Knowledge and Practices of women regarding Risk Factors of Uterine Prolapse

Faiza Mohamed Elsayed¹, Manal Hassan Ahmed² Manal Abdalla Sayed Ahmed Gaheen^{3.}

¹Demenstrator, Maternity and Gynecological Nursing Dept, Faculty of Nursing, Tanta University ²Prof & Head of Maternity and Gynecological Nursing Dept, Faculty of Nursing, Tanta University ³Lecturer of Maternity and Gynecological Nursing Dept, Faculty of Nursing, Tanta University

Abstract: Uterine prolapse (UP) is consider the most common cause of poor women health during reproductive and menopausal period. Nurses play an important role regarding its prevention, early detection and management of it.

Aim: This study aimed to assess knowledge and practices of women regarding risk factors of uterine prolapse. Subjects and Methods: The study was conducted in outpatient's clinics at Tanta University and El- Menshawy hospitals. A sample of 200 married women was included in the study and fulfilled the inclusive criteria. The data were collected through a structured interview schedule.

Three tools were used:

Tool I: covered two parts:

Part one: It included the Socio-demographic characteristics of women,

Part two: It included reproductive history of women.

Tool II: It related:-To women knowledge about uterine prolapsed.

Tool III: - Covered the following two parts: -

Part one: This part related to women's exposure to risk factors of uterine prolapse.

Part two: This part related to women's practices that actually taken as preventive measures as well as anticipated actions to overcome occurrence of uterine prolapse.

The results of this study revealed that more than half of the studied women (56.5%) didn't hear about uterine prolapse. A vast majority of the studied women (95%) exhibit poor knowledge regarding uterine prolapse. The majority of the studied women (81.0%) reported that they will seek medical advice, in case of suffering from uterine prolapse. Also, the vast majority of the studied women (93%) didn't know and had unsatisfactory practice regarding preventive measures of uterine prolapse.

Conclusion and Recommendation: There was poor knowledge regarding uterine prolapse. The majority of the studied women had unsatisfactory practices and did not know any measures to prevent occurrence of UP. Therefore, the study recommended that health education programs regarding uterine prolapse should target women at all places, age groups, and educational levels at rural and urban areas. In addition, health workers should be provided with training to be able to detect cases of uterine prolapse in early stages.

Keywords: Knowledge, Practices, Risk Factors, Uterine Prolapse.

I. Introduction

Pelvic organs prolapse is consider as one of the most common cause of reproductive health morbidity which influence the women quality of life ⁽¹⁾. Uterine prolapse is a very common condition, particularly among adults and old women in developing countries^(2,3). The actual number of women affected by prolapse is unknown because many women don't seek medical help because of the shame from the condition which affects a sensitive part of the women's body ^(4, 5,6).

Uterine porlapse is a health concern affecting millions of women worldwide. The global prevalence of it (2007) was 2-20% under the age of 45 years. In United States of America U.S.A (2002) was 11.4% and in Egypt (1993) was 56 % ^(7, 8, 9). Even though prolapse is not considered a life threatening condition, but it affect the women physically, psychologically, sexually and lead to occupational and social limitations, it also increase the risk of reproductive and urinary tract infection. ^(4,6)

According to UNFPA(2011) Uterine prolapse, is a debilitating condition in which the supportive pelvic structures of muscles ,tissue and ligaments gives away and the uterus drop into or out of the vagina ⁽¹⁰⁾. The severity of uterine prolapse is determined according its degree, first degree (mild) when the uterine cervix protrudes into the lower third of the vagina, second degree (moderate) when the cervix protrudes past the vaginal opening and the third degree (severe) when the entire uterus protrudes past the vaginal opening ⁽¹¹⁾.

There are several factors that may contribute to the weakening of the pelvic muscles and lead to uterine prolapse such as, mismanagement or improper care during delivery, loss of muscle tone as the result of aging, injury during childbirth, especially among multipara women more than three times, delivery of macrosomic fetus, obesity, chronic coughing and chronic constipation .All of these factors place added tension on the pelvic muscles, and may contribute to the development of uterine prolapse^(6, 12,13).

Although women suffering from uterine prolapse experience many symptoms, but the most specific symptoms for the condition are the feeling of something bulging out of the vagina, sensation of heaviness in the pelvis, vaginal bleeding, increased vaginal discharge, dysparaunia, low backache, urine incontinence, stress incontinence and constipation It is obvious that uterine prolapse not only results in physical pain, unbearable distress and extended infection but also has social implication which affects the women quality of life (14, 15).

Uterine prolapse can be prevented and treated depend on the severity of the condition, as well as the woman's general health, age and desire to have children ⁽¹⁷⁾. There are different ways to treat uterine prolapse. First and second degree prolapse can be treated through the use of ring pessaries, which inserted into the vagina and so stretches the vaginal walls, often in combination with pelvic floor exercises. Third degree prolapse requires surgical interference ^(16, 17).

Uterine prolapse can be prevented by raising women awareness regarding the preventive measures such as, maintain healthy life style ,taking adequate rest during postnatal period, performing Kegel exercise, maintaining ideal body weight, avoid constipation, encourage antenatal care and stop smoking (18,19).

Maternity nurses have a role toward the women to help them express their needs without fear, and explain to them the importance for appropriate preventive measures and treatment in the early stage. It is essential that women's should have adequate knowledge about uterine prolapsed. Therefore; this study was conducted to assess the knowledge and practices of women regarding risk factors of uterine prolapse.

Aim of the study

The aim of this study was to assess knowledge and practices of women regarding risk factors of uterine prolapse.

Research Questions:

- 1. What is the knowledge of women toward risk factors of uterine prolapse?
- 2. What are the practices of women toward risk factors of uterine prolapse?

II. Subjects and Methods

Research design: A descriptive study design was adopted to conduct this study.

Setting: This study was carried out at two settings: Gynecological out patients' clinics in Tanta University hospital and El-Menshawy hospital.

Subjects: The study included a convenient sample of women who attended the gynecological outpatient clinic from the beginning of November 2013 to the end of April 2014, the total number of women interviewed by the researchers were 200 women. The subjects of this study were selected according to the following criteria:

- Age group ranged from 19- 50 years.
- Non pregnant women.
- Free from gynecological complications (gynecological complications from surgery or disease or investigation).
- Women have no present history of uterine prolapse.

Tools of data collection: - Three tools were used for data collection:

. Tool I: structured interview schedule covered the following two parts: Part one: It included the Socio-demographic characteristics of women such as: age, marital status, residence, level of education, occupation, type of family and height & weight. Part two: It included Reproductive history of women such as: gravidity, parity, number of abortions, and number of living children and mode of last delivery and history of medical diseases, previous history of uterine prolapse, obstetrics and gynecological operations and family history of uterine prolapse. Tool II: It related:-To women knowledge about uterine prolapse, it included 9questions about: definition, predisposing risk factors (causative factors), symptoms, degrees, complications, preventive measures, management, treatment and sources of knowledge about uterine prolapse.

The scoring system regarding women's knowledge was as follow:

Women who gave correct answers was given score 2.

Women who gave Incorrect and didn't know answers was given score 1.

The total knowledge score level was categorized as follows:

1- Good level of knowledge \geq 75%.

- 2- Fair level of knowledge 50% <75%.
- 3- Weak level of knowledge < 50%.

Tool III: - Covered the following two parts:-

Part one: This part related to women's exposure to risk factors of uterine prolapse. It included 20 questions about: risk factors of uterine prolapse in absence of pregnancy, during previous pregnancies, at previous deliveries, and after previous deliveries (post partum period).

Part two: This part related to women's practices that actually taken as preventive measures as well as anticipated actions to overcome occurrence of uterine prolapse. It included questions about:

1. Practices that actually taken by women as preventive measures to prevent occurrence of uterine prolapse and how it can be avoided.

The questions covered the following points: Prevent occurrence and management of chronic constipation (to prevent irritable bowel syndrome), seek medical advice when exposed to prolonged cough, avoid carrying heavy objects at work or at home early after delivery, Maintain regular antenatal follow up during pregnancy, perform regular Kegel exercise during pregnancy and postpartum period and usual, avoid bearing down during first stage of labor, delivered at hospital to ensure availability of skilled birth attendant to avoid injury during childbirth (not by untrained Traditional Birth Attendance (TBA), maintain regular post natal follow up with physician after delivery (follow up postpartum visits), using appropriate contraceptive method after puerperium (to decrease parity not more than 4 deliveries), have rest for enough periods after delivery (postpartum), maintain good and well balanced diet, avoid obesity and avoid exposure to positive and negative smoking.

2. Anticipated actions that would be taken by women to deal with symptoms of uterine prolapse when happened. Women were also asked about to whom they should be referred if they experience any symptoms of uterine prolapsed.

The scoring system regarding women's reported practices regarding preventive measures of uterine prolapsed were as follow:

- Practices done were taken (2) score.
- Practices not done or did not know were taken (1) score.

The total score level will be as follows:

- Satisfactory practices > 60%.
- Unsatisfactory practices < 60%.

Method

- Written approvals:-Official permission was obtained from the responsible authority before conducting this study through official letters from Faculty of Nursing explaining the purpose of the study.
- Tools were developed by the researcher after review of the recent relevant literature in addition to experts' opinion.
- Subjects of this study were interviewed during their attendance in the gynecologic outpatient clinic at the previous mentioned settings. Ethical considerations of the study included approval to collect the data from the previous mentioned settings, as well as getting the subjects' consent to participate in the study after explaining the purpose of the study. Also, confidentiality and privacy were ascertained regarding the data collected.
- Before embarking on actual study, a pilot study was carried out on 10% of the sample "20 married women from the previously mentioned settings. Those women were excluded from the study sample.
- The tools were revised and submitted to five experts in obstetrics and gynecology nursing from Faculty of Nursing.
- Data collection was accomplished in the morning from 9:00 a.m.to 1:00 p.m. three times per week. Over a period of six months (3months for each hospital) from the beginning of November 2013 to the end of April 2014.

Statistical analysis:-

The collected data were organized, tabulated and statistically analyzed using SPSS software (Statistical Package for the Social Sciences, version 16, SPSS Inc. Chicago, IL, USA). For quantitative data, the range, mean and standard deviation were calculated. For qualitative data, comparison between two groups and more was done using Chi-square test (χ^2) and Fisher Exact test (FE). Significance was adopted at p<0.05 for interpretation of results of tests of significance (20).

III. Results

This study aimed to assess knowledge and practices of women regarding risk factors of uterine prolapsed. The results will be presented under the following headings:

Table 1: Socio-demographic characteristics of the studied women

Variables	(n=200)				
	N	%			
Age (years):					
19-<30	73	36.5			
30-<40	69	34.5			
40-50	58	29.0			
Range	19-50				
Mean±SD	34.46±9.17				
Marital status:					
Married	184	92.0			
Divorced	3	1.5			
Widowed	13	6.5			
Residence:					
Urban	21	10.5			
Rural	179	89.5			
Education level:					
Illiterate	65	32.5			
Read & write	9	4.5			
Primary &preparatory	19	9.5			
Secondary	85	42.5			
Highly educated	22	11.0			
Occupation:					
House wife	163	81.5			
Worker	37	18.5			
Type of work:	(n=37)				
Nurse	14	37.8			
Employed	20	54.1			
Teacher	3	8.1			
Type of family:					
Nuclear	132	66.0			
Extended	68	34.0			

Table 1, shows socio-demographic characteristics of the studied women. It was clear that age ranged from 19-50 years old, with a mean age of 34.46 ± 9.17 . The highest percent of the studied women (89.5%) were from rural areas, slightly more than one third (32.5%) were illiterate, and only (11.0%) had highly education. The majority of them were house wives (81.5%). Two-third (66%) of the studied women was lived in nuclear family.

Table 2, Percent distribution of women according to their Body Mass Index (BMI) According to WHO (2006).

Body mass index		(n=200)	
(BMI)		N	%
Under weight	(<18.50)	2	1.0
Normal weight	(18.50<25)	46	23.0
Overweight	(25-<30)	87	43.5
Obese	(≥ 30)	65	32.5
-Obese class I	(30-<35)	42	21.0
-Obese class II	(35-<40	20	10.0
-Obese class III	(≥ 40)	3	1.5
Range		14.45-42.76	
Mean±SD		28.36±7.77	

Table 2, Shows the body mass index (BMI) of the studied women, it was noticed that less than one-third (23%) of them with normal weight, while nearly one- third (32.5%) were obese (\Box 30kg/m²).

Table 3: Percent distribution of women regarding their Knowledge of uterine prolapse .

Knowledge regarding uterine prolapse UP	(n=200)	
	N	%
Hearing about uterine prolapse UP		
Heard about uterine prolapse	87	43.5%
Not heard	113	56.5%
Definition of uterine prolapsed		
Correct answers	83	41.5
Incorrect answers	4	2.0
Didn't know	113	56.5
Risk factors (causative factors) of uterine prolapse		

Correct answers	23	11.5
Incorrect answers	30	15
Didn't know	147	73.5
Symptoms of uterine prolapsed		
Correct answers	38	19.0
Incorrect answers	1	0.5
Didn't know	161	80.5
Degree of uterine prolapsed		
Correct answers	29	14.5
Incorrect answers	2	1.0
Didn't know	169	84.5
Complications of uterine prolapse		
Correct answers	23	17.5
Incorrect answers	7	3.5
Didn't know	170	85
Preventive measures of uterine prolapsed		
Correct answers	20	10
Incorrect answers	28	14
Didn't know	162	81.0
Treatment & Management of uterine prolapse		
Correct answers	45	22.5
Incorrect answers	0	0
Didn't know	155	77.5

Table 3, shows that (43.5%) did not aware about uterine prolapse. The table also exhibits that the majority of studied women had no knowledge regarding definition, risk factors (causative factors), symptoms, complication, preventive measures, treatment and degree of uterine prolapse (56.5%, 73.5%, 80.5%, 85%, 81%, 77.5%, and 84.5% respectively).

Table 4: women's overall total score level of knowledge regarding uterine prolapse (n=200).

Women's Knowledge items	Total score level regarding uterine prolapse . (n=200)					
	Poor		Fair	Fair		
	N	%	N	%	N	%
Definition of uterine prolapse	183	91.5	15	7.5	2	1.0
Risk factors of uterine prolapse	194	97.0	5	2.5	1	0.5
Symptoms of uterine prolapse	191	95.5	9	4.5	0	0
Degrees of uterine prolapsed	188	94.0	6	3.0	6	3.0
Complications of uterine prolapse	196	98.0	4	2.0	0	0
Prevention of uterine prolapse	189	94.5	9	4.5	2	1.0
Treatment of uterine prolapse	197	98.5	3	1.5	0	0
Total knowledge	190	95.0	8	4.0	2	1.0

Table 4, clarified that (4% &1% respectively) of studied women revealed fair and good level of knowledge, while the majority of them (95%) revealed poor level of knowledge regarding all items of uterine prolapse.

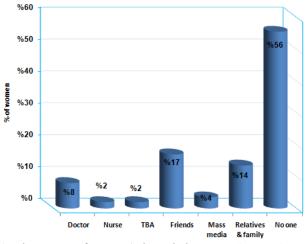


Figure 1: The source of women's knowledge regarding uterine prolapse.

Figure 1, found that 14% of the studied women obtained their knowledge from relatives and family and 17% of women obtained knowledge from friend and/ or neighbors. On the other hand, only 8%, 2%, 4% of women obtained their knowledge from doctor, nurse and mass media respectively.

Table 5: Percent distribution of women according to their exposure to risk factors.

Risk Factors of uterine prolapse. #	(n=200)			
	Yes		No	
	N	%	N	%
In absence of pregnancy: #				
•Exposed to chronic cough and didn't' seek medical advice.	70	35.0	130	65.0
•Complain from chronic &prolonged constipation without treatment.	89	44.5	111	55.5
•Carrying of heavy objects at work or at home in usual.	88	44.0	112	56.0
Total (mean frequency)	82	41.0	118	59.0
During previous pregnancies: #				
•Exposed to repeated abortions	19	9.5	181	90.5
Absence and lack of antenatal follows up during previous pregnancy.	117	58.5	83	41.5
•Lack of practicing kegel exercise during pregnancy	193	96.5	7	3.5
•Hard work during pregnancy.(heavy activities)	63	31.5	137	68.5
Total (mean frequency)	51	25.5	149	74.5
During previous labor: #				
•Occurrence of bearing down during first stage of labor.	85	42.5	115	57.5
• Exposure to abdominal (fundal) pressure during labor.	79	39.5	121	60.5
•Exposed to difficult prolonged labor.	36	18.0	164	82.0
•Delivered at home by traditional birth attendants (TBA)	58	29.0	142	71.0
Delivered large or macrosomic baby.	1	0.5	199	99.5
Total (mean frequency)	64	32.0	136	68.0
During previous puerperium: #				
•Lack of exercises during puerperium.	190	95.0	10	5.0
•Lifting heavy objects during puerperium.	76	38.0	124	62.0
•Hard work at home during puerperium.	81	40.5	119	59.5
•Lack of using appropriate contraceptive method after puerperium.	93	46.5	107	53.5
Lack of postnatal follow up.	193	96.5	7	3.5
•Complained of previous chronic constipation during puerperium.	7	3.5	193	96.5
Total (mean frequency)	39	19.5	161	80.5

More than one answer

Table 5, Shows women exposure to risk factors of uterine prolapse. It was found that (44.5% & 44%) of the studied women complained from chronic constipation and carrying heavy objects at work or at home in usual respectively. As regards women exposure to risk factors during previous pregnancies, it was noticed that nearly three-fifth of the studied women (58.5%) did not seek regular antenatal follow up during previous pregnancies, and the majority (96.5%) of them didn't know as well as didn't practice kegel exercise.

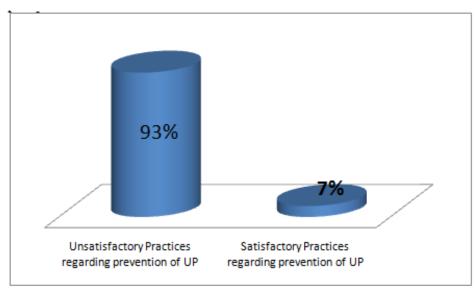


Figure 2: women's practices that actually taken as preventive measures to prevent occurrence of uterine prolapse.

Figure 2: Displays the distribution of the studied women according to their practices that actually taken as preventive measures to prevent occurrence of uterine prolapse. It was found that most of the studied women had unsatisfactory practices regarding prevention of uterine prolapse.

IV. Discussion

Uterine prolapse UP is one of the common causes of gynecological morbidity and major public health problem for the nation⁽²¹⁾. The incidence of uterine prolapse is increasing now-a-days, the main reason being lack of awareness about risk factors, signs and symptoms and preventive measures which leading to inappropriate management⁽²²⁾. Literature revealed that uterine prolapse has been unsatisfactorily addressed and is considered a sensitive topic among women, families and communities ⁽²³⁾.

This study aimed to assess knowledge and practices of women regarding risk factors of uterine prolapse. The finding of the present study revealed that the majority of the studied women had never heard about uterine prolapsed. Among women who had heard about uterine prolapse, they had fair knowledge of it. This finding supported by **Suman** (2013) (244), who stated that uterine prolapsed still neglected for so long and there is only a little literature on this topics. Moreover, Shrestha et al., (2014) (255), found that the majority of the women in their study had never heard about uterine prolapse, and only 37.5% of women who had ever heard about it.

Regarding women knowledge related to uterine prolapse, the findings of the present study revealed that the majority of the studied women have poor level of knowledge regarding all items of uterine prolapse. This finding was in line with Essa R (2002) (22), who reported that the majority of the studied women reflected poor total score level of knowledge regarding genital prolapse. In addition, Shobhamani (2012) (26), mentioned that majority of the multiparous women in his study had poor score of knowledge regarding uterine prolapse. Moreover Goman et al (2001) (27), reported that the majority of the studied women had poor knowledge of genital prolapse. On the other hand, these findings are contradicted with Suman (2013) (24), and Brawal (2010) (28). They stated that more than half of their studied women had fair and moderate level of knowledge.

As regard the sources of women's knowledge about uterine prolapse, the current study found that friends, family and relatives play an important role concerning women knowledge. From the researchers point of view this result due to that most of the studied women were house wives & lived in rural areas and in extended families. This is serious because such knowledge may be inadequate, inaccurate, and incomplete. This finding is agreed with **Vanamala** (2006) (29), who stated that the majority of women gained their knowledge related to uterine prolapse from friends and relatives.

Regarding women's practices that actually taken as preventive measures to prevent occurrence of uterine prolapse. The current study revealed that the majority of the studied women didn't practice and/or had unsatisfactory practices regarding prevention of uterine prolapse. From the researcher point of view this finding due to lack of women's knowledge and awareness as the majority of the studied women (81%) didn't have any knowledge about preventive measures of uterine prolapse. Also the studied women had a believe that uterine prolapse is a disease affect only old and grand-multipara women.

V. Conclusion

Women had poor knowledge about uterine prolapse. Many women had never heard about uterine prolapse and who had heard, most of them didn't know any knowledge about it. The vast majority of women didn't practice any measures to protect or prevent occurrence of uterine prolapse.

VI. Recommendation

- 1. Basic nursing education curriculum should evolve adequate information regarding risk factors and preventive measures of uterine prolapse
- 2. Health education programs by health care providers regarding uterine prolapse should target women at all places, age groups, and educational level at both urban and rural communities.
- 3. Regulation development of medical convoys especially to rural areas for early detection and diagnosis of uterine prolapse.
- 4. Upgrading all health workers practices regarding correct handling of safe delivery to prevent occurrence of uterine prolapse.
- 5. Further studies are needed in this field to assess the effect of health education program on women's as well as nurses knowledge regarding risk factors and preventive measures to avoid occurrence of uterine prolapse.

References

- [1]. **Aki O., Ibrahim H., and Mamdouh H**. Perceived Reproductive Morbidity and Treatment Seeking Behavior among ever Married Women in Siwa Oasis, Egypt. Journal of American Science, 2011; 7(6):749.
- [2]. **Thapa B., Rana G., and Gurung S.** Contributing factors of utero-vaginal prolapse among women attended in Bharatpur hospital. Journal of Chitwan Medical College, 2014; 4(9):38-42.
- [3]. **Tamrakar A.** Prevalence of Uterine Prolapse and its Associated Factors in kaski District of Napel. Journal of school of health and allied sciences, 2012; 2(1):38-41.
- [4]. **Detollenaere R., Robert A., Stekelenburg J., et al.** Treatment of Uterine Prolapse Stage Two or Higher.2011. Retrieved from http://www.biomedcentral.com.Available at 13-2-2015.
- [5]. Shrestha B. Challenges in prevention and timely care of uterine prolapse, PhD thesis, Institute of Medicine, University of Gothenburg, Sweden, 2015.
- [6]. SegestenK.Nepales Women Suffering from Uterine Prolapse. A participant Observational Study in A maternity Hospital in Napel. Msc thesis, Goteborgs University, 2012. Retrieved from https://gupea.ub.gu.se/1/gupea_2077_29490_1.pdf. Available at 22-4-2014.
- [7]. **Neupane Sh.** Effectiveness of Self Instructional Module on level of Knowledge regarding Prevention and Management of Uterine Prolapse. Msc thesis, College of nursing, Rajiv Gandhi University, 2011.
- [8]. Younis N., Khattab H., Zurayk H., et al. Community study and related morbidities in rural Egypt. Al- Azhar University, 1993; 24(3):175-86.
- [9]. Shah P.Uterine prolapse and Maternal Morbidity in Nepal .Human rights impressive, 2010:493. Retrieved fromhttp://www.earmacklaw.adrexe.edu/shah.pdf. Available at 1-4-2014.
- [10]. UNFPA (2011). Maternal Morbidity Statistics by Region and by Country.UNFPA. Retrieved from http://www. unfpa.org/public/cache /offonce /home/mothers/pid/. Available at 14-4-2014.
- [11]. **Federation SMN.** Prevalence of Uterine Prolapse amongst Gynecology OPD Patients in Tribhuvan University Teaching Hospital in Nepal and Its Socio-Cultural Determinants. Kuala Lumpur: The Asian-Pacific Resource and Research Centre for Women, 2009.Retrieved from http://www.who.int/2012-18n-up research-study-Nepal. Available at 20-11-2013.
- [12]. **Bodner-Adler B., Shrivastava C., and Bodner K.** Risk factors of Uterine Prolapse in Nepal. International UrogynecologyJournal, Pelvic Floor Dysfunct, 2007; (18): 1343–1346.
- [13]. Shrotri N., and Shrotri A. Surgical Principles in Obstetrics and Gynaecology. 8thed., CBS com., India, 2013.
- [14]. Puri R. Prevalence, Risk factors and Traditional Treatments of Genital Prolapse in Manama. Msc thesis, Faculty of Health Science, University of Tromso, Napel, 2011.
- [15]. **Bruwal A.** Knowledge, Attitude and Preventive Measures amongst the married women of Reproductive age toward Uterine Prolapse. Msc thesis, College of public health science, Chulalongkorn University, 2010; 23(3).
- [16]. **DarshanA.**Prevalence of uterine prolapsed and socio-cultural determinants among gynecology OPD patients, Msc thesis, Tribuvan University, Teaching Hospital, Malaysia, 2009.
- [17]. Christina M., Ranjita R., and Arja R. Uterine Prolapse Prevention in Eastern Nepal. International journal of women's health, 2012; (4):374.
- [18]. **Subhagan R.** Assess Knowledge regarding Prevention of Uterine Prolapse among Postnatal Mothers.Msc thesis, College of nursing, Bengauru, 2010.
- [19]. Shylin J. Evaluate Effectiveness of Self Instructional Module on knowledge of the House wives regarding Prevention of Uterine Prolapse. Msc thesis, Harsha College of Nursing, 2011.
- [20]. Dawson B D and Trapp R G: Reading the medical literature: Basic & Clinical Biostatistics. Lange Medical Book/ McGraw Hill. Medical Publication Division, New York. 3rd ed., Ch. 7-9, PP 161-218 and Ch. 13, PP 305-314, 2001.
- [21]. Kudish BI., et al. Effect of weight change on natural history of pelvic organ prolapse.2009; 113(1):81-88.
- [22]. **Essa R.** women's awareness and reactions toward symptoms of genital prolapse. Msc thesis, Faulty of Nursing, Alexandria University, 2002.
- [23]. Chen GD,and Chen S. Updated Definition of Female Pelvic Organ Prolapse. Incontinence pelvic floor dysfunction.2007; 1(4):121-124
- [24]. **Suman T.** Effectiveness of nursing intervention package on prevention of utero-vaginal prolapse among mothers. Msc thesis. Mangalore, 2013.
- [25]. Shrestha B., Devkota B., Onta S., and et al. Knowledge on uterine prolapse among married women of reproductive age in Nepal. International journal of women health, 2014:6 771-779.
- [26]. **Shobhamani CP.** Study to evaluate the effectiveness of Structured Teaching Programme regarding Knowledge on Preventive Measures of Uterine Prolapse amongst multiparous women. Msc thesis, Bapuji College of nursing, Rajiv Gandhi University, India, 2012
- [27]. **Goman H., Fetohy E., Nosseir S., etal.** Prevalence and Factors associated with genital prolapse: a hospital-based study in Alexandria (Part I). Egypt Public Health Assoc. 2001; 76(6):313.
- [28]. Bruwal A. Knowledge, Attitude and Preventive Measures amongst the married women of Reproductive age toward Uterine Prolapse. Msc thesis, College of public health science, Chulalongkorn University, 2010; 23(3).
- [29]. Vanamala PT. Assess the Knowledge of Postnatal Mothers who had Vaginal Delivery on Prevention of Uterovaginal Prolapse. Msc thesis, Oxford College of Nursing, Rajiv Gandhi University, 2006.