aim to determine the prevalence of uterine prolapse and to define possible risk factors for this disease in the Kathmandu Valley of Nepal in a clinical setting. During a 3-month study period, 96 women were diagnosed and treated with uterine prolapse. The median age at the time of clinical presentation was 50 years. In average, the women gave birth to four children vaginally and most of them were postmenopausal. Nearly all patients reported that they were working heavily during pregnancy as well as in the postpartum period (87%). Extensive physical labor during pregnancy and immediately after delivery, low availability of skilled birth attendants were reported to be the risk factors of uterine prolpase.[17]

Throughout rural Nepal, impoverished women suffer from uterine prolapse - a painful and debilitating condition in which the uterus protrudes from the vagina, sometimes for years; one of the highest incidences in the world. But the problem has been largely ignored by the government of Nepal and the international community. Uterine prolapse is a product of poverty, social pressure and inadequate health services. Documents reveals that 200,000 women in Nepal with the most severe symptoms, are thought to need immediate medical treatment. But they are generally deterred from seeking help by their distance from medical centers and a sense of shame. One United Nation's study found that more than 14 percent of Nepali women are doing heavy labor within a week of childbirth.[18]

Pelvic Organ Prolapse (POP) is a significant problem in Nepal. Definite treatment is scarcely available and little is known of the results of POP surgery on women living under burdensome circumstances. A study conducted in 2004 and 2006, 74 women with a POP from remote areas around Dhulikhel Hospital underwent Prolapse surgery. 85% found the effect of the procedure an improvement. A satisfactory anatomic outcome was found in 93%. A remarkable finding was the reduction in physical labour after the surgical procedure in 50% of the follow-up cases.[19]

Reproductive Morbidity: A Neglected Issue? (Bonetti et al, 2002), is a report of a clinic based study in far-western Nepal, undertaken jointly by GTZ, UNFPA and the Nepal government, which seeks to identify the causes of UP. In Accham and Doti 25.1% women were reported with different degrees of UP. The peak onset was found during younger reproductive age groups. Bonetti et al. studied the practices used during childbirth and during the post natal period for women with UP, their working pattern and nutrition status. Various tangible factors associated with UP were noted, including delivery by untrained (traditional) birth attendants, forced delivery, excess pressure on lower abdomen, prolonged labour, performing heavy work (lifting and carrying loads) during pregnancy and the post natal period, multiple births and poor nutrition.[1]

Uterine prolapse is a specific type of pelvic organ prolapse, which may be thought of as a type of hernia. Weakness in the muscles and ligaments of the pelvic floor can cause loss of uterine support and lead to uterine prolapse. Pregnancy, childbirth, obesity and chronic coughing and lifting are some of the factors that predispose a woman to developing uterine prolapse. Uterine prolapse is a progressive condition that gets worse over time if not treated. Symptoms of UP are: pelvic heaviness or pressure, pelvic pain, sexual dysfunction, lower back pain, constipation, difficulty walking, difficulty urinating, urinary frequency, urinary urgency, urinary incontinence.

Study identified that, in Accham, 22.2% of the women reported the onset of prolapse before the age of 20 and 43.8% reported onset between the ages of 20 and 29 years. The cases in Doti were very similar. Its prevalence is 37% in Siraha and Saptari districts and onset majority falls within the age 20-29 years; 31 % had uterine prolpase after the delivery of first child. Most of the patients of uterine proplase in Saptari and Siraha were from poor socioeconomic background and Dalits. The literacy status of women was highly correlated with prolapse and no relationship was observed between prolong labour and uterine prolapse. Nearly 76% of the women with UP women reported occurrence while lifting and carrying heavy loads, collecting water, chopping firewood, husking and pounding rice. Over half of the women first discovered their UP when in a squatting

position. Although this does not indicated that squatting is the cause of UP, it does suggest that working in a squatting position women is not good for women.[6]

A Study was conducted with an aim to generate baseline data on reproductive morbidity (RM) leading to pelvic organ prolapse in eastern districts of Nepal. Majority of the women in were found to be suffering from STI (30.1%), followed by Pelvic Organ Prolapse (20.1%), menstrual disorders (16.7%) and sub fertility (9.3%). Majority (60%) developed POP after first and second child birth. Among POP patients majority received ring pessary insertion (43.8%) followed by counselling plus pelvic floor exercise (32.9%) and surgical correction (23.3%).[20]

Gurung G et al. estimated the prevalence of pelvic organ prolapse (POP) among married women of reproductive age (MWEA) in the rural Nepalese community using cross-sectional descriptive designs. Results showed that among 2849 women who agreed to take part on the study when interviewed 72.6% came for assessment. POP was diagnosed in 10%. POP formed 2.8% of adolescent due to early marriage (50%) and unsupported delivery by skilled birth attendant (SBA) out of health facilities (99.2%). Resumption of manual labor after delivery less than a month was (83.8%) and parity was responsible to some extent. Mean duration of suffering being 7.8 years having II°/III° prolapse. [21]

Barbara Earth et al. describe the contribution of gender skewed cultural practices to the high prevalence of uterine prolapse among rural women in Nepal. In difficult geographical conditions, inadequate health services, prenatal as well as post natal heavy workload, low decision power to women and unskilled birth attendants using pull and push technique lead to pelvic organ prolapse or pelvic damage.[22]

Adventist Development Relief Agency (ADRA) Nepal identified that UP is a major health problem among the women in Nepal. The needs assessment identified that 70% women of reproductive age in Achham and Kalikot district have UP and 30% require surgical intervention. In response, the project concentrated on UP surgery and treatment, as well as increasing awareness on UP treatment and prevention among service providers

and community leaders. In addition to the high incidence of UP, use of family planning methods is very low in these districts. Poor referral mechanisms and remoteness are contributing factors that reinforce the vulnerability of women and girls in Far and Mid-Western Nepal.[23]

2.4 Policy, programme and Practices Related Literatures

Uterine Prolapse has yet to be addressed because of the lack of understanding of gender concepts among people in the concerned bodies, policy-making level and the implementation level. As discrimination against women and the continued lack of awareness among women themselves persist, Uterine Prolapse cases continue to increase day by day. Only a limited number of women know about their physical and mental health rights. Awareness-raising programmes on health rights have not been effectively implemented and the State has also been unable to address issues related to Uterine Prolapse despite the fact that this disease affects the lives of hundreds of thousands of women throughout the country.[9]

The National Policy of the Government of 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." In response to the increasing demand to address the reproductive health needs, reproductive health strategy come in existence. The Nepal Reproductive Health Strategy included the following services targeted through integrated reproductive health package.

- Family Planning;
- Safe Motherhood;
- Child Health (including care of the newborn);
- Prevention and management of the complications of abortions;
- Prevention and management of reproductive tract infections, STDs and HIV/AIDS;
- Prevention and management of infertility;
- Adolescent reproductive health;

- Reproductive health problems of elderly women [6]

Although, reproductive health strategy focused on the women's reproductive health issues, uterine prolapse or pelvic organ prolapse or genital prolapse is not specifically mentioned in the Second Long Term Health Plan, it is only covered Reproductive health problems of elderly women however the reproductive health remain a priority in Nepal. Several development partners like UNFPA, UNICEF, ADRA, PHECT Nepal, GTZ/HSSP, CAED, CREHPA, FPAN, Helping Hands Nepal, Safe motherhood Net work, etc have been engaging in the delivery of reproductive health services in collaboration with Ministry of Health and Population. In addition to the government health services, these nongovernmental organizations play an associative role to combat against the problem. For example, ADRA Nepal has been delivering reproductive health services through campaign approach; general community awareness programme on preventative and general reproductive health care, uterine prolapse, and HIV/AIDS through dissemination of information, education and communication (IEC) materials, video shows and street dramas. Currently, 113,315 women, men and youth have received health services through ADRA Nepal's health camps and 447 women have received uterine prolapse surgery.[23]

Mobile Camp was held in Ganeshpur Dadeldhura with the assistance from UNFPA; implemented by ADRA Nepal, along with the Public Health Concern Trust in December 2006. A study released earlier this month estimated that 10 percent of Nepali women need treatment for pelvic organ prolapse. Many factors are behind the high incidence include: women marry and get pregnant at an early age; they bear many children but receive poor pre and post natal care; do excessive heavy work during and immediately after delivering and most have little or no access to health care. UNFPA expects more than 14,000 Nepalese receive reproductive health services at the 84 camps and about 600 health workers to be trained in such skills as replacing pessary rings. The agency is now talking with the Ministry of Health and Population about it taking on the task of holding similar camps once this project ends.[24]

Uterovaginal Prolapse is widespread problem in Nepal. In consideration of diverse geographical determinants and the nature of the clinical or community based study carried out in general population against the women who are sick and actual sufferers during different period of year. Several surgical camps are mushrooming every year with extension of services in various parts throughout the country to address the problem of uterine prolapse. This approach is useful to reduce the prevalence of prolapse and the related magnitude of morbidity. The concept of surgical camps is marvellous but the approaches are undoubtedly less palatable. These kinds of surgical camps for major vaginal surgery at community and district level must be the first of its kind and needs applause.[25]

A country with major geographical disadvantages, Nepal, yet has been looming with innumerable measures in improving women's health needs targeted at women who cannot make to the big cities by the extension of services in remote areas of the community by the organization of surgical health camps and reaching to masses of women who have in due course of time adjusted to live with prolapse. This is an ambitious approach, the services imparting the reproductive right to women where the women would benefit more if they did not have to be air lifted in face of dire emergencies meeting the provision of general anesthesia facility.[25]

CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY

This section describes the process by which research study was performed in logical manner and presented in scientific orders. The steps presented here are interlinked. In this study, the format of NHRC is followed entirely.

3.1 Research Method

This was the quantitative study.

3.2 Study Variables

1. Demographic variables:

   Age, occupation, education, ethnicity, income, family size, types of family, parity, age at marriage, age at first child birth

2. Other variables:

   - Support during pregnancy, after child birth
   - Work load
   - Frequency of child birth
   - Sex of previous child
   - Birth spacing
   - Assistant at the time of delivery
   - Place for delivery : home or institutional, normal or assisted
   - Associated diseases
   - Habits : smoking

3. Dependent Variable: Uterine Prolapse

3.3 Type of Study

This was the community based descriptive cross-sectional study.

3.4 Study Site and its Justification

This study was conducted in Doti district of Nepal. It lies in far western development region and represents the glimpse of hilly region. Comparatively, Far-western region less developed than other regions and it has limited amenities and facilities. Of nine districts of the region, Doti is one of the remote districts where hardly transportation, communication and other facilities exists throughout its jurisdiction. The socio-economic conditions are relatively considerable and literacy status in this district is poor. Access to health facilities is limited. This district administratively divided into two electoral constituencies, one Municipality: namely Dipayal Silgadhi Municipality and 50 Village Development Committees.[26]

It is believed that women in hilly area are more prone to the condition because of the heavy work associated with farming in the hills and lack of any wheeled transport. To date, evidences supports that uterine prolapse is mostly prevalent in the hilly areas; especially the far-western region of Nepal. Due to poor access, to health and health care services, prevalent social factors it is believed that the district is highly prone to the problem of uterine Prolapse. So, it was prioritized for the study.

3.5 Target Population

All women were the target population of the study. Although, the uterine prolapse is an issue of concern for all women; for the study purpose, women who were under went pregnancy at least one time during her life span and resident of Doti district of Nepal consisted study population. This included the women who are currently in the reproductive age and experiencing post menopausal life.

Identification of uterine prolapse

Uterine prolapse is defined as falling of the womb, when the muscles of the pelvis are strained to a point where they can no longer support the positioning of the uterus. Such prolapse may have several degree of protrusion like first, second, third and fourth. Along with uterus, other organs such as rectum, bladder, urethral and vaginal wall etc. may descend down.

In order to identify the existing condition of prolapse, self reported history explained by the respondent was the base to define the existence of uterine prolapse. No clinical examination was done to diagnose the status of uterus prolapse; nevertheless it is entirely based on verbal autopsy. A women having uterine prolapse was defined if she complaints at least two relevant symptoms explained below.

- Feelings of something coming down per vagina while she is moving about; feeling of pressure or protrusion or bulge which may or may not be visible
- Backache or dragging pain in the pelvis,
- Difficulty in passing urine and stool and sitting,
- Excessive white or blood stained discharge per vagina.

In addition to these, many other symptoms experienced by respondents were also recorded.

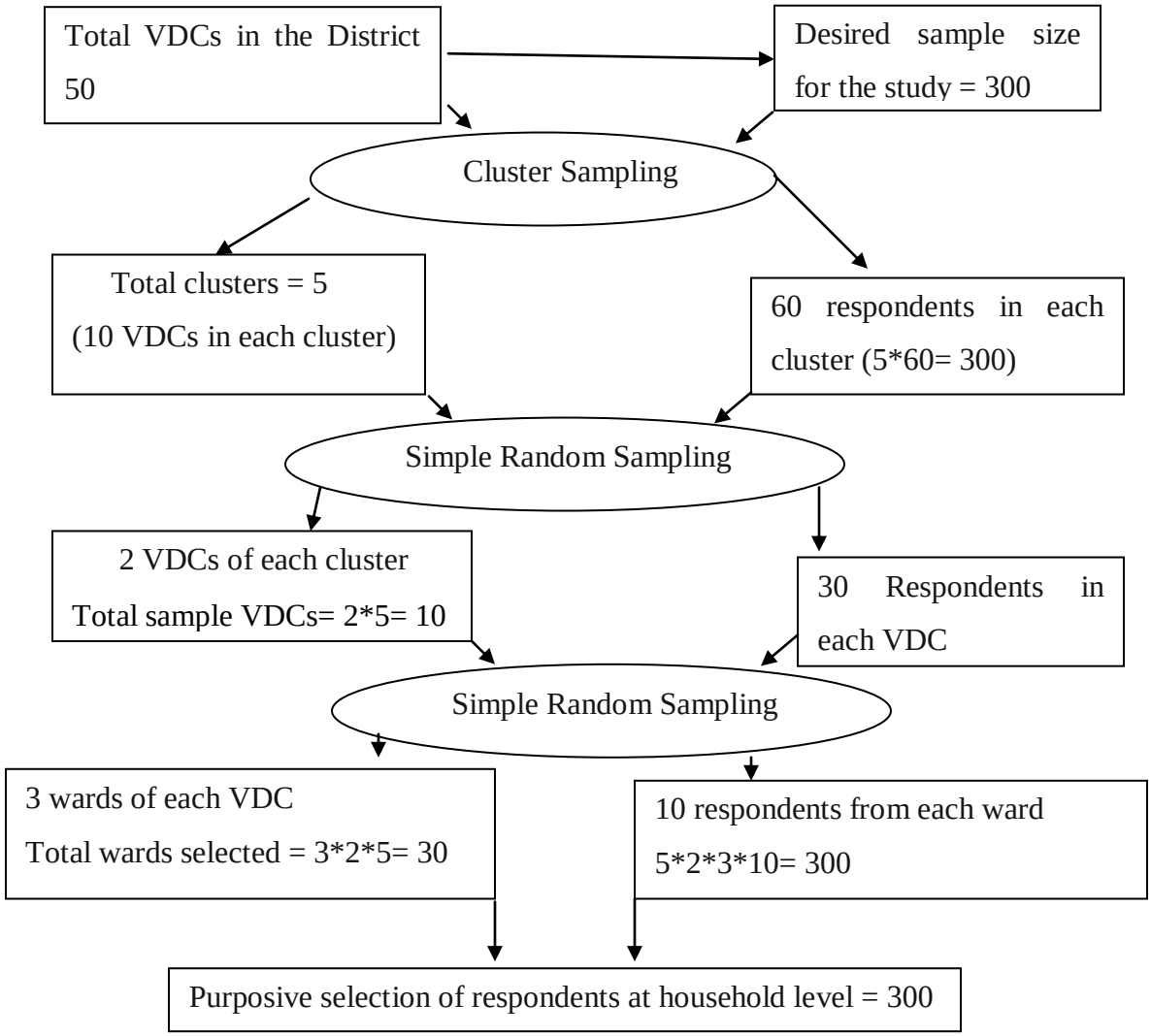
3.6 Sampling Methods

Three stage stratified sampling method was followed for study. The first stage consisted of clustering of districts. The district consists of 50 Village development committees (VDC) and a Municipality. The whole district was divided into five clusters of Village Development Committee (VDC) and a cluster of Municipality. All these VDCs were grouped into five clusters of adjoining VDCs with somehow similar geographical location. Thus, each cluster consists of ten VDCs and a Municipality cluster.

In second stage, Out of ten VDCs of each cluster, random sampling was carried out to select 2 VDCs of each cluster. Third stage involved the selection of 3 wards of selected VDCs that were selected by simple random sampling using lottery method.

Respondents were selected from these selected wards purposively starting from first house and then others. Thus, 360 respondents were selected from five clusters of VDCs and a cluster of municipality accounting for 60 respondents from each cluster. If a family comprises more than two eligible women, one of them was selected by lottery method.

The selection process can be shown as follows.



Clustering of VDCs, random selection process and the selected VDC with their respective wards are illustrated in annex. Dipalyal Silgadhi Municipality was considered a cluster for the study because it has geographical as well as population coverage somehow equals to the combination of 10 Village development committees.

3.7 Sample Size

A study conducted by GTZ/UNFPA jointly, on women's health status in 2002 reported that women attending in clinics complaints various reproductive health problems such as

Reproductive tract infections, vaginal discharges, and about 25% reported pelvic organ prolapse. On the basis of this statistics, desired sample of the study is calculated as:

$$n = \frac{Z^2 * P * Q}{D^2}$$

Where,

n = Desired sample size for the study

Z = the standard normal variate, value of Z at 95% CI= 1.96.

P= prevalence of pelvic organ prolapse

Q= 1-P

D = permissible errors, value of D is = 0.05

$$n = \frac{1.96X1.96x0.25X0.75}{0.05X0.05}$$

$$= 288.12 = 289$$

Logically, 289 sample populations must be selected. For the purpose of greater representation and reduce the effect of non response, 300 populations were selected from the Clusters of VDCs and 60 respondents from the municipality clusters constituting 360 samples.

3.8 Sampling Frame and Sampling Process including Criteria for Sample Selection

All women of reproductive age group with having experiences of at least one time pregnancy, living in Doti district in different VDCs will constitute a sampling frame. Of those populations only the eligible women of the selected area will be the potential participants.

Inclusion criteria:

- Those women who have experienced at least one time pregnancy were included in the study.
- Resident women of the Doti district were selected for the study.

Exclusion criteria:

- Nulli Parus women were excluded.

3.9 Tools and Techniques for Data Collection

In order to obtain the desired information in the light of objectives, structured questionnaire was developed. The questionnaire was so designed that it covered the entire aspects of the study conducted observationally. First part covered demographic information, second covered the prevalence of uterine prolapse, third part encompassed the factors associated with uterine prolapse and fourth part have health services related satisfaction or perception of women after treatment of uterine prolapse.

Data pertaining to the study were collected through face to face interview with women who have experienced pregnancy at least one time. In order to do so, trained enumerators visited households of the women. Local (residents of far west development region) female having at least certificate level pass in Health education or nursing were selected as enumerators.

3.10 Pre-testing the Data Collection Tools

Pre-testing of the developed questionnaire was done in Dadeldhura district among 30 purposively selected eligible women in the peripheral areas of headquarter of district.
Trained enumerators were mobilized for pre- testing. After pre-testing, all filled questionnaires were cross checked for consistency and correctness. Confusions were made clear and the tool was finalized by incorporating necessary feedbacks of the pre-testing.

3.11 Validity and Reliability of the Research

Validity and reliability of study has paramount importance in the research study. In order to ensure high validity of study, following formal processes were performed.

Frequent meetings with advisor were organized and necessary inputs were drawn. The formal letter was taken from NHRC before departure for the study. Two days orientation

trainings on data collection techniques and processes were organized for enumerators. After data collection, they were subjected for the pre- testing. Enumerators were clearly explained about the study objectives, study process and the utility of study. They were made skilled through practices on data collection during training sessions.

3.12 Biases

Confounding might be occurred with the age factors, health status and service satisfaction. Information bias, measurement bias might be there due to the dependency of verbal autopsy and one-dimensional measurement of events.

3.13 Limitation of the Study

1. This study is solely based on verbal autopsy of the respondents.
2. No clinical examination and criteria were used.
3. The study entirely depends upon the information provided from participants.
4. Only those who have heard about uterus prolapse were included for the analysis.
5. Only selected variables were study to observe the association.

3.14 Supervision and Monitoring

Principal investigator, co investigators supervised the entire research process. They were involved in the data collection to whole study processes also. PI and Co-PI trained the enumerators on data collection and editing process. Study team frequently visited to the field, necessary logistic arrangement, appropriate guidance was provided to enumerators.

3.15 Data Management

Data collected were managed carefully and safety with a due importance to crude data. All filled interview schedules were serially on the cluster numbers basis. Thus, collected data were stored in a cupboard for the future utility purpose. Data management and analyses were performed by data managers, PI and CO PI respectively.

3.16 Data Analysis

Collected data were analyzed by data manager. All serially compiled data were entered into SPSS (SPSS 16 Version) sheet and analyzed respectively. Percentage, mean, median, chi square, Fisher's exact test, one way ANOVA, Correlation and regression coefficients were calculated and results were presented in the diagrammatic, graphic and tabular forms.

CHAPTER FOUR: RESULTS

Health status of women is determined by multiple factors and some of these factors are attributed to their specific roles which are not observed in her counterpart male. The reproductive roles of women expose to her to various ill health conditions if sufficient attention is not given her reproductive health. In this study, an effort has been made to explore the magnitude of uterine prolapse and the associated factors that are attributable to disability adjusted life years and deaths. The results of this study are presented in four major parts. First part includes the demographic information, second part includes reproductive health related information with magnitude of uterus prolapse, third part shows contribution of various factors to the onset of uterus prolapse and fourth part encompasses perceived health service satisfaction among those who were treated against the uterus prolapse.

4.1 Demographic Findings

Table 4.1.1 Respondents by Residents

Cluster Number	Place of Residence	Frequency	Percent
1	Ghanteshwor	30	8.3
	Pachnali	30	8.3
2	Barchhen	30	8.3
	Manakapadi	30	8.3
3	Lanakedareshwor	30	8.3
	Simchaur	30	8.3
4	Kalena	30	8.3
	Sanagau	30	8.3
5	Lamikhal	30	8.3
	Jijodamandu	30	8.3
6	Dipayal Silgadhi Municipality	60	16.7
	Total	360	100.0

Table 4.1.1 shows the place of residences of the respondents. Equal numbers of respondents were selected from each cluster showing uniformity in respondent selection.

Table 4.1.2 Respondents by Age Category

Age Group	Frequency	Percent
16-20	14	3.9
21-25	73	20.3
26-30	62	17.2
31-35	47	13.1
>35	164	45.6
Total	360	100

Table 4.1.2 shows the age wise distribution of respondents. Nearly half of the respondents were over age 35 years with one in every five belongs to age group 21-25 years. Median age of the respondents was 35 years and minimum and maximum ages of the respondents included in the study were 18 years and 70 years respectively.

Table 4.1.3 Respondents by Caste

Caste	Frequency	Percent
Brahmin	27	7.5
Chhetri	192	53.3
Dalit	121	33.6
Others	20	5.6
Total	360	100.0

Table 4.1.3 reveals the ethnic distribution of respondents. Brahmin and Chhetri constitute 6 out of every 10 respondents and majorities of them were Chhetri followed by Dalits accounting for 33.6 percent respectively. Others include Newars, Magars and Muslims.

Table 4.1.4 Respondents by Literacy Status

Educational Status	Frequency	Percent
Illiterate	257	71.4
Literate	103	28.6
Total	360	100.0

Majorities of the respondents were illiterate and only the around a quarter of them were literate with varying level of educational attainment as shown in figure 4.1.1.

Figure 4.1.1 Educational status of Respondents

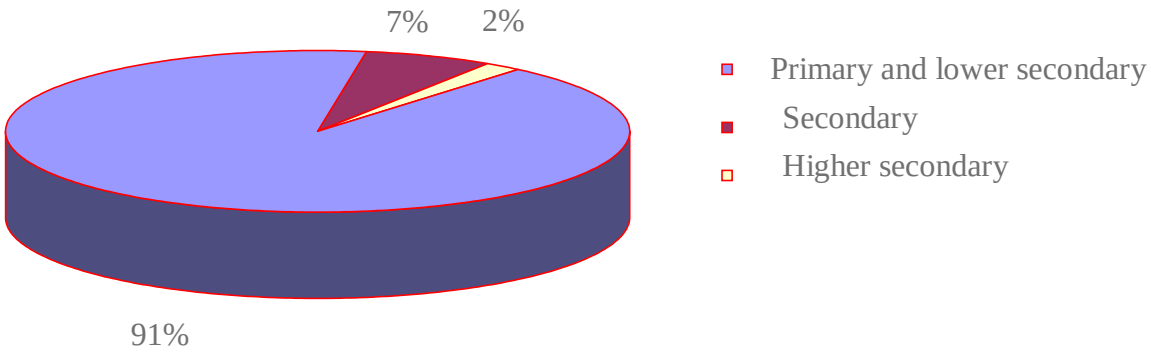


Table 4.1.5 Respondents by Occupation

Occupational Status	Frequency	Percent
Housewife	136	37.8
Farming	212	58.9
Business	9	2.5
Service	3	0.9
Total	360	100.0

Above table depicts the distribution of respondents by their existing occupational status. Nearly nine out of every ten respondents were indulged themselves in household works and agricultural works while negligible population have had business and services.

Table 4.1.6 Respondents by Type of Family

Type of Family	Frequency	Percent
Nuclear	173	48.1
Joint	187	51.9
Total	360	100.0

More than half of respondents had joint families and rest of them had nuclear with small variation between their family types.

4.2 Reproductive Health Related Information

This section describes the findings pertaining to the reproductive health of women and prevalence of uterine prolapse among them.

Table 4.2.1 Respondents by Age at Marriage

Age at Marriage	Frequency	Percent
10-15	150	41.7
16-20	199	55.3
21-25	11	3.1
Total	360	100.0

More than half were married between the ages of 16- 20 and 96 % of the respondents got married before 20 years of age; two out of every five were married before 15 years of ages showing increased women's vulnerability to pregnancy and child birth. Mean years of marriage was 16 with minimum age 8 years to maximum age 25 years.

Table 4.2.2 Respondents by Age at First Child Birth

Age at First Child Birth (years)	Frequency	Percent
<16	38	10.6
16-20	250	69.4
21-25	68	18.9
26 or more	4	1.1
Total	360	100.0

Majorities of the respondents underwent their first pregnancy and child birth during 16-20 years of their life corresponding to age at marriage as shown in table 4.2.2. Median years of first child birth was 19 years indicating that fifty percent women give first child before maturation of reproductive organs and processes; minimum age at first child birth was 12 years and maximum 35 years respectively.

Table 4.2.3 Parity of Respondents

Gravida	Frequency	Percent
2 or less than 2	101	28
3-5	159	44.2
5 and below five	260	72.2
6-10	93	25.9
11 and more	7	1.9
	360	100

Table 4.2.3 shows numbers of pregnancies that a women have had during her reproductive span. More than seven out of every ten women conceived less than five times in her life; of them majority were experienced 3 to 5 pregnancies and only 28% were conceived up to two times. Surprisingly, More than a quarter of women conceived half dozen to a full dozen time.

Table 4.2.4 Number of Living Children

No. of children	Frequency	Percent
Up to 2	126	35
3-5	187	52
6-10	47	13
Total	360	100.0

More than half of the respondents have 3-5 living children with 35% have had one and two children. Average numbers of children 3.44/ women.

Table 4.2.5 Uterine Prolapse Status of Respondents

Uterus prolapse	Frequency	Percent
Yes	109	35.97
No	194	64.03
Total	303	100.0

Out of 360 respondents, only 303 (84.16%) have heard about the uterine prolapse. Only those respondents were included further analysis of association. Table 4.2.5 shows that nearly 36% women in Doti district had uterine prolapse.

Table 4.2.6 Duration of Uterine Prolapse

Time period (Years)	Frequency	Percent
1-5 years	54	50.0
6- 10 years	21	19.4
11-15 years	24	22.2
16-20 years	7	6.5
>20 years	2	1.9
Total	108	100.0

Statistics revealed that half proportion of respondents were experiencing uterus prolapse since last five years with equal numbers with six years or longer period of time; indicating that incidence rates have not been yet reduced as shown in table 4.2.6. The Median time of suffering was of prolapse 5.5 years and longest period reported were 35 years to lowest with one year of prolapse at the time study.

Table 4.2.7 Symptoms Experienced by Respondents having Uterine Prolapse

Symptoms	Frequency	Percent	Remarks
Feeling of something coming down	107	98.17	N= 109 Multiple responses
Bleeding/ spotting	49	44.95	
Difficulty in sittings and walking	98	89.91	
Backache	109	100	
Whitish discharge	53	48.62	
Pain abdomen/pain in waist region	107	98.17	
Difficulty in passing stool and urine	26	23.85	
Visible bulging or protrusion Per vagina	57	52.29	
Painful sexual intercourse	31	28.44	

Out of 109 respondents who have been suffering from uterine prolapse, cent percent reported backache. Almost all 107(98.17%) reported that feeling of something coming down or protrusion from vagina and abdominal pain (pain in waist region) as most frequently experienced symptom followed by difficulty in sittings and walking(89.91%). More than half of the patients with uterine prolapse have visible protrusion of uterine contents from vagina showing worsening conditions.

4.3 Factors Associated with Uterine Prolapse

This section analyses the contributory role of several factors to lead into uterine prolapse. This study attempted to observe the relationship between the prevalence of uterine prolapse and factors such as age, age at marriage, age at first child birth, place of residence, caste, income, occupational status, education, birth interval, birth assistant,

type of delivery, numbers of children, gravida, previous abortion, smoking, constipation, working during pregnancy and after delivery, disease status during pregnancy and puerperal period, social status in the family and husband's occupation status and living conditions etc. The relationship was observed by cross tabulation and calculating Chi Square test, correlation, ANOVA, Linear regression analysis, Fisher's exact test etc. Specific findings are as follows:

Table 4.3.1 Uterine Prolapse by Family Size

No. of family members	Uterine Prolapse		Total
	Yes	No	
<5	31(28.44)	91(46.9)	122
6-10	67(61.46)	89(45.87)	156
11-15	8(7.33)	13(6.7)	21
>16	3(2.7)	1(0.51)	4
Total	109(100)	194(100)	303

(Figures in the parentheses indicate percentage)

Table 4.3.1 shows the relationship between family size and uterine prolapse. χ^2 is highly significant at 95% CI, $P<0.05$; showing that increase in family size increases the chance of uterine prolapse.

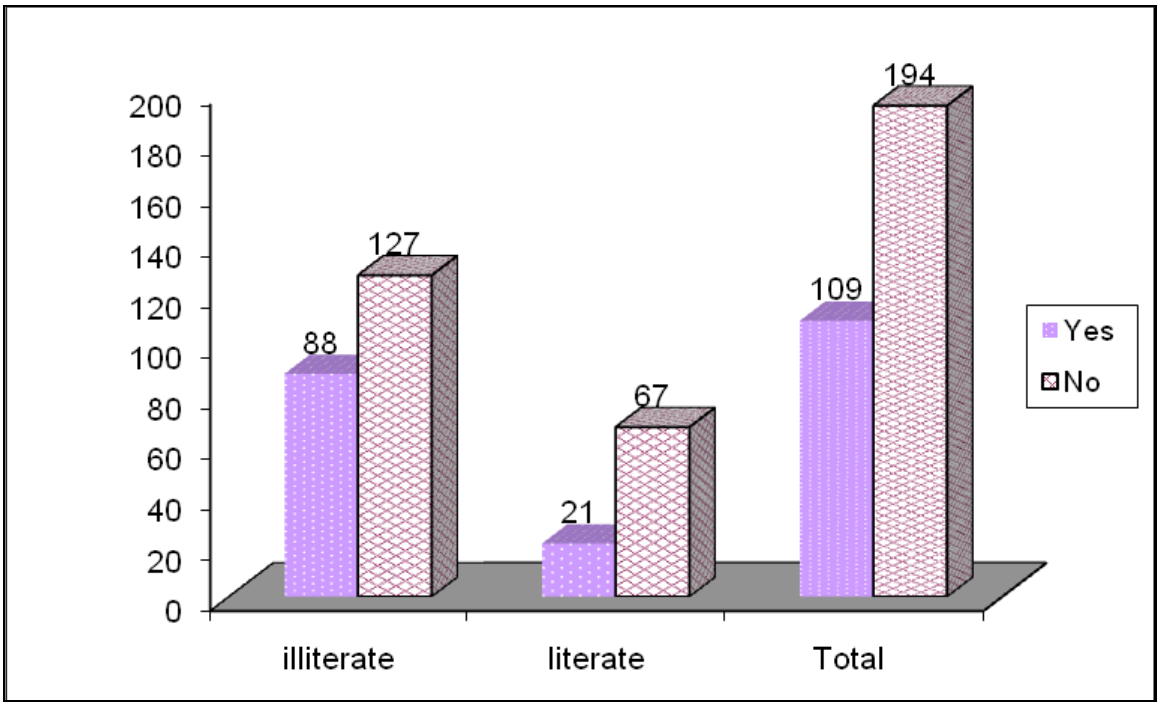
Table 4.3.2 Uterine Prolapse by Literacy Status

Education of Respondent	Uterine Prolapse		Total
	Yes	No	
Illiterate	88(80.73)	127(65.46)	215
Literate	21(19.27)	67(34.54)	88
Total	109(100)	194(100)	303

(Figures in the parentheses indicate percentage)

Table 4.3.2 shows the effect of literacy status on uterine prolapse and χ^2 are highly significant (P = 0.005). It shows that the prevalence of uterus prolapse is significantly high among illiterate women than literates

Figure 4.3.1 Uterine Prolapse by Literacy Status



The diagram clearly distinguishes the status of uterine prolapse among literate and illiterate women. There was wide gap in between the groups accounting for four times more cases among illiterates than literates

Table 4.3.3 Uterine Prolapse by Level of Education

Level of Education	Uterine Prolapse		Total
	Yes	No	
Primary and lower secondary	19 (86.36)	61(92.43)	80
Secondary or more	3(13.64)	5(7.57)	8
Total	22(100)	66(100)	88

(Figures in the parentheses indicate percentage)

There was no significant relationship between the educational level and uterine prolapse (P>0.05), however very low degree of negative correlation exists, (Spearman correlation coefficient r = – 0.085), showing that increasing educational attainment decreases the uterine prevalence.

Table 4.3.4 Uterine Prolapse by Monthly Income

Monthly Income (in NRs)	Uterine Prolapse		Total
	Yes	No	
0-5000	54 (49.54)	96 (49.48)	150
5000-10000	30 (27.52)	74(38.14)	104
10000-15000	21 (19.26)	18(9.27)	39
>15000-	4 (3.60)	6 (3.09)	10
Total	109(100)	194(100)	303

(Figures in parenthesis indicate percentage)

The Spearman correlation (r= -0.046) shows very low degree of inverse relationship between uterine prolapse and monthly income; suggestive of improvement in economic status reduces the prevalence of uterine prolapse.

Table 4.3.5 Uterus Prolapse by Family Type

Type of Family	Uterine Prolapse		Total
	Yes	No	
Nuclear	46 (42.20)	103	149
Joint	63(57.80)	91(46.90)	154
Total	109(100)	194(100)	303

Statistics revealed that there was no association between their family types and uterine prolapse (χ^2 not significant, P> 0.05. Family types have no effect on onset of uterine prolapse.

Table 4.3.6 Uterine Prolapse by Caste

Caste	Uterine Prolapse		Total
	Yes	No	
Brahmin	7 (33.33)	14 (66.67)	21 (100)
Chhetri	52 (30.95)	116 (69.05)	168 (100)
Dalit	46 (48.42)	49 (51.58)	95 (100)
Others	4 (21.05)	15 (78.95)	19 (100)
Total	109 (35.97)	194 (64.03)	303 (100)

(Figures in parenthesis indicate percentage)

There were significant differences between respondents of various castes with respect to the uterine prolapse ($P<0.05$). Uterine prolapse is higher among Dalits than others ethnic women in their respective groups.

Table 4.3.7 Uterine Prolapse by Age of Respondents

Age Group	Uterine Prolapse		Total
	Yes	No	
16-20	0 (0)	13(6.7)	13
21-25	12 (11)	50 (25.77)	62
26-30	14(12.84)	41(21.13)	55
31-35	16 (14.67)	22 (11.34)	38
>35	67(61.46)	68(35.05)	135
Total	109(100)	194 (100)	303

Table 4.3.7 shows the relationship of age with uterine prolapse. There is very high level of association between age of the respondents and uterine prolapse; indicating that as age advances, uterine prolapse cases also increases. (χ^2 Value 28.932, P = 0.000).

Table 4.3.8 Uterine Prolapse by Age at Marriage

Age at marriage	Uterine Prolapse		Total
	Yes	No	
10-15	53 (48.62)	64 (32.98)	117 (38.61)
16-20	54 (49.54)	123 (63.40)	177 (58.41)
21-25	2(1.83)	7 (3.60)	9(2.97)
Total	109 (100)	194 (100)	303 (100)

(Figures in the parenthesis indicate percentages)

Above table shows that those who have got married before the age of 15 and 20 years were having uterine prolapse which constitutes 48.62 % and 49.54% (cumulative 98.16%) among the prolapsed cases respectively. Spearman correlation coefficient shows the positive relationship with increasing age and uterine prolapse (r = 0.157). χ^2 test also shows significant relationship ($p < 0.05$).

Table 4.3.9 Uterus Prolapse by Numbers of Children

No. of Children	Uterine Prolapse		Total
	Yes	No	
0-2	23 (21)	78 (40.20)	101 (33.33)
3-5	54 (49.54)	103 (53.09)	157 (51.81)
6 or more	32 (29.35)	13 (6.70)	42 (13.86)
Total	109 (100)	194	303 (100)

There is positive relationship with prevalence of uterine prolapse and numbers of children showing very strong association **(**χ^2 value 39.98, p = 0.000). As the numbers of children increases, there is increase in uterine prolapse cases. Proportionately, more than 80% cases belong to those having more than two children.

Table 4.3.10 Uterine Prolapse by Parity of Respondents

No. of Parity	Uterine Prolapse		Total
	Yes	No	
1.00	4 (3.67)	29 (14.95)	33 (10.89)
2.00	11(10.09)	39(20.10)	50(16.50)
3.00	14 (12.84)	40(20.62)	54(17.82)
4.00	11 (10.09)	30 (15.46)	41(13.53)
5.00	15(13.76)	23(11.86)	38(12.54)
6.00	12 (11.01)	19 (9.79)	31(10.23)
7.00	16 (14.68)	9(4.64)	25(8.25)
8 or more	26 (23.85)	5(2.58)	31(10.23)
Total	109(100)	194	303(100)

Table 4.3.10 reveals the ascription of parity status for uterine prolapse. Higher the numbers of pregnancies experienced, higher will be the chance of uterine prolapse. The χ^2 test (value = 58.963, p = .000) shows strong association.

Table 4.3.11 Uterine Prolapse by Type of Delivery

Type of delivery	Source of variation	Sum of Squares	df	Mean Square	F	Sig.
Type of delivery at first delivery	Between Groups	3.608	1	3.608	16.134	.000
	Within Groups	67.310	301	.224		
	Total	70.917	302			
Type of delivery at second delivery	Between Groups	6.633	1	6.633	47.330	.000
	Within Groups	36.995	264	.140		
	Total	43.628	265			
type of delivery at third child birth	Between Groups	3.520	1	3.520	22.519	.000
	Within Groups	32.356	207	.156		
	Total	35.876	208			
type of delivery at fourth child birth	Between Groups	5.026	1	5.026	32.960	.000
	Within Groups	23.026	151	.152		
	Total	28.052	152			

One way ANOVA shows the significant variation between the types of delivery held and uterine prolapse. The complicated deliveries more likely suffer from uterine prolapse than those who deliver their child normally.

Table 4.3.12 Uterine Prolapse by wok Load during Pregnancy

Working status	Source of variation	Sum of Squares	df	Mean Square	F	Sig.
First pregnancy	Between Groups	.563	1	.563	.703	.402
	Within Groups	240.271	300	.801		
	Total	240.834	301			
Second pregnancy	Between Groups	.144	1	.144	.181	.671
	Within Groups	209.819	265	.792		
	Total	209.963	266			
Third pregnancy	Between Groups	.004	1	.004	.005	.943
	Within Groups	179.855	211	.852		
	Total	179.859	212			
Fourth pregnancy	Between Groups	.930	1	.930	1.079	.301
	Within Groups	131.870	153	.862		
	Total	132.800	154			

ANOVA test shows insignificant relationship between the uterine prolapse and workloads during pregnancy. Working status during pregnancy was found to be non contributory one.

Table 4.3.13 Uterine Prolapse by Time to Resume Work after Delivery

Time to resume work after delivery	Uterine Prolapse		Total
	Yes	No	
immediately after delivery (< 42 days)	101(92.66)	150 (77.31)	251(82.83)
After six weeks of delivery	8(7.34)	44 (22.68)	52(17.17)
Total	109 (100)	194 (100)	303(100)

(Figures in parenthesis indicate percentage)

Fisher's Exact Test (P<0.05) shows highly significant association between uterine prolapse and time to resume works after the delivery of child. Most of the respondents who have uterine prolapse started to work before 42 days of termination of pregnancies.

Table 4.3.14 Uterine Prolapse by Past Smoking Status of the respondents

Past smoking status	Uterine Prolapse		Total
	Yes	No	
Yes	46	57	103
No	63	137	200
Total	109	194	303

Table 4.3.14 shows no significant relationship between past smoking status and uterine prolapse (p>0.05).

Table 4.3.15 Uterine Prolapse by Constipation during Pregnancy

Constipation During pregnancy	Source of variation	Sum of Squares	df	Mean Square	F	Sig.
First pregnancy	Between Groups	.040	1	.040	.228	.633
	Within Groups	53.195	300	.177		
	Total	53.235	301			
Second pregnancy	Between Groups	.015	1	.015	.126	.723
	Within Groups	31.149	266	.117		
	Total	31.164	267			
Third pregnancy	Between Groups	.063	1	.063	.614	.434
	Within Groups	21.665	211	.103		
	Total	21.728	212			
Fourth pregnancy	Between Groups	.001	1	.001	.010	.921
	Within Groups	12.743	154	.083		
	Total	12.744	155			

One way ANOVA showed no significant differences (on an average) between the constipation during the successive pregnancies and onset of uterine prolapse and constipation has no role for the uterine prolapse.

Table 4.3.16 Uterine Prolapse by Associated Diseases Status during Pregnancy

Disease status during pregnancy	Uterine Prolapse		Total
	Yes	No	
Yes	12(11.09)	18 (9.27)	30 (9.9)
No	97(88.99)	176(90.72)	273 (90.09)
Total	109(100)	194(100)	303(100)

(Figures in parenthesis indicate percentage)

Table 4.3.16 shows the non significant relationship between the associated diseases during pregnancies and uterine prolapse ($p > 0.05$) however, spearman's correlation shows low degree of correlation indicating that disease have some contribution for the uterine prolapse.

Table 4.3.17 Uterus Prolapse by the Associated Diseases during Postpartum Period

Disease after delivery during postpartum period	Uterine Prolapse		Total
	Yes	No	
Yes	30 (55.55)	24 (44.45)	54 (100)
No	79(31.72)	170 (68.28)	249 (100)
Total	109 (35.97)	194 (64.03)	303(100)

Above table shows the strong association between the uterine prolapse and existing disease status during the post partum period ($P = 0.001$).of these who have had disease during the post partum period, more than half of them have had uterine prolapse.

Table 4.3.18 Effects of Variables on Uterine Prolapse

Independent variables	R^2 Value (%)
Age at marriage	5.1
Parity of women	18.6
No. of Children	12
Type of First delivery	5
Type of second delivery	15
Type of third delivery	9
Type of fourth delivery	17
Disease status during pregnancy, age at first child birth, working status during second, third, fourth pregnancy	2.9
Disease status after delivery, Age of respondents, resume work after delivery, caste of respondents, type of delivery at first, second, third and fourth child birth, Education of respondents	38.2
Type of delivery at first, second, third and fourth child birth, age at marriage, No of children, parity of women, age at first child birth	40
Age at marriage, parity of women, type of delivery at first, second, third and fourth child birth	39.7
Type of delivery at first, second, third and fourth child birth parity of women	38.9

The cumulative effects of various independent variables on UP was observed by coefficient of multiple determination (R^2).

Disease status during pregnancy, age at first child birth, working status during second pregnancy, working status during third pregnancy, working status during fourth pregnancy were not associated with the uterine prolapse however, the cumulative effects of these variables shows some degree of attribution. About 2.9% (R^2= .029) variation in UP was due to these variables disease status during pregnancy, age at first child birth,

working status during second pregnancy, working status during third pregnancy, working status during fourth pregnancy

Similarly, Disease status after delivery, Age of respondents, resume work after delivery, caste of respondents, type of delivery at first second, theirs and fourth child birth, Education of respondents were independently associated with uterine prolapse and their synergistic effects was observed. About 38.2% (R^2 = .382) variation in Uterine Prolapse was due to the combined effects of mentioned variables.

The extent of contribution by Gravida of women and the type of fourth delivery was experienced highest independently. Cumulative action of Type of delivery at first, second, third and fourth child birth, age at marriage, No of children, parity of women, age at first child birth have had strongest among all interactive factors whereas 39.7% variation was experienced due to Age at marriage, parity of women, type of delivery at first, second, third and fourth child birth Age at marriage, parity of women, type of delivery at first, second, third and fourth child births as shown in table 4.3.17.

4.4 Health Services Related Findings

This section reveals the treatment seeking practices of respondents suffering from uterine prolapse and their perceived satisfaction towards the services received to get rid of prolapse. The first contact services points during the reproductive ill health was also explored.

Table 4.4.1 First Contact Point during Reproductive Ill Health

Service Centers	Frequency	Percent
Public health institutions	192	63.37
private medicals	7	2.31
Dhami/Jhakri	104	34.32
Total	303	100

Only six out of every ten respondents visited public health facilities for the health services during reproductive illness and very few followed private medical centers; on the other hand more than 34% visited for Dhami/Jhakri. It shows that traditional health care practices are still highly prevalent in Doti district.

Table 4.4.2 Respondents by Treatment Status

Treatment received status	Frequency	Percent
yes	40	36.70
No	69	63.30
Total	109	100.00

Table 4.4.2 shows the treatment practices of respondents suffering from uterine prolapse. Out of 109 cases, about four in every ten patients received services against uterus prolapse and majorities of them were not treated; showing the culture of silence and poor accessibility of service.

Table 4.4.3 Services Centers for Treatment of Uterine Prolapse

Service Centers	Frequency	Percent
Health Camp	15	37.5
Hospital	19	47.5
Private Medicals	6	15.0
Total	40	100.0

Of 109 respondents who have uterine prolapse, nearly half of them received services from hospitals followed by health camps.

Table 4.4.4 Nature of Treatment Received

	Frequency	Percent
Ring Pessary	13	32.5
medicine intake on advice of health workers	23	57.5
Surgery/operation	4	10
Total	40	100

Of those who received the services for uterine prolapse, most of them were under medical treatment and taken medicines on advice of health workers followed by use of ring pessary (32.5%) and one in out of every ten have had surgical treatment.

Table 4.4.5 Feeling after Treatment

Status	Frequency	Percent
Status Improved	24	60.0
No change	16	40.0
Total	40	100

Of the 40 respondents who have received health services, only 60% felt that the sufferings by uterine prolapse was reduced and one in every five of them were replied no improvement after treatment also.

Table 4.4.6 Satisfaction with Treatment

Satisfaction Status	Frequency	Percent
yes	26	65.0
No	14	35.0
Total	40	100.0

Only 65% were found to be satisfied with the services that they received against uterine prolapse and rest were not.

Table 4.4.7 Respondents by their Satisfaction Level towards the Services

Level of Satisfaction	Frequency	Percent
Fully satisfied	9	34.6
Moderately Satisfied	13	50.0
Fairly satisfied	4	15.4
Total	26	100.0

Of those who expressed their satisfaction towards the services, only 34.6% were fully satisfied and majorities were moderately satisfied followed by fairly satisfied.

Table 4.4.8 Preventive methods for Uterus Prolapse (n= 303)

Preventive methods	Frequency	Percent	Remarks
Avoidance of weight lifting	297	98.02	Multiple responses
Should not apply pressure before labor pain	281	92.74	
Take nutritious diet	284	93.73	
Do not use constipating foods	237	78.22	
Prevent form chronic cough	245	80.86	
Institutionalization of delivery	268	88.45	
Treatment of associated disease	259	85.48	
Limit numbers of births	281	92.74	
Delay sexual contact with husband	4	1.32	

Above table shows the idea of respondents for the prevention of uterine prolapse. Almost all respondents replied that uterine prolapse can be prevented by avoiding lifting or carrying loads followed by intake of nutritious diet, limiting births and avoiding application of vigorous pushing before true labor pain, intuitional delivery, timely treatment of associated diseases and delaying the sexual contact with husbands respectively.

CHAPTER FIVE: DISCUSSION

Reproductive ill health holds major global burden of diseases for women. It is noteworthy that reproductive tract infections and pelvic organ prolapse conditions contribute enormously to lead into poor reproductive health.

This was the descriptive cross sectional community based study representing the glimpse of the hilly districts of the region. Major aim of the study was to estimate the magnitude of uterine prolapse and its associated factors among the women of Doti district who experienced at least once a time pregnancy and residing in the same district. The findings of the study are discussed here comparing with existing facts identified in similar settings.

5.1 Demographic Findings

Equal numbers of respondents were selected from each cluster representing the target population of defined strata. Majorities of them were more than 35 years age followed by 20-25 years with median age 35 years. More than half of them were Chhetri followed by Dalits (33.6%). Large numbers of (71.4%) of respondents were illiterate and almost out of every ten literate respondents, nine have had primary and lower secondary level education with few had higher educational attainment. Most of the respondents adopted farming and household work as major occupation and more than half had joint family structures.

5.2 Reproductive Health Related Findings

This study identified that most of the respondents got married before the 20 years of age and two out of every five were married before 15 years of age. About eight out of every ten delivered their first child before 20 years age and one in every ten delivered first child before 16 years of life. Majorities of the respondents experienced 3-5 pregnancies during her reproductive life span and most of them 3-5 living children. Average numbers of pregnancies were four /women and average numbers of living children were 3.44/ women.

Prevalence of uterine prolapse was reported to be 35.97 percent and half of them were suffering from more than six years with equal numbers were less than six years indicating that the incidence cases were not reduced yet. Median duration of suffering was 5.5 years with longest time reported was 35 years. Deuwa et al and Bonetti et al also reported the prevalence of uterine prolapse 33% and 37% in western districts of Nepal respectively while Dangal estimated the prevalence of pelvic organ prolapse 20.1 % in eastern Nepal. Surprisingly ADRA Nepal Need assessment survey identified that more than 70% women in Accham and Kalikot have experienced uterine prolapse; of them 30% requires immediate attention. Eva et al reported that 30.8% women in rural Sweden have self reported uterine prolapse. Prevalence of the uterine prolapse was somehow similar in all quoted studies except in eastern Nepal.

Bonetti et al also identified that 25 % uterine prolapse in western districts of Nepal, of them 95% have self reported cases; which validate the information and methodology of this study also. The prevalence of uterine prolapse was estimated to be 37 % in Sarlahi and Siraha district however Tuladhar identified 18.3% prolapse cases in Bajhang district. These all facts supports that the burden of uterine prolapse among the Nepalese women is still high.

The median time period for clinical presentation of uterine prolapse reported by Barbara Bodner-Adler et al was 50 years among those who were attended for the treatment in hospital while Bonetti et al calculated the average time elapsed was 10 years in a campaign based study.

Those who had been suffering from the uterine prolapse, cent percent explained the backache followed by feeling of heaviness or something coming down per vagina and pain around the waist region (> 98%) as major manifestations. Visible protrusion of prolapsed contents was reported by more than 32% cases having conditions; indicating the greater degree of severity of prolapse. Other commonly experienced symptoms include bleeding or spotting per vagina, whitish watery discharge, Painful sexual act, stool and urinary incontinence and difficulty in weight lifting and sitting or walking.

Study conducted by Rortveit et al, Thapa, Bonetti et al and CAED reports also revealed similar facts that difficulty in weight lifting, and sitting, walking, protrusion of pelvic contents per vagina, painful sexual act, pain in low abdominal area, pelvic pain, and urinary incontinence etc were common manifestations if the varying degree of uterine prolapse onsets. Gurung identified that mean duration of suffering was 7.8 years having second and thritd degree of prolapse.

5.3 Factors Associated with Uterine Prolapse

The study revealed that most of the affected population were Chhetri followed by Dalits (42.20%) with greater proportion of prolapse cases (48.42%) among Dalits i.e. is the study findings are more likely consistent with the study of Pant PR. He stated that majorities of the prolapse cases (45.54%) were from deprived Bishwokarma (Dalit). Deuwa A. claimed that most of the Cases in Sarlahi and Siraha Districts were also form Dalits. This study identified significant relationship between various castes and uterine prolapse i.e. low caste have had higher rate of uterine prolapses.

Majorities of the respondents having uterine prolapse were over 35 years age with 11% have had onset of uterine prolapse before the age of 25 years and nearly half of the respondents with a prolapse were married before 15 years of age and almost all got married before 20 years of life. Significant level of association was observed with the age of respondents and the age at marriage; indicating that as the age advances, the risk of prolapse also increases and if the there is early marriage, it provokes the uterine prolapse.

CAED report revealed that 22.2% Acchami women reported the onset of Uterine Prolapse before 20 years of age and 43.8% have had onset between 20-29 years age and Deuwa et al and Bonetti et al showed that hat majorities of uterine prolapses cases have onset between the age of 20-29 years.

More than a quarter of uterine prolapse conditions were reported form those families having five or less than five family members whereas three quarters were from the families with more than six family members and most of the prolapse cases were from

joint families however, there was no significant association between the family type and onset of uterine prolapse.

Most of the prolapse cases were belongs to illiterate groups accounting for 80.73% however, there was no significant relationship observed to be with their level of educational attainment. Similarly, CAED report revealed that the prevalence of uterine prolapse was higher among those who have low socioeconomic status and illiteracy. Half of the women who have had uterine prolapse were form income below NRs 5000 per month and Spearman correlation coefficient shows the inverse relationship between the uterine prolapse and income; indicating that improvement in income level decreases the prevalence of uterine prolapse.

This study identified that almost all respondents having uterine prolapse got married before the age of 20 years and the highest prevalence was observed to be among those who have had 3-5 children followed by 29.35 percent with more than six children. Six out of every ten uterine prolapse cases were having more than six parities. Gurung reported that more than 50 percent uterine prolapse cases were due to early marriage and Mary also reported early marriage, early pregnancies and bearing many children as major predictors of uterine prolapse. Marattha stated that those who were having UP have had 8 or more than Eight children and Pant identified that utero vaginal prolapse was high among high among those who have six more than six parities and Kumari also found significantly higher prevalence among women with higher parity in her study. The findings are consistent that increase in the numbers of children and their parities have higher prevalence of UP.

The significant degree of association was observed with type types of delivery. Complicated deliveries have higher tendency to develop uterine prolapse. In the study, most of the complicated deliveries were reported as prolong labour, retained placenta, post partum haemorrhage and forced deliveries etc. Marattha revealed that most (70%) of the genital prolapse cases developed due to the deliveries conducted a home without the help of birth assistant. Similarly, CAED reports forced deliveries, excessive pressure

during labour pain, prolong labour leads into uterine prolapse. Work during pregnancy was found to be insignificantly associated with uterine prolapse while resuming work immediately after delivery (within 42 days of delivery) i.e. postpartum period was strongly associated with the onset of uterine prolapse. Pant observed that those who were diagnosed having utero vaginal prolapse, prolong labour (15.54 %) and delay in delivery of placenta (16.22%) were reported and majorities of Bishwokarma (95.27%) and Brahmin (91.09%) women were resumed to work soon following delivery among respectively. Barbara Bonder also reported that most of the patients having uterine prolapse were post menopausal and all were worked heavily during pregnancy and soon after delivery whereas Marahatta identified that 64.3% respondents resumed their work after one month of child birth and 26.7% started to work within 2-3 weeks of delivery. Bonetti et al reported similar findings.

This study identified that past smoking and current smoking habits; and constipation status during the pregnant period had insignificant contribution to uterine prolapsed but Barbara Bonder reported that most of the uterine patients were smokers. Existing sufferings during pregnancies were found to have insignificant prediction; only 11 percent of those having UP were with some kinds of diseases during pregnancies whereas diseases during post partum periods had strong determinative action over the onset of uterine prolapse accounting for more than half with uterine prolapse developed different kinds of diseases within 42 days of termination of pregnancies. The reported disorders during pregnancy and after deliveries were whitish discharge urine retention typhoid piles, bleeding pain abdomen Muscle cramps in legs, gastric pain coughing burning urination, chest pain, headache, fever, swelling of legs and body parts.

Similarly, the effects of various factors were observed independently as well as cumulatively. This study identified that higher numbers of parity have strongest attribution followed by type of delivery that holds second position among the identified factors. The cumulative effects of type of delivery at first, second, third and fourth child birth, age at marriage, numbers of children, parity of women, age at first child birth have was observed to be the strongest accountings for 40 percent variation due to these factors.

Similarly 39.7 % variation was due to age at marriage; parity of women, type of delivery at first, second, and third and fourth child birth followed by 38.9 % contribution was due to type of delivery at first, second, third and fourth child birth parity of women cumulatively.

5.4 Health Services Related Findings

Majorities of the respondents visited public health facilities for the health services during reproductive illness even so more than 34% visited to the Dhami/Jhakri. Out of every ten, nearly four respondents suffering from uterine prolapse received services against uterus prolapse and majorities of them were not treated. Of those who have had received services, nearly half of them received services from hospitals followed by mobile health camps. Most of them were taken medical treatment on advice of health workers followed by use of ring pessary (32.5%) and one in out of every ten have had surgical treatment. Kumari found that 57% patients having uterine prolapse had not taken any services. Of those who received services, 12.33% went to Traditional birth attendants and 27% consulted doctors for the treatment of uterine prolapse. About 60% women who were treated by any kinds of services reported that they had significant improvement due to treatment while Joelle found that 80% had satisfactory improvement after surgery of uterine prolapse cases. Only 60% felt that the suffering by uterine prolapse was reduced and only 65% were found to be satisfied with the services that they received. only 34.6% were fully satisfied and majorities were moderately satisfied followed by fairly satisfied.

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

CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

This study was conducted in Doti district of Nepal to explore the factors contributing to the onset and development of varying degrees of uterine prolapse and its magnitude among women of the district. It was entirely based on verbal autopsy of self reported symptoms of uterine prolapse.

- The prevalence of uterine prolapse was estimated to be 35.98% with higher burden among those with low economic background, over age 35 years, illiterates, farmers and housewives, the Median time of suffering was of prolapse 5.5 years and longest period reported were 35 years Almost all 107(98.17%) reported that feeling of something coming down or protrusion from vagina and abdominal pain (pain in waist region) as most frequently experienced symptom followed by difficulty in sittings and walking(89.91%).

- The proportion of UP cases were highest among Dalits, More than half were married between the ages of 16- 20 and 96 % of the respondents got married before 20 years of age; Majorities of the respondents underwent their first pregnancy and child birth during 16- 20 years. More than seven out of every ten women conceived less than five times in her life; of them majority were experienced 3 to 5 pregnancies and average numbers of children 3.44/ women.

- There were various factors associated with the onset and development of uterine prolapse. These include family size, literacy status, income, caste, age of respondents, age at marriage; numbers of children, parity, type of delivery, time to resume work after delivery, associated diseases after delivery etc have independent significant contribution whereas no association was observed with family type, birth spacing, smoking, disease during pregnancy, age at first child birth, work load during pregnancy, constipation during pregnancies and uterine prolapse. The strongest variation was observed due to parity of women followed

by type of second and fourth delivery, however the cumulative effects type of delivery at first, second, third and fourth child birth, age at marriage, numbers of children, parity of women, age at first child birth etc were observed to be the highest with 40% variation due to these factors and 39.7% variation was due to age at marriage, parity of women, type of delivery at first, second, third and fourth child birth.

- Majorities of the respondents followed the public health facilities to seek care for reproductive disorders. Less than 40% had received treatment of uterine prolapse and most of them received services from hospitals followed by mobile camps. Most of the service recipients were taking medicines as advised by health workers followed by ring pressary as treatment methods and 60% received that their sufferings were reduced after treatment. Only 65 % who were treated against uterine prolapse were satisfied with services that they received, nevertheless only 34.6% were fully satisfied.

6.2. Recommendations

The prevalence was observed to be still high in Doti district. Reduction requires multiple efforts of various sectors. Some recommended measures are as follows.

- Focus should be made on socioeconomic status improvements though skill development and income generation activities.
- Women's empowerment should be the central focus and Dalits should be given due considerations in various development programmes.
- Massive advocacy for delay the marriages should be encouraged and post pond the time for first pregnancy
- Limits the numbers of pregnancies and child births by increasing accessibility, availability of family planning services, maternity services and reproductive health services.
- Educational opportunities for female should be emphasized by reserving their seats and launching informal educations programmes.

- Adequate rest should be taken following child birth and preventive measures of potential associated diseases during pregnancy and after delivery should be given due consideration.
- Mobile health clinics should be organized as short term and medium term strategies and encourage early identification of prolapse through preventive and public hospital services.
- Further studies should be conducted to identify the effects of other factors such as nutritional status, services quality, availability, accessibility and acceptance. Similarly, reason for variation in uterine prolapse attributed by different types of delivery at every birth should be explored.

ANNEX – I

REFERENCES

1. Bonetti et al. GTZ/MOHP/UNFPA: Reproductive Morbidity: A neglected issue? Report of a clinic-based study in Far-Western Nepal. Kathmandu 2002.
2. IOM/UNFPA. Status of reproductive morbidities in Nepal [A reproductive morbidity on clinic based study]. Tribhuwan University, Maharajgunj, Kathmandu 2006.
3. D.C Dutta. A text book of Obstetrics. 3rd Edition. 2005.
4. Shirish N. Daftron. A Mannual of Obstetrics. 2nd edition, 2002 ISBN-818147013
5. S. B Thapa. Uterine Prolapse: Prevalent among Nepalese women who were deprived of general health services. Booklet on Uterine Prolapse; received through Sancharika Samuha Nepal) the Kathmandu Post. 2007-05-08 21:56:13.
6. Uterine Prolapse Study Report. Center for Agro-Ecology and Development, Nepal 2007.
7. Bonetti TR, Erpelding A, Pathak LR. Listening to "felt needs": investigating genital prolapse in western Nepal. Health Sector Support Programme, German Agency for Technical Cooperation (GTZ), Nepal. Reproductive Health Matters. 2004 May; 12(23):166-75.
8. Marahatta RK, Shah A. Genital prolapse in women of Bhaktapur, Nepal. Nepal Med Coll J. 2003 Jun;5(1):31-3.
9. Pant PR. Utero- Vaginal Prolapse in Far western region of Nepal. Department of Obstetrics and Gynecology, Institute of Medicine, Journal of Institute of Medicine, august 2009, 31:2:19-21.
10. J. A. Stallworthy. Prolapse-I, Aetiology and Diagnosis. Gynaecology in General Practice. British Medical Journal 27 February 1971.
11. Eva C. Samuelsson, F.T. Arne Victor, Gosta Tibblin, and Kurt F. Svardsudd. Signs of genital prolapse in a Swedish population of women 20 to 59 years of age and possible related factors. American Journal of Obstetrics and Gynecology Volume 180, Issue 2, February 1999, Pages 299-305 (published online , 2005)

12. Rortveit G, Brown JS, Thom DH, Van Den Eden SK, Creasman JM, Subak LL. Symptomatic Pelvic organ Prolapse: Prevalence and risk factors in Population based, Racially diverse cohort. Obstetric Gynecology, 2007 Jun: 109(6): 1396-403 (Available from www.pubmed.com)
13. Kumari S, Walia I, Singh A. Self reported Uterine Proplase in a resettlement colony of North India. Journal of Midwifery Womens Health, 2000 July – August (4): 343- 50. (Available from www.pubmed.com)
14. Serge p. Marinkovic, stuart l. Stanton. Incontinence and voiding difficulties associated with prolapse. the journal of urology, volume 171, issue 3, march 2004, pages 1021-1028
15. Tuladhar H.An overview of reproductive health of women in Bajhang district. Department of Obs/Gyne, Nepal Medical College Teaching Hospital Jorpati, Kathmandu, Nepal Med Coll J. 2005 Dec;7(2):107-11.
16. Deuwa A. et al Uterine Prolapse: Prevalent among Nepalese women. Safe motherhood network, Kathmandu , 2004
17. Barbara Bodner-Adler, Chanda Shrivastava, Klaus Bodner. Risk factors for uterine prolapse in Nepal. Int Urogynecol J (2007) 18:1343–1346.
18. Kantipur National Daily. Uterus Damage Condemns Women to Sickness and Stigma in Rural Nepal, News Bulletin 115, August 2, 2007.
19. Jelle M. Schaaf , Anjana Dongol. Follow-up of prolapse surgery in rural Nepal. Int Urogynecol J (2008) 19:851–855. DOI 10.1007/s00192-007-0542-2.
20. Ganesh Dangal. A study of reproductive morbidity of women in the Eastern Terai Region of Nepal. Nepal Journal of Obstetrics and Gynaecology, Vol 3, No 1 (2008)
21. Geeta Gurung, Ashma Rana, Archana Amatya, Keshang D. Bista, Ananda B. Joshi, Jamuna Sayami. Pelvic organ prolapse in rural Nepalese women of reproductive age groups: What makes it so common? N. J. Obstet. Gynaecol 2007 Nov-Dec; 2 (2): 35 - 41
22. Barbara Earth and Sabitri Sthapit. Uterine prolapse in rural Nepal: Gender and human right implication; a mandate for development. Journal of culture, health and sexuality 2002, vol.4, no. 3, 281-296.

23. ADRA Nepal. Reproductive Health (RH) Services through Outreach Medical Clinics to Remote, Vulnerable, and Conflict Affected Populations of Nepal. News Posted on Kathmandu post: July 17, 2009.
24. Marty Logan. Health-Nepal: Mobile Camps Treat Uterine Prolapse. Dadeldhura Post, Dec 11, 2006.
25. Ashma Rana, Reducing morbidity from uterovaginal prolapse in Nepalese women through surgical camps: An ambitious approach. N. J. Obstet. Gynaecol Vol. 1, No. 2, p. 1 - 3 Nov-Dec 2006.
26. CBS, Brach office Doti. Profile of Doti Disrtict. NPC, CBS, 2065 BS.
27. George Lazarou and Bogdan A. Grigorescu. Pelvic organ prolapsed. E Medicine Obstetrics and Gynaecology. emedicine. Medscape.5th Sep. 2008/276259.
28. Park. K. text book of Preventive and social Medicine. 19th edition. M.S Banarasidas Bhanot 1167, Premnagar, Jabalpur 482001. India 2007.
29. Annual Report. Department of Health Service, Ministry of Health and Population Nepal 2007/2008.

ANNEX II

CONSENT FORM

Namaste!

I am Mr/Ms …… I am here to collect data related to Uterus prolapse. We are conducting research study entitled "Uterine Prolapse in Doti District" under the regional grant of Nepal Health Research Council. Mr. Damaru Prasad Paneru is the principal investigator of this study. Dr. Samjhana Dhakal and Ms. Pearl Banmali is Supervisors.

In this study the research team takes your interview related to your reproductive health. Only female enumerators will take your interview. The study is being conducted to determine the prevalence of uterus problems and factors associated with it in Doti district. This research will be very helpful to identify the existing problems of women which are hidden and will contribute to make an effort to design intervention strategies.

All your information will be kept confidentially and information will be used for the study purpose only. If you feel any discomfort to provide information, you can withdraw yourself from the study.

I am agreeing to participate in your study.

Name of respondent: ……

Signature: ……

Date: ……

Your participation will be appreciable for this study. Thank you for your kind co-operation and participation. If you have any query, please feel free to mail **panerumph@gmail.com or contact at 9841700026**

Name of Enumerator: ……

Signature ……

ANNEX –III

INTERVIEW SCHEDULE

Part I- Demographic Information

1. Name (optional)
2. Age

a) Below 16 years b) 16 – 20 years
c) 21 – 25 years d) 26 – 30 Years
e) 31 – 35 years f) Above 35 years

3. Ethnicity

a) Brahman b) Chhetri
c) Dalits d) Others (specify)

4. Educational status

a) Illiterate b) Literate

If literate,

a) Primary education b) Secondary
c) Higher Secondary d) Bachelor's Degree
e) Master's Degree

5. Major Occupation

a) Housewife b) Agriculture
c) Business d) Service
e) others (specify)

6. Major Source of Income

a) Business b) Agriculture
c) Others

7. What is your monthly income (NRs)?

a) Below 5000 b) 5000 – 10000
c) 1000-15000 d) 15000-20000
e) > 20000

8. In addition to your occupation, are you attached with any organization/media?

a) Yes b) No

If yes, (specify)

a…… b…… c Others …..

9. Types of family

a) Nuclear b) Joint

Part II - Information of Husband

1. Name
2. Age
3. Education
4. Occupation
5. Status of living conditions

a. alive b. Dead c. others

Part III - Questions Related to Uterine Prolapse

1. What was your age at marriage?

a) Below 16 years b) 16 – 20 years c) 21 – 25 years
d) 26 – 30 years e) 31 – 35 years f) 36 years or above

2. What was your age at the time of first child birth?

a) Below 15 years b) 15 – 20 years c) 20 – 25 years
d) 25– 30 years e) 30– 35 years f) 36 years or above

3. How many children do you have?

a) One b) Two
c) Three d) Four
e) Five f) More than five

4. Have you heard about uterine prolapse?

a) Yes b) No

i. If yes, from what sources you have heard about it?

a) Radio b) Television
c) News papers d) Health personnel
e) Friends f) Others

ii. Have you ever experienced the problem of Uterus prolapse?

a) Yes b) No

ii.a) If yes, for how many years have you been facing this problem?

a) 1-5 years b) 6-10 years
c 11-15 years d) 16-20 years e) > 20 years

ii.b) What are the major signs and symptoms of uterus prevalence within you?

1……..
2……...
3…….

5. What is the interval of time between two consecutive pregnancies?

a) < 2 years b) 3 years
c) 4 years d) 5 years

6. Where did you deliver your child?

First child	a. home	b. health institution	c. others
Second	a. home	b. health institution	c. others
Third	a. home	b. health institution	c. others
Four or more	a. home	b. health institution	c. others

7. Who assisted you at the time of delivery?

I. First child	a. health workers	b. FCHV	c. others
II. Second	a. health workers	b. FCHV	c. others

III. Third	a. health workers	b. FCHV	c. others
IV. Four or more	a. health workers	b. FCHV	c. others

8. What type of delivery was?

Number of Deliveries	Status	
	Normal	Complicated (Specify)
First		
Second		
Third		
Fourth		
Five or more (specify)		

9. What was the sex of child?

I. First	a. male	b. female
II. Second	a. male	b. female
III. Third	a. male	b. female
IV. Fourth	a. male	b. female

10. What was the work load (physical work) during pregnancy?

First child	a. As usual	b. >than before pregnancy	c. < before pregnancy
Second	a. As usual	b. >than before pregnancy	c. < before pregnancy
Third	a. As usual	b. >than before pregnancy	c. < before pregnancy
Fourth or more	a. As usual	b. >than before pregnancy	c. < before pregnancy

11. When did you resume performing physical work after child birth?

a. soon after child birth b. After six weeks of child birth c Others

12. Did you have any abortion?

a) Yes b) No

If yes, who assisted abortion process?

a) Trained health workers b) Traditional healers
c) Self medications d) others

13. Did/do you smoke?

Past status	a) Yes	b) No
Present status of smoking	a) Yes	b) No

If yes, for how many years have you been smoke?

a) 1 – 5 years b) 6 -10 years
c) 11 – 15 years d) 16 – 20 years
e) More than 20 years

14. Do you have long term constipation?

I during pregnancy	a. Yes	b. No
II. Post natal period	a. Yes	b. No

III. At present a. Yes b. No

15. Who is the head of your family?
a. Husband b. Father in law
c. Mother in law d. Others

16. Did you have any diseases during pregnancy?
a) Yes b) No
If yes what ……
……

17. Did you have any diseases after child birth?
a) Yes b) No
If yes what …….

Part IV Health Services related information

18. Where do you go for the first time for the treatment of your RH problems?
a. Health institutions b. Traditional healers (Dhami, Jhakri)
c. Private Medical Centre d. Others

19. Have you treated against uterine prolapse?
a. yes b. no
If yes, from where you have got service?
a) Home b) traditional healers
c) Hospital d) private clinic
f) Others (specify)…

20. What type of treatment have you got?
a) Apply ring pessary
b) Medication as per the advice of health workers
c) Surgery/operation
d) Others ……

21. What your health status after receiving treatment?
a. improved b. not improved c. worse

22. Are you satisfied with available health services?
a) Yes b) No
If yes, express your satisfaction level.
a) Partially b) Moderately c) Fully

22. In your opinion how can we prevent the uterine prolapse?
(Tick on the expressed statements)

Methods of prevention	Yes	No
a) Do not lift heavy weight during pregnancy		
b) Do not apply pressure before true labor pain		
c) Eat nutritious diet at the time of pregnancy & delivery		
d) Avoid chronic constipation		
e) Avoid long term coughing		
f) Deliver the baby in health institution by health personnel		
g) Abortion through trained health personnel		
h) Treat diabetes & other chronic diseases in time		
i) Do not give birth too many babies		

Thank you

ANNEX – IV

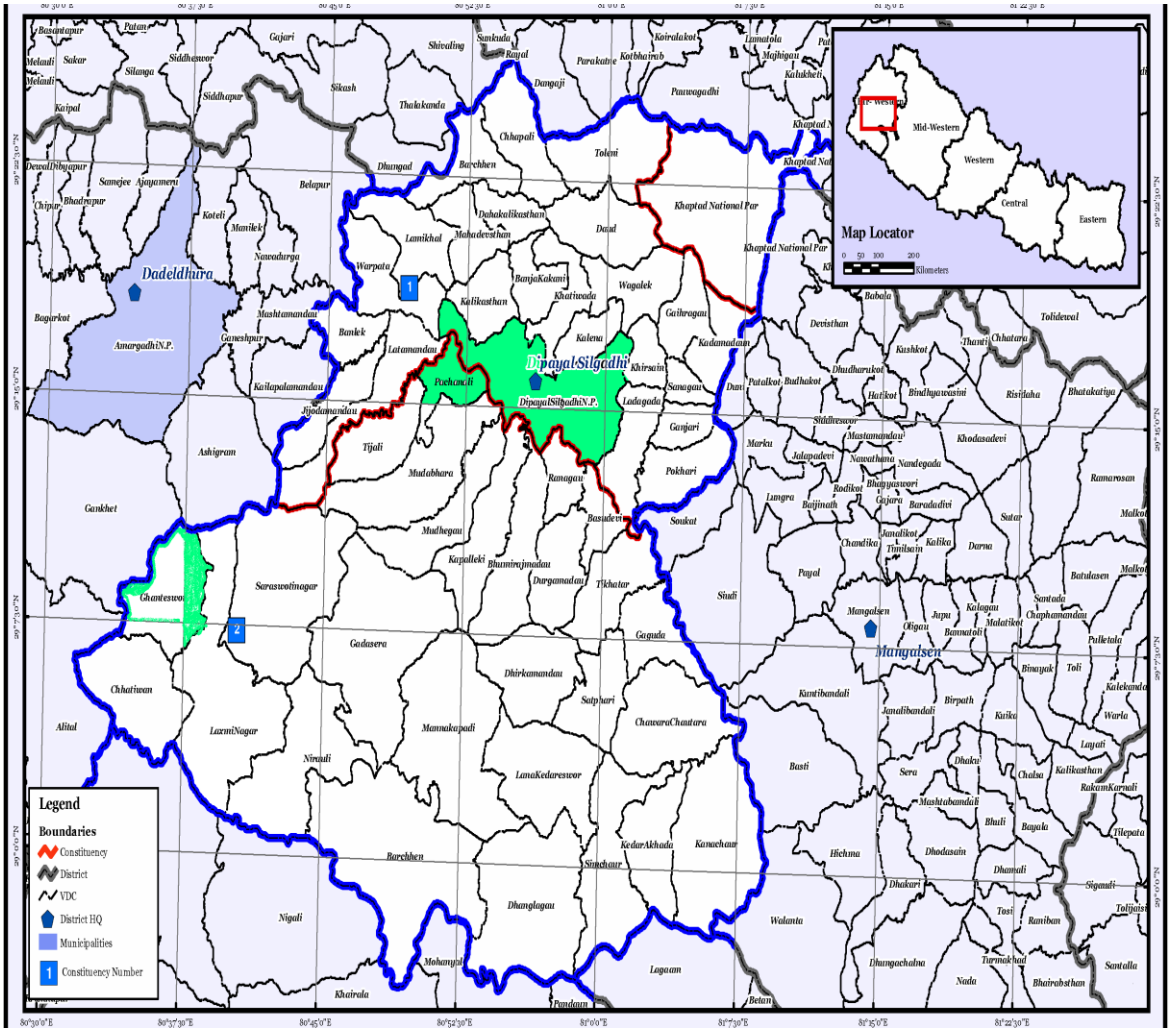
WORK PLAN

Research works were started following approval and signing of contract with NHRC. The work was accomplished within nine months of agreements and presented as follows. The work was conducted from November 2009 to July 2010.

SN	Activities	Time (3 months)		
		1st	2nd	3rd
1	Proposal review and finalizations tools			
2	Ethical clearance and official preparation for field work			
3	Orientation Training to enumerators			
4	Pre-testing and Data collection			
5	Data compilation, Data analysis, management			
6	Report preparation and submission to NHRC			
7	Report dissemination seminar			**NHRC**

ANNEX V

MAP OF THE STUDY DISTRICT AND STUDY AREA



Bold and highlighted line represents the demarcation line of the study area

ANNEX: VI

LISTS OF VDCs AND MUNICIPALITY

SN	Name of VDC	No.	Selected VDCs	Selected VDCs	Selected wards
1.	Kalena	4	Kalena	Kalena	2,3,4
2.	Ladagada		Sanagaun	Sanagaun	4,5,6
3.	Pokhari		Kadamandu		
4.	Gajari		Gairagaun		
5.	Sanagaun		Khirsain		
6.	Kadamandu		Khatiwada		
7.	Gairagaun		Daud		
8.	Khirsain		Toleni		
9.	Wagalek		Banjkakani		
10.	Khatiwada		Wagalek		
11.	Daud	3	Kanachaur		
12.	Toleni		Kedar-Akhada		
13.	Chhapali		Chabara Chautara		
14.	Girichauka		Gaguda		
15.	Mahadevsthan		Lanakedaeshwar	Lanakeda.	2,6,9
16.	Dahakalikasthan		Simchaur	Simchaur	5,6,7
17.	Kalikasthan		Ladagada		
18.	Banjkakani		Pokhari		
19.	Lamikhal		Gajari		
20.	Barbata		Ghangal		
21.	Banlek	5	Lamikhal	Lamikhal	1,4,6
22.	Jijodamandu		Barbata		
23.	Latamandu		Banlek		
24.	Chhatiwan		Jijodamandu	Jijodamand	1,8,9
25.	Ghanteshwar		Latamandu		
26.	Laxminagar		Mahadevsthan		
27.	Saraswatinagar		Dahakalikasthan		

28.	Gadsera		Kalikasthan		
29.	Niroli		Chhapali		
30.	Mannakapadi		Girichauka		
31.	Berchhen	1	Mudvara		
32.	Ghangal		Tijali		
33.	Lanakedaeshwar		Mudegaun		
34.	Simchaur		Pachnali	Pachnali	1,2,3
35.	Satpari		Saraswatinagar		
36.	Dirghamandu		Gadsera		
37.	Kanachaur		Niroli		
38.	Kedar-Akhada		Chhatiwan		
39.	Chabara Chautara		Ghanteshwar	Ghanteshw	1,2,3
40.	Gaguda		Laxminagar		
41.	Tikhatar	2	Tikhatar		
42.	Basudevi		Basudevi		
43.	Durgamandu		Durgamandu		
44.	Ranagaun		Ranagaun		
45.	Bhumiraj Mandu		Bhumiraj Mandu		
46.	Kaphalleki		Kaphalleki		
47.	Mudvara		Satpari,		
48.	Tijali		Dirghamandu		
49.	Mudegaun		Mannakapadi	Mannakapa	6,8,9
50.	Pachnali		Barcchen	Barcchen	3,8,9
51.	Dipayal Silgadhi Municipality		Dipayal Silgadhi Municipality	Di. Si. municipalit	6,11,12,13

Selection Process

Cluster: By location

VDCs: By lottery methods

Wards: By lottery Methods

ANNEX VII
APPROVAL LETTER
To be attached

ANNEX VIII

CURRICULUM VITAE OF PRINCIPAL INVESTIGATOR

Name : **Damaru Prasad Paneru**

Sex/ Marital status : Male /Unmarried

Date of Birth : 15th April 1981

Father's Name : Gobinda Raj Paneru

Permanent Address : Mahendranagar Municipality -19, Kanchanpur, Nepal

Contact : **Cell: 9841700026**, **9741067583**

Email : panerumph@gmail.com, krdpbhpaneru@yahoo.com

Current Status : **Lecturer (Pub. Health), Pokhara University, Kaski, Nepal**

Academic Qualification:

University	Degree	Passed Year
AAI-DU, Allahabad, India	Master of Public Health	2007
TU, Nepal	Bachelor in Health Education	2004
CTEVT, Nepal	PCL in General medicine	2003
TU, Nepal	PCL in Biological science	2000
HMG Board, Nepal	School Leaving Certificate	1998

Trainings/Workshops attended

- Infection Prevention Practices (7days); organized by SOHS, Chitwan
- Integrated Management of Childhood Illness (7days); organized by SOHS, Chitwan
- Participated in workshop for curriculum development for community and home based care giver for People Living with HIV/AIDS; Organized by FHI, Kathmandu.
- TOT on Master Trainer in Teaching – learning process; organized by TITI Bhaktapur
- AIDS programme Management Training, Organized by UNDP/HDA
- TOT on STI syndromic Case Management Training; organized by UNDP?HDA
- Journal Editorial Training, Organized by Nepal Medical Association, Kathmandu

- Operational Research on Tuberculosis: workshop on Proposal Development, organized by HERD, Kathmandu
- Workshop on Project Monitoring and evaluation techniques; organized by GF/FPAN
- Participated in Simulation program of disaster Management; organized by WHO/EDCD

Computer skill

- Three month computer operation on MS-Words, MS excel, MS PowerPoint, Email, Internet
- Two Weeks training on Statistical Package for Social Sciences **(SPSS),** organized by Faculty of Health and Medical Science, Allahabad Agricultural Institute-Deemed University, Allahabad.

Consultancy services performed

1. Performed project monitoring and evaluation of "HIV prevention project", Dadeldhura 2006.
2. Performed End term evaluation of FP/MCH and Nutrition programme; UMN, Palpa 2009.
3. Impact of Evaluation of varieties (HIV) of Training programmes, HDA 2010

Professional Experiences

Employer: Pokhara University, Kaski, Nepal

Duration: Jan 2010 to contd…

Position: Lecturer (Public Health) and publication secretary.

Responsibilities: Teach BPH, BSC Nursing and BMLT students, supervise their thesis

Undertaken : Academic planning, journal publication

Employer: Health and Development action, Kathmandu

Duration: Feb 2009 to March 2010

Position: Programme Coordinator (research and Training)

Responsibilities: Identify priority health research issues, coordinate for research

Undertaken **:** Supervise and monitor research activities, present research findings
: plan; organize and coordinate and monitor trainings activities

Employer **: Multipurpose Development society, Dadeldhura**
Duration : 14th Jan 2009 to contd...
Position **:** Consultant, HIV/ AIDS prevention Programme (partial)
Responsibility : Plan, implement, supervise and monitor project activities
Undertaken **:** Conduct surveys, develop project proposal, Develop JD of Various project positions, Coordinate DHO/INGOs/GOs and other stakeholders

Employer **: National Academy for Medical Sciences, Kathmandu**
Duration **:** 17th Nov. 2007 to contd…
Designation **: Coordinator**, HA and BPH Programme and Lecturer and B Sc Nursing
Responsibility **:** Teaching epidemiology, Research and health administration
Undertaken **:** Community diagnosis, Facilitation in Clinical and community Field practices
: Monitoring and evaluation of Field activities, Organization of workshops
: Coordination with NGOs, DPHO, Hospitals, PHCCs, HPs

Employer **: Farwest School of Medicine, Mahendranagar, Kanchanpur**
Duration **:** January2007 to 16th Nov 2007
Designation **:** Lecturer, Head of Department of General Medicine Programme
Responsibility **:** Teaching Health Management, BMP/first Aid, PHC/FH
Undertaken **:** Monitoring of Field activities, student activities, Coordination with NGOs, DPHO, Zonal Hospital, PHCCs, HPs

Employer **: Association of Medical Doctors of Asia (AMDA) Nepal**
Duration **:** June 2005 to September 2005
Designation **:** Care and support officer, HIV prevention project Damak, Jhapa
Responsibility **:** Provided care and support service for PLHA,

Undertaken coordinated NGOs, CBOs and advocacy on behalf of PLHA ,Provided Trainings to PLHA, community members, AMDA staff , Supervision, monitoring and evaluation of activities of projects,Reporting: monthly, Quarterly basis

Employer : Nirdhan NGO, Head Office Kathmandu, Nepal
Duration : May 2004 to April 2005
Designation : Health centre In-charge, Bhairahawa, Rupandehi
Responsibility : Over all management of Health center
Undertaken To provide health care services like OPD, IPD and Pharmacy services

Emergency preparedness for epidemics, disasters and potential hazards

Coordinated with DPHO, Medical colleges, NGOS and others

Reporting: monthly, quarterly and annual

Employer : Institute of community Health, Dhangadhi
Duration : **S**eptember 2003 to April 2004
Designation : Instructor for Paramedics (CMA, AAHW),

Professional Affiliation

1. Registered in Nepal health professional council. **Reg. No A 154 PH**
2. Executive Member, National Health Education Council of Nepal, Kathmandu
3. Member, Nepal Public Health Association, Kathmandu
4. Secretary, Society for Public Health research and Development, Kathmandu

Scholarship/Assistance received

- Received scholarship throughout the whole study period (Two and half year) in PCL in general medicine course; assisted by Hosona Club of Korea
- Received scholarship during MPH study in AAI-DU Alld, India

Awards "Nepal Vidaya Bhusan Padak "Kha" by President of Nepal

Research/Articles

- Maternal and child health care practices and problems faced by health workers at primary level health care facilities in Dadeldhura district
- Research project " uterus prolapsed in Doti District of Nepoal, funded by NHRC

Conference Attended:

- Presented a paper on "information technology in Public Health" in Regional ICT conference, Mahendranagar 2007.
- Presented a paper on Health policies of International health organization: How much relevant for developing countries? Organized by FHMS, AAI-DU, Allahabad

Language skill: Doteli (mother tongue), Nepali, English, Hindi and Bhojpuri (Understandable)

References

Dr Jay Bahadur Tandon
Member Secretary
CTEVT, Bhaktapur, Nepal
Cell: 9851083172

Mr Keshab Parajuli
Director
School of Health and Allied Science,
Pokhara University
Cell: 9841401038

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe me, my qualification, and my experiences.

Signature: