ஆராய்ச்சி தகவல் தாள்

இம் மருத்துவமனைக்கு வரும் நோயாளிகளிடம் இருந்து ஒரு ஆராய்சிக்காக தங்களிடமிருந்து தகவல் பெறப்படுகின்றது.

முடிவுகளை அல்லது கருத்துகளை வெளியிடும் போதோ அல்லது ஆராய்ச்சியின் போதோ தங்களது பெயரையோ அல்லது அடையாளங்களையோ வெளியிட மாட்டோம் என்பதையும் தெரிவித்துக் கொள்கிறோம்.

இந்த ஆராய்ச்சியில் பங்கேற்பது தங்கலுடைய விருப்பத்தின் பேரில் தான் இருக்கிறது. மேலும் நீங்கள் எந்நேரமும் இந்த ஆராய்ச்சியிலிருந்து பின் வாங்கலாம் என்பதையும் தெரிவித்துக் கொள்கிறோம்.

இந்த சிறப்பு பரிசோதனைகளின் முடிவுகளை ஆராய்ச்சியின் போது அல்லது ஆராய்ச்சியின் முடிவின் போது தங்களுக்கு அறிவிப்போம் என்பதையும் தெரிவித்துக் கொள்கிறோம்.

ஆராய்ச்சியாளர் கையொப்பம் **பங்கேற்பாளர் கையொப்பம்**

ஆராய்ச்சி ஒப்புதல் படிவம்

ஆராய்ச்சி தலைப்பு

பெயர்: தேதி:
வயது: உள்நோயாளி எண்:
பால்: ஆராய்ச்சி சேர்க்கை எண்:

இந்த ஆராய்ச்சின் விவரங்கலும் அதன் நோக்கங்களும் முழுமையாக எனக்கு தெளிவாக விளக்கப்பட்டது.

எனக்கு விளக்கப்பட்ட விஷயங்களை நான் புரிந்து கொண்டு நான் எனது சம்மதத்தை தெரிவிக்கிறேன்.

இந்த ஆராய்ச்சியில் பிறரின் நிர்பந்தனையின்றி என் சொந்த விருப்பத்தின் பேரில் தான் பங்கு பெறுகிறேன் மற்றும் நான் இந்த ஆராய்ச்சியிலிருந்து எந்நேரமும் பின்வாங்கலாம் என்பதையும் அதனால் எந்த பாதிப்பும் ஏற்படாது என்பதையும் நான் புரிந்து கொண்டேன்.

நான் என்னுடைய சுய நினைவுடனும் மற்றும் முழு சுதந்திரத்துடனும் இந்த மருத்துவ ஆராய்ச்சியில் என்னை சேர்த்துக் கொள்ள சம்மதிக்கிறேன்.

நான் இந்த ஆராய்ச்சிக்கு என்னுடைய முழு ஒப்புதலை தெரிவிக்கின்றேன்.

கையொப்பம்

From

Vijaya,
II Year, M.Sc (N).,
College of Nursing,
Madras Medical College,
Chennai-600 003.

To

The Director,
Institute of Obstetrics & Gynaecology and
Government General Hospital for Women and Children,
Egmore, Chennai-600 008.

Through Proper Channel

Sub: Permission for conducting study in Gynaecological outpatient department ward at IOG, request regarding.

Respected Sir/ Madam,

Kindly permit M.Sc (N)., II year M.Vijaya to conduct a study on topic mentioned below at the Gynaec Out Patient Department part of my curriculum requirement. The study period is from 1.11.2010 to 30.11.2010.

The topic is "A study to identify the contributory risk factors of Dysfunctional Uterine Bleeding among the women in reproductive age groups attending Gynaecology Out Patient Department at Institute of Obstetrics and Gynaecology Hospital for Women and Children, Egmore, Chennai-8.

Kindly consider my request and permit me to conduct the study.

Thanking you,

Yours faithfully

(M.Vijaya)

Forwarded
DR. P. MANGALA GOWRI, MSc (N), PhD
PRINCIPAL
COLLEGE OF NURSING
MADRAS MEDICAL COLLEGE
CHENNAI - 600 003.

Date : 12.08.2010
Place : Chennai – 3.

Director and Superintendent
Institute of Obstetrics and
Gynaecology and Govt. Hospital
for Women and Children,
EGMORE, MADRAS-8.

CERTIFICATE OF CONTENT VALIDITY

This is to certify that the tool developed by Mrs. M.Vijaya, M.Sc (N) II Year, College of Nursing, Madras Medical College, Chennai – 03 for her topic "**A study to identify the predisposing factors for dysfunctional uterine bleeding among women in reproductive age group attending Gynaecology Out Patient Department, Government Hospital for women and children, Chennai -8.**, is validated by me and she can proceed with this tool to conduct the main study.

SIGNATURE :

NAME : K. KANIMOZHI

SEAL : ASST. PROFESSOR

DATE : 11.11.2010.

CERTIFICATE OF CONTENT VALIDITY

This is to certify that the tool developed by Mrs. M.Vijaya, M.Sc (N) II Year, College of Nursing, Madras Medical College, Chennai – 03 for her topic **"A study to identify the predisposing factors for dysfunctional uterine bleeding among women in reproductive age group attending Gynaecology Out Patient Department, Government Hospital for women and children, Chennai -8.,** is validated by me and she can proceed with this tool to conduct the main study.

SIGNATURE :

NAME : K. LATHA

SEAL :

DATE : 23.11.2010.

SRM COLLEGE OF NURSING
SRM Nagar, Kattankulathur-603 203, Kancheepuram - Dist., Tamil Nadu, India.
SRM UNIVERSITY

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CHAPTER-I
INTRODUCTION

"For what is done or learned by class by, of women becomes, virtue of their common womanhood, the property of all women"- Elizabeth Blackwell

In women's life span various gynaecological disorders occurs during reproductive age group of women. Irregular excessive or prolonged menstrual bleeding without demonstrable pathology is termed as dysfunctional uterine bleeding.

In the vast majority of cases, it is secondary to anovulation which is a condition where the follicle does not burst and therefore does not release the egg, which is more common at the extremes of reproductive age, ie: early adolescents girls and women between 40-50 years of age.

Dysfunctional Uterine Bleeding (DUB) is an abnormal genital bleeding evidenced and found in the absence of demonstrable structural or organic pathological condition of the uterus. Diagnosis must be made by exclusion, since organic pathology must first be ruled out. It can be classified as ovulatory or anovulatory, depending on the occurrence of the ovulation.

During anovulatory cycle, the corpus luteum is not formed and the normal cyclical secretion of progesterone does not occur. Thus oestrogen stimulates the endometrium unopposed. Without progesterone the endometrium continues to proliferate, eventually outgrowing its blood supply; then it sloughs and bleeds incompletely, irregularly, and sometimes profusely for a long time. When this abnormal process occurs repeatedly, the endometrium can become hyperplastic and sometimes present with atypical or cancerous cells.

In ovulatory DUB, progesterone secretion is prolonged; irregularly shedding of the endometrium occurs. This is due to reduced oestrogen levels which are nearing the threshold level of bleeding.

The early adolescent girls have irregular times of menstrual bleeding. This usually gets altered due to the overtime of the hormone levels and then it will lead to regular menstruation. Some women may experience dysfunctional uterine bleeding in

the age of 20- 30 years. The gynaecologist should rule out the serious reasons for DUB in this age group.

The other risk factor of the dysfunctional uterine bleeding occurs in the perimenopausal and menopausal age group. During this time before the menstruation ceases, they will experience the irregular vaginal bleeding.

A. FACTORS THAT INCREASE THE RISK OF DEVELOPING DYSFUNCTIONAL UTERINE BLEEDING ARE AS FOLLOWS:

Dysfunctional uterine bleeding is more common in early adolescents, at the beginning of the reproductive age, and in perimenopausal women at the end of their reproductive years. Overweight women more commonly develop dysfunctional uterine bleeding. Some women have dysfunctional uterine bleeding even though they have no risk factors.

Medications, such as contraceptive pills, sometimes cause abnormal vaginal bleeding. It induces minor bleeding between periods during the first few months of usage of contraceptive pills. It also induces bleeding if the pills are not taken at regular time.

An intrauterine device (IUD) also may increase the chances of spotting or heavy periods. Women who are breast-feeding may have irregular vaginal bleeding or spotting.

Heavy bleeding during the first few weeks after delivery (postpartum) or after an abortion may indicate that the fetal tissue remains in the uterus (retained products of conception). The uterus has not contracted to the pre-pregnancy size (or) normal sign.

Dysfunctional uterine bleeding is most common at the extreme ages of a woman's reproductive years, either at the beginning or near the end, but it may occur at any time during her reproductive life.

Most cases of dysfunctional uterine bleeding in adolescent girls occur during the first 2 years after the onset of menstruation, when their immature hypothalamic-pituitary axis may fail to respond to oestrogen and progesterone, resulting in anovulation.

Abnormal uterine bleeding affects up to 50% of perimenopausal women. In the perimenopausal period, dysfunctional uterine bleeding may be an early manifestation of ovarian failure causing decreased hormone levels or responsiveness to hormones, thus also leading to anovulatory cycles.

In patients who are 40 years or older, the number and quality of ovarian follicles diminishes. Follicles continue to develop but do not produce enough oestrogen in response to FSH to trigger ovulation. The estrogen that is produced usually results in late-cycle estrogen breakthrough bleeding

1.2 NEED FOR THE STUDY:

DUB occurs in women during their reproductive years (they have started their period but have not reached menopause). About 20% of DUB cases occur in adolescents and 40% occur in women over 40years.

According to Amir,(2010), approximately 90% of dysfunctional uterine bleeding cases result from anovulation, and 10% of cases occur with ovulatory cycles. He said that the women of dysfunctional uterine bleeding lose blood at a rate of about 3 times faster than the women with normal menses.

In United States, Dysfunctional uterine bleeding is one of the most often encountered gynaecological problems. An estimated 5% of women aged 30-49 years will consult a physician every year for the treatment of menorrhagia. Around 30% of all women reported was having menorrhagia.

According to Hemprabha, (2001), about 28% of Indian women consider their excessive menstrual loss and plan their activities around their menstrual cycle and nearly 10% of employed women take time off from their work due to excessive menstrual loss. Six percent of women aged between 25-44 years consult their family physician for excessive menstrual loss every year. Among 35% of these are referred to hospitals and 60% will go in for a hysterectomy in the next 5 years. Over 7500 hysterectomies are carried out every year with 30% of them for menstrual disturbances. The exact pathophysiology is difficult to understand and hence the disorder is broadly referred as dysfunctional uterine bleeding.

According to Kistner, in cases of dysfunctional uterine bleeding, 57.5% had a normal endometrium, in 30.8% of cases, hyperplasia of the endometrium was observed, the incidence of irregular ripening and irregular shedding was present in 7.8% and atrophy was seen in 3.9% of the cases

Morbidity is related to the amount of blood loss at the time of menstruation, which occasionally is severe enough to cause haemorrhagic shock. Excessive menstrual bleeding accounts for two thirds of all hysterectomies and most endoscopic endometrial destructive surgery. Menorrhagia has several adverse effects, including anemia and iron deficiency, reduced quality of life, and increased health care costs.

The Institute of Obstetrics and Gynaecology (IOG), nearly 120-140 women with dysfunctional uterine bleeding are attending gynaecological outpatient department.

Table No.1.1: Statistics of Gynaecology outpatient department :

YEAR	NEW CASES	OLD CASES	TOTAL
2006	23303	10174	33477
2007	21459	12354	33813
2008	20504	12441	32945
2009	21312	13160	34472
2010	24243	12489	36732

Source: Medical Records department of The Institute of Obstetrics and Gynaecology (IOG)

Table No.1.2: comparative Statistics of Gynaecology outpatient department of dysfunctional uterine bleeding with other gynecological problems:

YEAR	UTI	PID	LEUCORRHEA	DUB	CA CERVIX
2006	2715	3417	4631	3417	1428
2007	2792	3736	4823	3679	1574
2008	2872	4217	5629	4725	2128
2009	2820	5124	5972	4917	2679
2010	2972	5679	6843	5674	3417

Source: Medical Records department of The Institute of Obstetrics and Gynaecology (IOG)

When an investigator is posted in Gynaecology outpatient department, many patients came with various factors of dysfunctional uterine bleeding. So the investigator with a rich clinical experience decided to take-up the study to identify the contributory risk factors of dysfunctional uterine bleeding.

1.3 STATEMENT OF PROBLEM:

A study to identify the contributory risk factors of dysfunctional uterine bleeding among the women in reproductive age groups attending Gynaecology outpatient department at Institute of Obstetrics and Gynaecology hospital for women and children, Egmore, Chennai-8.

1.4 OBJECTIVES:

1. To identify the contributory risk factors of dysfunctional uterine bleeding
2. To associate the identified risk factors with selected demographic variables.
3. To formulate a self instructional module for the contributory risk factors of dysfunctional uterine bleeding

1.5 OPERATIONAL DEFINITION:

1. **Dysfunctional uterine bleeding:**

   It refers to irregular bleeding from the reproductive tract which occurs due to various contributory factors.

2. **Contributory Risk Factors:**

   Refer physical, social, gynaecological and obstetrical.

3. **Women in the reproductive age groups:**

   It refers to the women who are in the age group of 15-49 years attending the Gynaecological outpatient department

HYPOTHESIS:

There is a significant relationship between the contributory risk factors and dysfunctional uterine bleeding

1.7 DELIMITATION:

The study is limited to 4 weeks

The study is done among women with dysfunctional uterine bleeding.

CHAPTER-II

2.1 REVIEW OF LITERATURE

According to Polit,(2008), a thorough literature review provides a foundation on which to base new evidence and usually is conducted well before any data are collected.A critical summary of research on a topic of interest, often prepared to put research problem in context.

An intensive review of literature relevant to the research topic was done to gain insight and to collect maximum information for laying foundation of the study. The purpose of review of literature is to obtain specific knowledge base and in depth information about the various contributory factors of dysfunctional uterine bleeding

PART I - RELEVANT LITERATURE RELATED TO PREVIOUS STUDIES

Section A : Literature related to dysfunctional uterine bleeding

Section B : Literature related to physical and social factors

Section C : Literature related to gynaecological and obstetrical factors

PART II - CONCEPTUAL FRAMEWORK OF THE STUDY

SECTION A : LITERATURE RELATED TO DYSFUNCTIONAL UTERINE BLEEDING

Maness DL, 2010, he conducted a study on Irregular or unusually heavy periods are a common complaint. Most often, the condition is benign and can by managed conservatively. Assess postmenopausal women for cancer by endometrial biopsy, transvaginal ultrasound, or saline infusion sonohysterogram. Treat mild dysfunctional uterine bleeding (DUB) with nonsteroidal anti-inflammatory drugs, levonorgestrel intrauterine device (IUD), or danazol. Treat moderate DUB with oral contraceptive pills, levonorgestrel IUD, danazol, or tranexamic acid.

Casablanca Y,2008, conducted a study on Dysfunctional uterine bleeding is one of the most common reasons patients seek the opinion of a gynaecologist. This article reviews the causes of dysfunctional uterine bleeding and the relevant

differential diagnosis. Laboratory and radiologic studies pertinent to the evaluation of dysfunctional uterine bleeding are delineated. Medical therapy is the principal tenet of treatment and is summarized for both acute and chronic bleeding. Surgical options are also discussed, as well as treatments of other causes of abnormal uterine bleeding.

Bongers MY, 2004, he performed a review of the treatment modalities for dysfunctional uterine bleeding.Medical treatment consists of anti-fibrinolytic tranexamic acid, non-steroidal anti-inflammatory drugs, the combined contraception pill, progestogen, danazol, or analogues of gonadotrophin releasing hormone. The levonorgestrel releasing intra uterine device is developed for contraception, but is also effective in the treatment of dysfunctional uterine bleeding. Surgical treatment includes endometrial ablation of the first and second-generation, and hysterectomy. This review contains current available evidence on the effectiveness of these therapies. Since none of the treatments for dysfunctional bleeding is superior to one of the others, and since all treatments have their advantages and disadvantages, counselling of patients with dysfunctional bleeding should incorporate medical approach, levonorgestrel releasing IUD, endometrial ablation and hysterectomy.

Farrell E., 2004, who discussed about the Dysfunctional uterine bleeding is defined as heavy menstrual uterine bleeding not due to any recognisable cause and is therefore a diagnosis of exclusion. Other conditions such as uterine fibroids, endometrial polyps and systemic diseases should be excluded by appropriate investigations. In the adolescent, investigations for a coagulopathy should be performed. The pathophysiology of DUB is largely unknown but occurs in both ovulatory and anovulatory menstrual cycles. Medical treatments include nonsteroidal anti-inflammatory drugs or antiprostaglandins, tranexamic acid, the progestogen releasing intrauterine device, combined oral contraceptive pills, and other hormonal therapies. As no medical treatment is superior to another, each woman should be individually assessed as to appropriate management. Surgical treatments include endometrial ablation and hysterectomy.

Bongers MY, 2004, conducted a study to review of the treatment modalities for dysfunctional uterine bleeding. Antifibrinolytic tranexamic acid is the most effective medical therapy to treat dysfunctional uterine bleeding. In general medical therapy is not as effective as endometrial resection in terms of patient satisfaction and

health related quality of life. The levonorgestrel releasing intra uterine device is an effective treatment for dysfunctional uterine bleeding. No difference in quality of life was observed in patients treated with a levonorgestrel releasing intra uterine device as compared to hysterectomy. Ablation techniques of the first generation are effective and safe when used by trained surgeons, but have a learning curve. Ablation techniques of the second generation are effective, but long-term follow-up data are not available. Similarly, there are no large randomised controlled trials comparing the levonorgestrel releasing intra uterine device to first and second-generation ablation techniques. Hysterectomy, the traditional standard of care, has a relatively high complication rate, but it generates a high satisfactory.

Kilbourn C, 2001,determined a study on the approach to diagnosis of abnormal uterine bleeding is guided by a sound knowledge of menstrual physiology and differential diagnosis. Often, simple anovulation is the underlying problem, although the possibility of pregnancy, endometrial hyperplasia with atypia, or benign reproductive tract disease must be considered. In the majority of cases, abnormal uterine bleeding can be fully evaluated and effectively treated medically without the need for gynecologic referral.

SECTION B : LITERATURE RELATED TO PHYSICAL AND SOCIAL FACTORS

Fraser IS, 2007, conducted a study on determined a study on symptoms, signs and causes of abnormal uterine bleeding. It also attempts to put usage of modern terminologies in an historical context with important lessons for current usage. New terminologies are required to describe certain underlying causes of abnormal uterine bleeding. discussion should be an ongoing process aimed towards good international agreement, which will greatly simplify the interpretation of clinical trials and scientific studies of mechanisms and treatment responses, and will contribute to the process of education at all levels.

Matytsina LA, 2006, conducted a study on DUB is extremely common in young adolescents, and can be regarded asa part of normal physiologic development. It is essential to have a firm grasp on normal physiologic development of the menstrual cycle to recognize the normal menstrual patterns of adolescents and to

manage abnormal patterns that may develop. Specific management depends on the underlying cause, presence and extent of any existing anemia, and duration of the irregular menstrual pattern.

Prim car, 2006, conducted a study on DUB is extremely common in young adolescents, and can be regarded as a part of normal physiologic development. It is essential to have a firm grasp on normal physiologic development of the menstrual cycle to recognize the normal menstrual patterns of adolescents and to manage abnormal patterns that may develop. Specific management depends on the underlying cause, presence and extent of any existing anemia, and duration of the irregular menstrual pattern.

Bittman, 2000, performed a study on to determine the outcome of hysteroscopic endometrial resection for dysfunctional uterine bleeding according to women's age. Questionnaires were completed for 162 (95.9%) patients with mean +/- SD follow-up of 32 +/- 17 months. The frequency of postoperative complications was not related to age. After ablation, the rate of amenorrhea was significantly higher in 31 women age 50 years or older than in younger women ($p < 0.001$), and also in 72 women age 45 to 49 than in 59 age 44 or less ($p < 0.05$). Complete relief of dysmenorrhea was achieved significantly more often in women age 45 to 49 ($p < 0.005$) and 50 or older ($p < 0.05$) than in those age 44 or younger. Dissatisfaction with the outcome of endometrial resection was uncommon, but most frequent among women age 44 or younger ($p < 0.10$). There was no difference in the proportion of women requiring second ablation or hysterectomy in any age group.Significantly higher rates of amenorrhea and complete relief of dysmenorrhea after endometrial resection are achieved in older than in younger women.

Akush Ginekol (Sofiia). 2002; investigator said Dysfunctional Uterine Bleeding (DUB) is a frequent gynaecological problem during adolescence. In about 95% of cases it is caused by the late maturation of the hypothalamic-pituitary-ovarian axis (HPO), leading to anovulatory cycles. These adolescents lack the E2 positive feedback on LH. Thus, the continuous production of estrogen with endometrial stimulation is the basic cause of DUB. The initial step in the evaluation of the disease includes detailed clinical history, followed by complete physical examination. Laboratory tests should include coagulation profile, complete blood count with

platelet evaluation, and sometimes a serum pregnancy test. The treatment of DUB is related to the severity of symptomatology with the objective of stopping bleeding and preventing recurrences. The importance of continued follow-up in DUB cases should be underlined, until stabilization of ovulatory menstrual cycles.

Deligeoroglou E, 2002, conducted a study on Dysfunctional Uterine Bleeding (DUB) is a frequent gynecological problem during adolescence. In about 95% of cases it is caused by the late maturation of the hypothalamic-pituitary-ovarian axis (HPO), leading to anovulatory cycles. These adolescents lack the E2 positive feedback on LH. Thus, the continuous production of estrogen with endometrial stimulation is the basic cause of DUB. The initial step in the evaluation of the disease includes detailed clinical history, followed by complete physical examination. Laboratory tests should include coagulation profile, complete blood count with platelet evaluation, and sometimes a serum pregnancy test. The treatment of DUB is related to the severity of symptomatology with the objective of stopping bleeding and preventing recurrences. The importance of continued follow-up in DUB cases should be underlined, until stabilization of ovulatory menstrual cycles.

Munro MG., 2001, Dysfunctional uterine bleeding occurs during the reproductive years unrelated to structural uterine abnormalities. Ovulatory dysfunctional uterine bleeding occurs secondary to defects in local endometrial hemostasis; while anovulatory dysfunctional uterine bleeding is a systemic disorder, occurring secondary to endocrinologic, neurochemical, or pharmacologic mechanisms. Evaluation of patients with abnormal uterine bleeding and identifying those with dysfunctional uterine bleeding is achieved with a combination of the following: history; physical examination; and judicious use of laboratory evaluation, endometrial sampling and uterine imaging, with sonographic techniques and/or hysteroscopy. There is an increasing body of evidence that suggests that nonhysteroscopic endometrial ablation may be at least as effective as hysteroscopic endometrial ablation, even when the hysteroscopic procedure is performed by experts.

SECTION C : LITERATURE RELATED TO GYNAECOLOGICAL AND OBSTETRICAL FACTORS

Maness DL,2010, conducted a study on Irregular or unusually heavy periods are a common complaint. Most often, the condition is benign and can by managed conservatively. Assess postmenopausal women for cancer by endometrial biopsy, transvaginal ultrasound, or saline infusion sonohysterogram. Treat mild dysfunctional uterine bleeding (DUB) with nonsteroidal anti-inflammatory drugs, levonorgestrel intrauterine device (IUD), or danazol. Treat moderate DUB with oral contraceptive pills, levonorgestrel IUD, danazol, or tranexamic acid.

Bao S, 2009, conducted a study on To screen and identify the serum biomarker of anovulatory dysfunctional uterine bleeding (ADUB), to determine the expression of biomarker protein in menses of ADUB patients, and to investigate the relation between ADUB and the biomarker proteins. Two biomarkers which might be related with ADUB have been correctly screened and identified as SAA and VEGF. It needs further study whether the increased expression of SAA and reduced expression of VEGF are the cause or result of ADUB.

Blumenthal PD, 2006, This study aims to compare the cost-effectiveness of oral contraceptives (OCs), the levonorgestrel-releasing intrauterine system (LNG-IUS) and surgical management in treating dysfunctional uterine bleeding (DUB) in women not desiring additional children.Treatment strategies employing the LNG-IUS are the most cost-effective in managing DUB, regardless of whether a woman has previously tried OC therapy.

Gupta B, 2006, the investigator investigated to compare the acceptability, efficacy, adverse effects, and user satisfaction of a levonorgestrel intrauterine system (LNG-IUS) and transcervical resection of the endometrium (TCRE) for the treatment of dysfunctional uterine bleeding. At the end of 1 year there were a 97% and a 94% reduction in menstrual blood loss in the LNG-IUS and TCRE groups, respectively, and hemoglobin concentration had increased by 5.5% in the LNG-IUS group and 5.2% in the TCRE group. Adverse effects were similar in both groups except for systemic effects, which were seen only in the LNG-IUS group. Satisfaction rates were about 80% in the 2 groups. Both treatments were found to be equally effective but

LNG-IUS placement requires less operator skill and entails no operative hazards, and the device provides effective contraception.

Lethaby AE,2005, the investigator conducted a study on o determine the effectiveness and acceptability of progesterone or progestogen-releasing intrauterine devices in achieving a reduction in heavy menstrual bleeding. Progesterone or progestogen-releasing intrauterine systems have not been compared to placebo or no treatment. Progestasert has been compared to a number of different medical therapies in one small study but no conclusions can be made about its effectiveness. The levonorgestrel-releasing intrauterine device (LNG IUS) has been compared to oral cyclical norethisterone (NET) administered on days 5 to 26 of the menstrual cycle in one trial and was significantly more effective although there was a large reduction in loss from baseline in both groups. Some short term side effects were more common in the LNG IUS group but a significantly greater proportion of women in this group were satisfied and willing to continue with their treatment. In one trial of women awaiting hysterectomy, where the LNG IUS was compared with a control group taking their existing medical therapy, a higher proportion of the women in the intrauterine device group cancelled their planned surgery after six months of treatment.

Shinsy, 2005, conducted a study on to compare the patterns of menstruation-related problems between adolescents and premarital women For primary amenorrhea, hypogonadotropic hypogonadism was more frequent in group I ($p = 0.007$), and eugonadism in group II ($p = 0.0025$). Chromosomal competent ovarian failure ($p = 0.003$) and hyperprolactinemia ($p < 0.001$) were more frequent causes of secondary amenorrhea in group II. Endometriosis without ovarian endometrioma was the more frequent laparoscopic finding for patients of group I ($p = 0.0429$). Regarding AUB, dysfunctional uterine bleeding (DUB) was more frequent for group I ($p < 0.001$) and endocrinopathies ($p = 0.006$) and benign lesions of genital tract ($p < 0.0001$) for group-II.

Imperato F, 2002, conducted a comparative study on the effects of copper intrauterine device (Cu-IUD) compared to progesterone (PRG-IUS) or levonorgestrel releasing intrauterine system (LNg-IUS) on menstrual bleeding, menorrhagia and

dysfunctional uterine bleeding. The authors evaluated the effect of copper surface area on uterine bleeding. The study concluded with The LNg-IUS is a new contraceptive method combining the advantages of both hormonal and intrauterine contraception. In addition, it can be considered an alternative method in the treatment of menorrhagia and dysfunctional uterine bleeding. On the contrary, in women inserted with Cu-IUDs, the main reason of menorrhagia probably is due both to the shape of device and to copper surface area.

Steiner RA, 2002,conducted a study on Abnormal uterine bleeding (DUB) is one of the most frequent gynecologic problems. Not every DUB is pathological, yet most women feel disordered. Recurrent DUB needs a diagnostic work-up and has to be treated frequently. 80% of cases are due to hormonal disorders, called dysfunctional uterine bleeding, the others are of organic cause (polyps, myomas). The diagnostic work-up is essentially based on the vaginal ultrasound. Standard invasive diagnostic includes the combination of hysteroscopy and curettage or guided biopsy. Laboratory tests are rarely indicated. Medical treatment is based on gestagens, estrogens or combinations thereof. If contraception is needed, ovulation inhibitors are chosen. In case of contraindications, non-steroid antirheumatics or antifibrinolytics are efficacious alternatives. Organic causes of abnormal bleeding are treated by hysteroscopy. Relapse may necessitate destruction of the endometrium or hysterectomy.

Augood C, 2000, conducted a study on Nonsteroidal anti-inflammatory drugs or prostaglandin synthetase inhibitors reduce prostaglandin levels which are elevated in women with excessive menstrual bleeding and also may have a beneficial effect on dysmenorrhoea.As a group, NSAIDs were more effective than placebo at reducing heavy menstrual bleeding but less effective than either tranexamic acid or danazol. Treatment with danazol caused a shorter duration of menstruation and more adverse events than NSAIDs but this did not appear to affect the acceptability of treatment. There was a non significant trend towards greater efficacy of NSAIDs compared to oral progestogen (luteal phase) and ethamsylate but no differences were demonstrated between NSAIDs and the progesterone releasing intra-uterine system (IUS) and the oral contraceptive pill, although these results were based on very small studies.

2.2 CONCEPTUAL FRAME WORK OF THE STUDY

A conceptual framework is made up of concepts, which are the mental images of the phenomenon. It offers framework of preposition for conducting research these concept are linked together to express the relationship between them. A model is used to donate symbolic representation at the concept.

Conceptual framework is interrelated concept that is assembled together in some rational scheme by virtue of their relevance, to a common theme. It is a device that helps to stimulate research and the extension at knowledge by providing both direction and impulse (**Polit And Hungler, 2009**).

The conceptual framework used for my study was Rosenstoch (1966), **Health Belief Model.**The health belief model was a psychological model developed in the 1950s, for studying and promoting the uptake of services offered by social psychologists.

Health belief model (HBM) was one of the first models that adopted theory from the behavioral sciences to health problems and it remains one of the most widely recognized conceptual framework,

Rosenstoch addressed the relationship between the women health belief and behaviors. It is a way of understanding and predicting how clients will behave in relation to their health and how they will comply with health care therapies. Use of the model was based on a person's perceptions of susceptibity to an illness and the seriousness of the illness.

Rosenstoch, in the year 1966 constructed the original health belief model. This health belief model is concerned with what people perceive, or believe, to be true about themselves in relation to their health.

According to Rosenstoch, health belief model was based on four constructs.

4. Perceived susceptibility- an individual's assessment of the risk factors of dysfunctional uterine bleeding of getting the condition.

5. Perceived severity- an individual's assessment of the seriousness of the condition and its potential consequences.

6. Perceived barriers- an individual's assessment of the influences that facilitate or discouraged adoption of the promoted behavior.

7. Perceived benefits- an individual's assessment of the positive consequences of adopting the behavior.

Two constructs were later added,

Perceived efficacy- an individual's self assessment of ability to successfully adopt the desired behavior.

Cues to action- external influences promoting the desired behavior.

Modified Rosenstoch's health belief model:

- Women perceptions: Women perceived was assessed by various contributing factors which causes the dysfunctional uterine bleeding.

- Modifying factors

  Mother's perception s influenced and modified by demographic data, contributing factors like physical factors, social factors, gynaecological and obstetrical factors.

  Physical factors- BMI, nature of work.

  Social factors- age at marriage, types of marriage.

  Gynaecological factors- age at menarche, frequency of menstrual cycle, duration of the menstrual bleeding, Hb level, menstrual discomfort, history of abnormal uterine bleeding, sexual activity, contraceptive measures, family planning method, IUCD, abortion and menopause.

  Obstetrical factors- age at first child birth, parity.

- Likelihood of taking action:

  This part indicates that women try to make action to act against the dysfunctional uterine bleeding.

CHAPTER III

3.1 METHODOLOGY

Methodology is the most important part of research study, which enables the researcher to form blueprint of the research undertaken. Research methodology involves the systematic procedure by which the researcher starts from the time of initial identification of the problem to its final conclusion.

This chapter deals with the brief description of the different steps undertaken by the investigator for the study. It includes the research approach, research design, variables, setting of the study, population, sample and sampling techniques, development of tool, description of tool, content validity, pre-testing of the tool, pilot study data collection procedure and plan for data analysis.

3.2 RESEARCH APPROACH AND RESEARCH DESIGN:

The research approach tells the researcher what data to collect and how to analyze it. It also suggests possible conclusions to be drawn from the data. In view of nature of the problem understudy **Quantitative Research Approach and Descriptive Exploratory Design** was implemented in the study.

3.3 SETTING OF THE STUDY:

The setting was conducted in Gynaecology outpatient department at the Institute of Obstetrics and Gynaecology hospital for women and children, Egmore, Chennai-8. This is a reputed educational institute, research center as well as a referral hospital. It has been rendering meritorious service for the past 170 years. It is one of the biggest hospitals exclusively for women in India with 755 beds. The labour ward

serves gravid women both high risk and low risk on all day. On an average, 2450 deliveries occur in every month.

3.4 STUDY POPULATION:

The study population are all the women who were in the reproductive age group attending the gynecological outpatient department and diagnosed as dysfunctional uterine bleeding in Institute of Obstetrics and Gynaecology hospital for women and children, Egmore, Chennai-8.

3.5 SAMPLE:

The samples were the women who were diagnosed as dysfunctional uterine bleeding and ful-fill the inclusive criteria.

3.6 SAMPLE SIZE:

A total 100 women were selected for the study

3.7 SAMPLE TECHNIQUE:

The sampling technique used for the study was **Convenient Sampling Technique.** According to (**Polit and Hungler, 2009**), convenient sampling is the selection of the most readily available persons as participants in a study.

3.8 CRITERIA FOR SAMPLE SELECTION:

Inclusion criteria:

- Women in reproductive age with dysfunctional uterine bleeding.
- Women with post menopausal bleeding
- Mothers who are able to understand Tamil.
- Women who are willing to participate

Exclusion criteria:

Women with tumors

Pilot study participants

3.9 DESCRIPTION OF THE TOOL:

The tool is developed by the investigator after reviewing the related literature and getting guidance from expert in the field. The tool is structured interview questionnaire and consisted of three sections.

SECTION-A

Demographic data in which consists of age, religion, education, occupation,monthly income, type of family, residence.

SECTION-B

It comprises of physical factors like BMI, Nature of work and social factors like age at marriage, types of marriage.

SECTION-C

Gynaecological variables like age at menarche, frequency of menstrual cycle, duration of menstrual bleeding, obstetrical variables like age at birth of first child and parity and haemoglobin level.

3.10 ETHICAL CONSIDERATION:

All respondents were carefully informed about the purpose of the study and their part during the study and how the privacy is guarded. Ensured confidentiality of the study result. Thus the investigator followed the ethical guidelines, which are issued by research committee or by the authority.

3.11 TESTING OF THE TOOL

Validity

To evaluate content validity, the tool was given to 3 experts in the clinical area . They validated the tool for adequacy items from each area. One statistician and two nursing experts also validated the tool. All the experts shared positive except for minor modification.

Reliability

Reliability of the tool was assessed by using test retest method. After pilot study it was assessed using Test retest method. Correlation coefficient was calculated using Test retest method. Calculated r value is 0.81. This correlation coefficients is very high and it is excellent tool for assessing factors associated with dysfunctional uterine bleeding among the women attending Gynaec OP at institute of Obstetrics and Gynaecology.

3.12 PILOT STUDY FINDINGS

A pilot study was conducted in Gynaecology outpatient department in the institute of Obstetrics and Gynaecology with 10 women in order to test the refine instrument and to develop skill in observation. At the end of the pilot study, it was found that the instrument needed further correction and refining in demographic data, inclusive and exclusive criteria. The investigator made correction in order. The experts of maternity nursing and medical tested the instruments for its content validity and statistical professional, the statistical table is utilized for the pilot study help the investigator to prepare the statistical table analyze the main study and also it proved the statement of the problem.

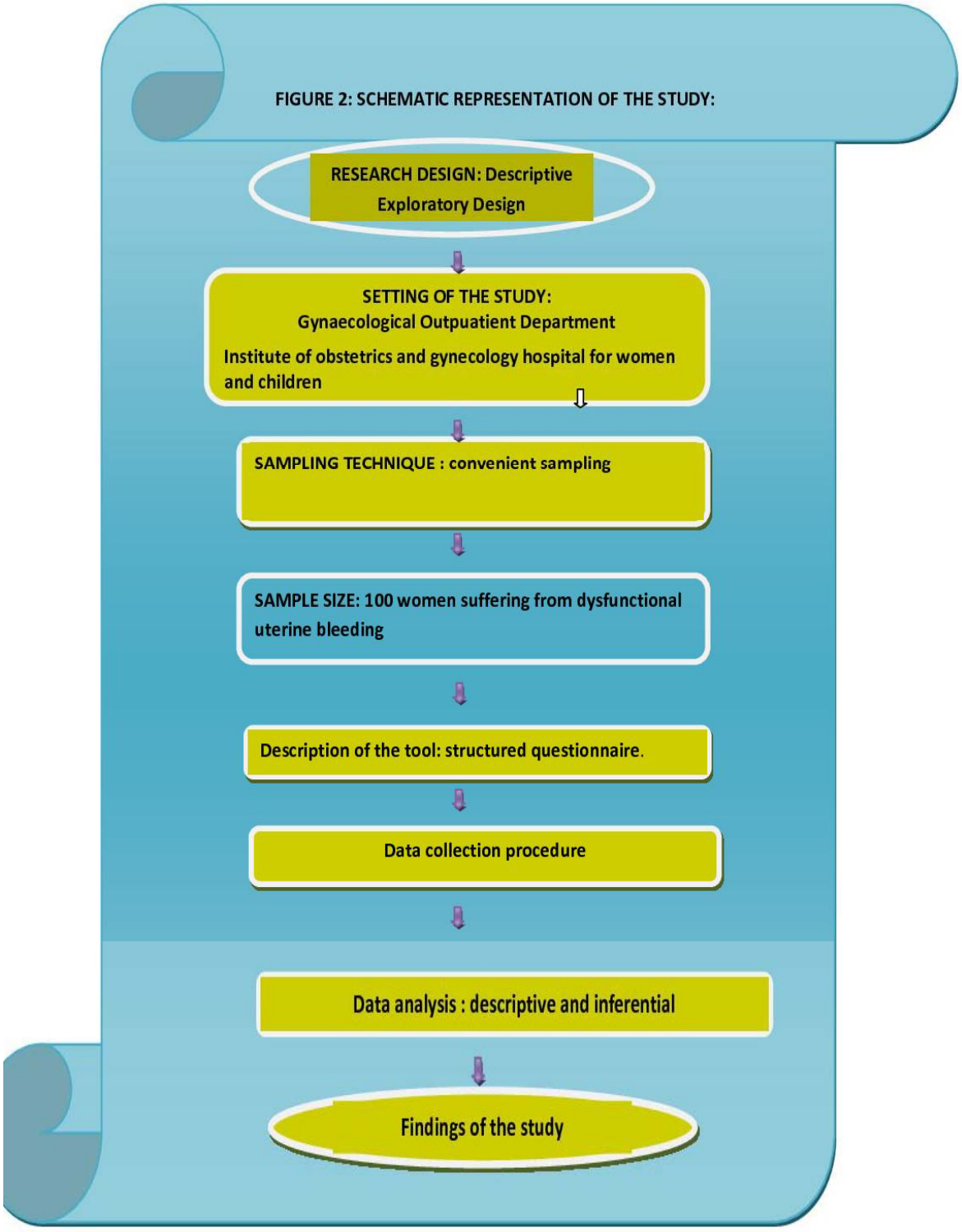
3.13 DATA COLLECTION PROCEDURE:

The data collection procedure was explained as follows:

The study was conducted after getting the formal permission from the director and the unit chief.

The investigator identified the cases who were attending the Gynaecology outpatient Department OP from the register. The cases were selected based on inclusion criteria and the convenient sampling technique.

The general consent was obtained from the women and structured interview schedule was used to identify the contributory risk factors of dysfunctional uterine bleeding. The investigator assured the women the study results were confidential.



CHAPTER IV

4.0 DATA ANALYSIS AND INTERPRETATION

This chapter deals about the analysis and interpretation of the data collected. Analysis is a method for rendering quantitative, meaningful and providing intelligible information. So that research problem can be studied and tested including the relationship between the variables.

The analysis used for the study was descriptive (mean, SD) and inferential analysis used for the study is chi- square test.

The data collected had been analyzed using appropriate statistical methods and the results are represented below:

ORGANIZATION OF THE DATA:

Section-I: Demographic variable of the data

Section-II: Assess the contributory factors of the dysfunctional uterine bleeding

Section-III: Identification of the contributory factors of the dysfunctional uterine bleeding

Section-IV: Association of the identified contributory factors with the selected demographic variables

SECTION I: DEMOGRAPHIC VARIABLE OF THE DATA

Table no:4.1 Percentage distribution of the demographic variable

N=100

DEMOGRAPHIC VARIABLES		No. of women	%
Age	< 30 years	9	9.0%
	31-35 years	25	25.0%
	36-40 years	48	48.0%
	>40 years	18	18.0%
Educational Status	Non formal	18	18.0%
	Primary	50	50.0%
	Secondary	24	24.0%
	Graduate & others	8	8.0%
Marital Status	Un married	4	4.0%
	Married	91	91.0%
	Divorcee	2	2.0%
	Widow	3	3.0%
Occupation	House wife	34	34.0%
	Cooly	48	48.0%
	Clerical work	6	6.0%
	Professional	12	12.0%
Family Income	<Rs.1000	39	39.0%
	Rs.1000 -3000	32	32.0%
	Rs.3001 -5000	17	17.0%
	>Rs.5000	12	12.0%

DEMOGRAPHIC VARIABLES		No. of women	%
Religion	Hindu	80	80.0%
	Muslim	11	11.0%
	Christian	9	9.0%
Type of Family	Nuclear family	56	56.0%
	Joint family	24	24.0%
	Extended Family	20	20.0%
Residence	Urban	26	26.0%
	Sub urban	15	15.0%
	Rural	59	59.0%

The above table showed that the percentage distribution of 100 women who were suffering dysfunctional uterine bleeding in which less than half of proportion 48(48%) of the women were in the age group of 36-40 years of age.

Half of the Proportion 50(50%) of the women were having primary educational status

Majority 91(91%) of the women were married.

Less than half of the proportion 48(48%) of the women were working as cooly.

Less than half of the proportion 39 (39%) of the women were having the family income of < Rs1000.

Majority 80(80%) of the women were belong to Hindu religion.

More than half of the proportion 56(56%) and 59(59%) were living nuclear type of family and residing at rural.

SECTION II: ASSESS THE CONTRIBUTORY FACTORS OF THE DYSFUNCTIONAL UTERINE BLEEDING

Table No: 4.2 Percentage distribution of the women on the basis of physical factors

N=100

Physical factors		No. of women	%
BMI	Under weight	23	23.0%
	Normal	15	15.0%
	Over weight	37	37.0%
	Obesity	25	25.0%
Nature of work	Heavy work	36	36.0%
	Moderate work	30	30.0%
	Sedentary work	34	34.0%

The above table shows that the percentage distribution of 100 women who were suffering dysfunctional uterine bleeding on the basis of physical factors in which Less than half of the proportion 37(37%) of the women were over weight and 25% were obese.

Less than half of proportion 36(36%) of the women were doing heavy work.

Table No:4.3 Percentage distribution of the women on the basis of social factors

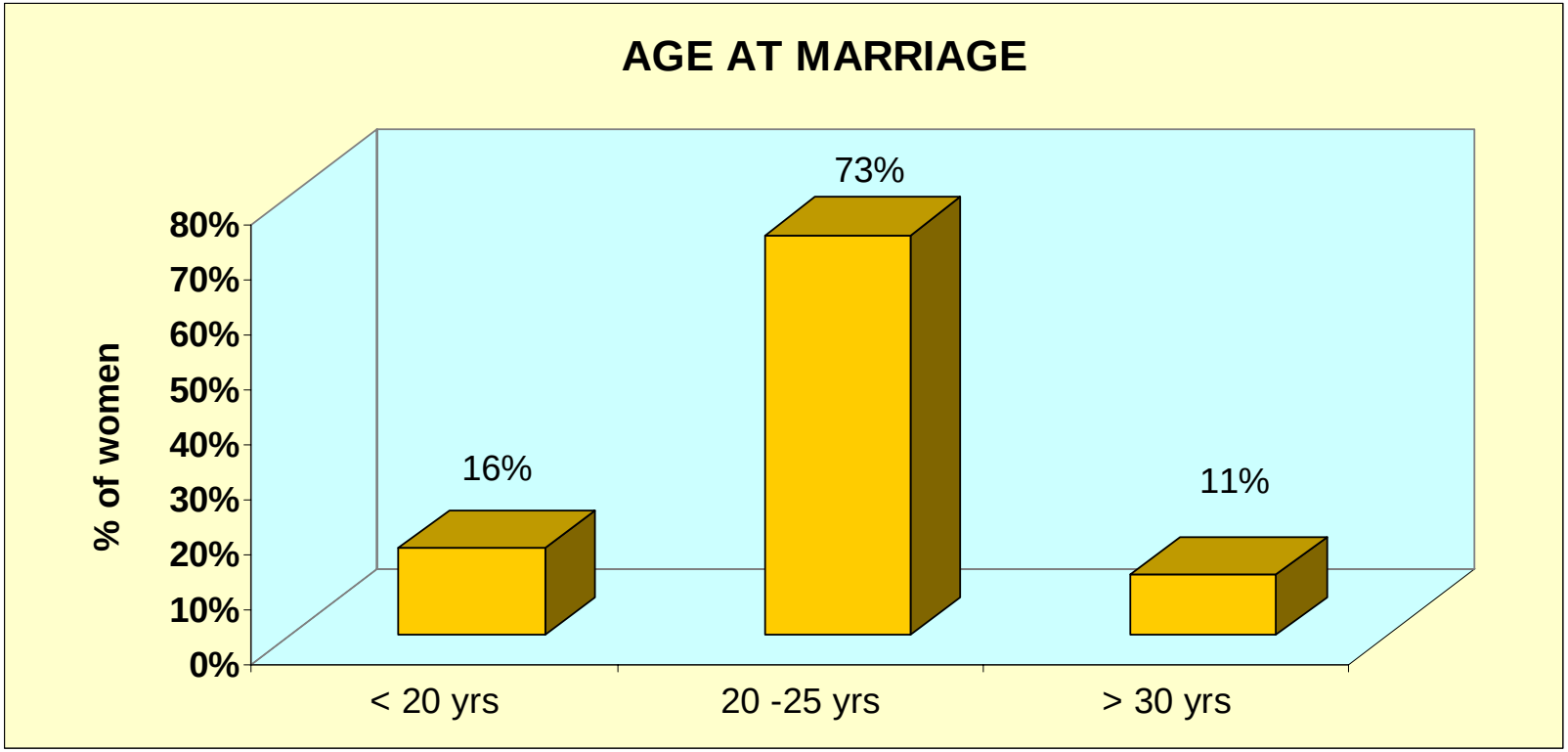
N=100

Social factors		**No. of women**	**%**
Types of marriage	Consanguineous	54	54%
	Non-consanguineous	46	46%

The above table showed that the percentage distribution of 100 women who were suffering dysfunctional uterine bleeding on the social factors in which, More than half of the proportion 54(54%) of the women were got consanguineous marriage.

Figure No:4.1 Percentage distribution of the women on the basis of social factors – Age at marriage

N=100



The above figured showed majority 73%of the women were married at the age of 20-25 years and 16% of women married at the age of <20 years.

Table No:4.4 Percentage distribution of the women on the basis of Gynaecological factors

N=100

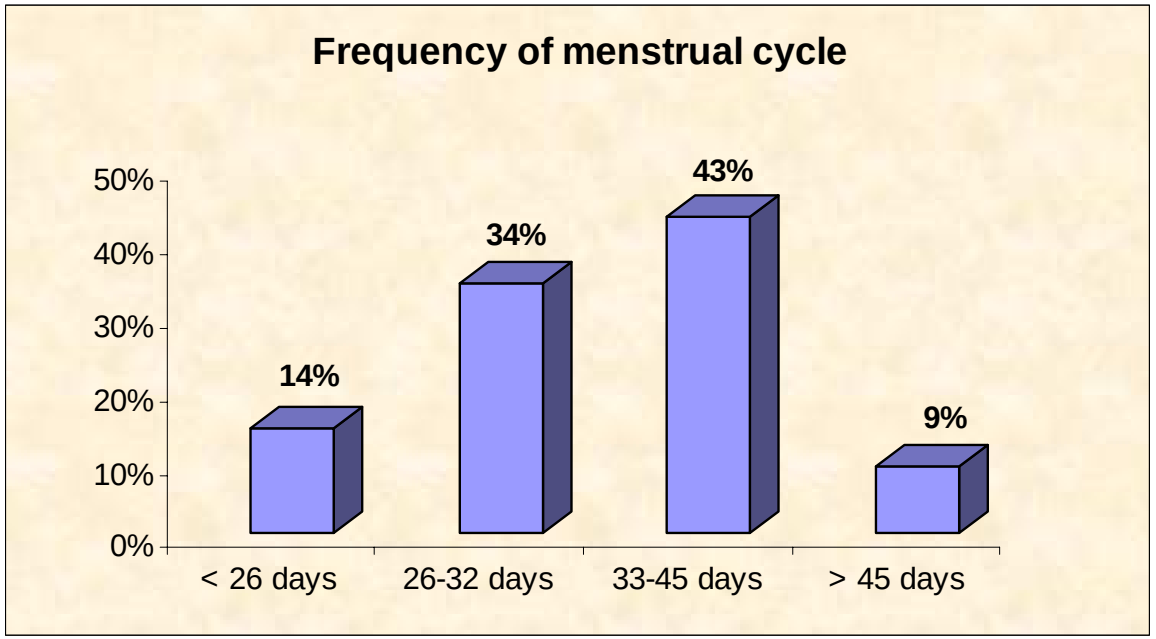
Gynecological factors		No. of women	%
Age at Menarche	< 11 yrs	17	17.0%
	11 -12 yrs	46	46.0%
	13 -14 yrs	27	27.0%
	>14 yrs	10	10.0%
Quantity of Hb level	Anemic	54	54.0%
	Not anemic	46	46.0%
Menstrual discomfort	Yes	71	71.0%
	No	29	29.0%
Family history of abnormal uterine bleeding	Mother	3	3.0%
	Sister	2	2.0%
	Others	2	2.0%
	none	93	93.0%
History of sexual activities	Rarely	10	10.0%
	Once in a week	29	29.0%
	Twice a week	37	37.0%
	Daily	24	24.0%
Use of contraceptive	Yes	79	79.0%
	No	21	21.0%
Family Planning method	Oral contraceptive	44	44.6%
	IUCD	35	35%
	Barrier	4	4%
	Permanent	17	17%
Duration of contraceptive method	< 1 yr	28	28%
	1 - 5 yrs	48	48%
	6 - 10 yrs	24	24%
Oral Contraceptive	1 yrs	20	20%

Gynecological factors		No. of women	%
	2 -3 yrs	24	24%
IUCD	> 1 yr	8	8%
	1 - 3yrs	13	13%
	4 - 6yrs	10	10%
	7 - 10yrs	5	5%
Abortion	Induced	35	35%
	Missed	14	14%
	Spontaneous	19	19%
	No abortion	32	32%
Menopause	Yes	36	36%
	No	64	64%
If Yes, age of menopause	40-45 years	16	16%
	45-50 years	11	11%
	50-55 years	7	7%
	>55 years	2	2%
Hb level	< 6 gm	15	15.0%
	6 -7 gm	39	39.0%
	8 -9 gm	33	33.0%
	10 & above	13	13.0%

The above table showed that the percentage distribution of 100 women who were suffering with dysfunctional uterine bleeding on the basis of gynaecological factors in which, Less than half of the proportion 46(46%) of the women attained menarche at the age of 11-12 years. Majority 54(54%) of the women were anaemic Majority 71(71%) of the women were experiencing menstrual discomfort Majority 37(37%) of the women were having twice in a week sexual activity. High proportion 79% of women following contraceptive measures, in which 44% were taking oral contraceptive pills and 35(35%) were using IUCD. Less than half of the proportion 36% of the women were having the history of the induced abortion and 36 (36%) women with menopause. Less than half of the proportion 39(39%) of the women were having the hemoglobin 6-7gm/dl.

Figure No:4.2 Percentage distribution of the women on the basis of Gynaecological factors – frequency of menstrual bleeding

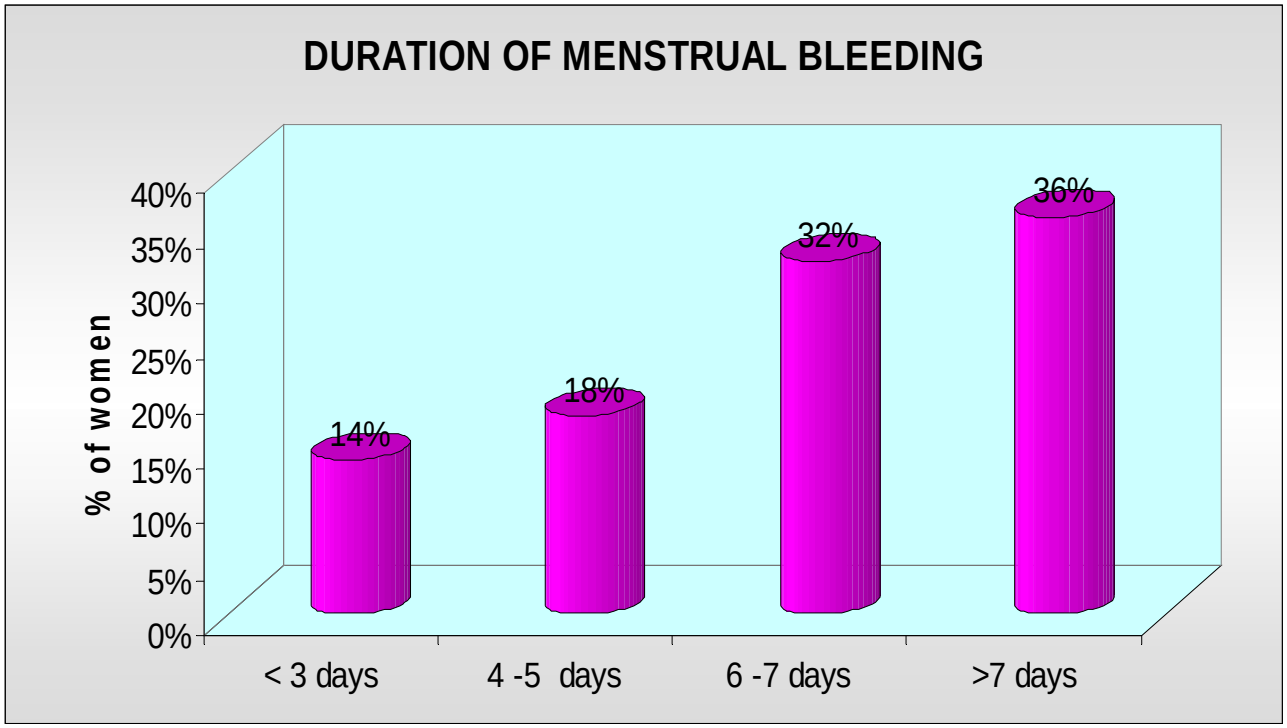
N=100



The above figure showed that the percentage distribution of 100 women who were suffering dysfunctional uterine bleeding on the basis of frequency of menstrual cycle in which, Less than half of the proportion 43(43 %) of the women were having the frequency of menstrual cycle between 33-55 days.

Figure No:4.3 Percentage distribution of the women on the basis of Gynecological factors – duration of menstrual bleeding

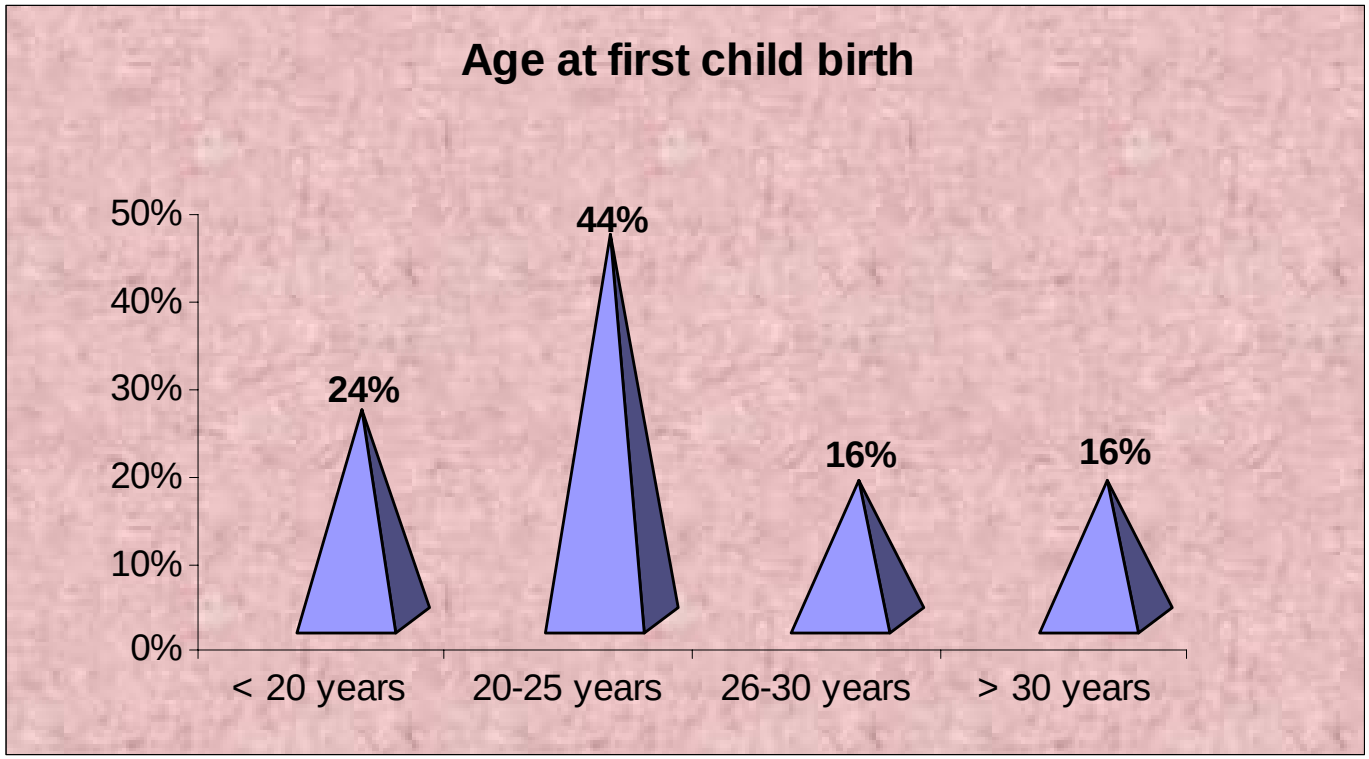
N=100



The above figure showed that the percentage distribution of 100 women who were suffering dysfunctional uterine bleeding on the basis of duration of menstrual bleeding in which, less than half of the proportion 36(36 %) of the women were having the duration of menstrual cycle of >7 days.

Figure No:4.4 Percentage distribution of the women on the basis of obstetricalfactors Age at the child birth

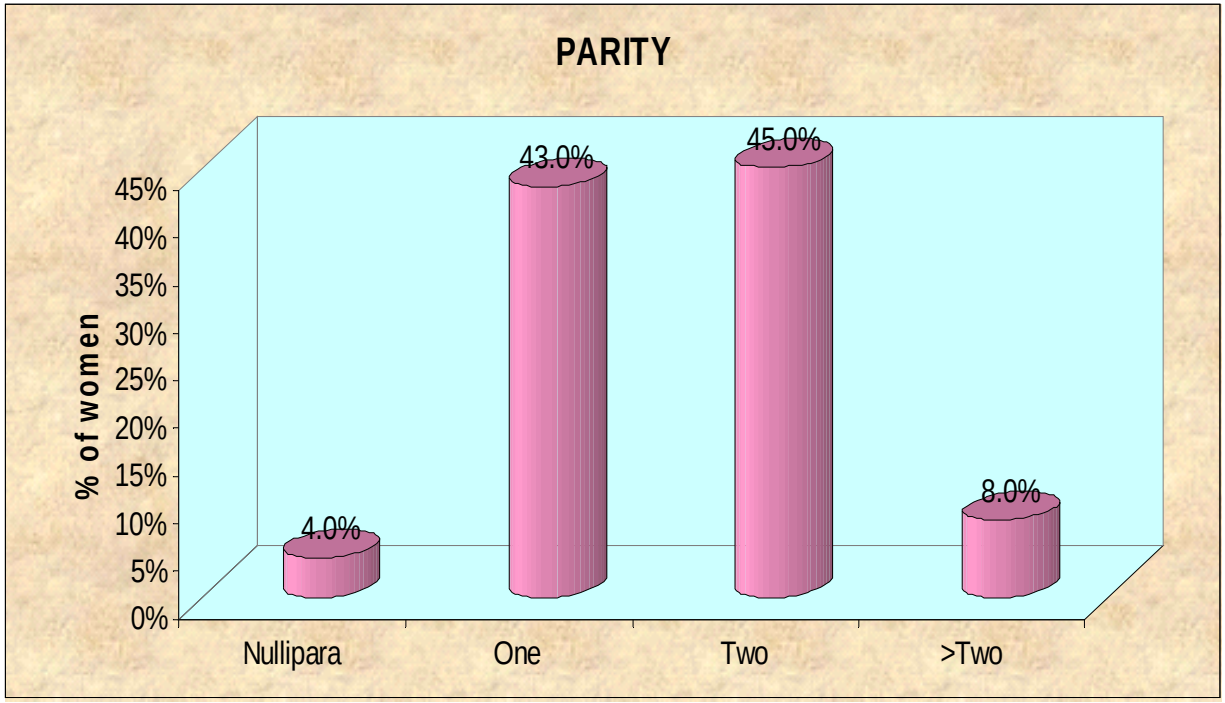
N=100



The above figure showed that the percentage distribution of 100 women who were suffering dysfunctional uterine bleeding on the basis of age at child birth in which, More than half of the proportion 44 (44 %) of the women were having the 20-25 years of age at first child.

Figure No:4.5 Percentage distribution of the women on the basis of obstetrical factors- parity

N=100



The above figure showed that the percentage distribution of 100 women who were suffering dysfunctional uterine bleeding on the basis of parity, in which Less than half of the proportion 45 (45. %) of the women were having 2 children.

SECTION III:IDENTIFICATION OF THE CONTRIBUTORY FACTORS

Table No:4.5 Percentage distribution of the women of the identified contributing factors

N=100

Contributing factors		No. of women	%
BMI	Under	23	23%
	Normal	15	15%
	Over weight	37	37%
	Obesity	25	25%
Nature of work	Heavy work	36	36.0%
	Moderate work	34	34.0%
	Sedentary work	30	30.0%
Age at marriage	< 20 yrs	15	15%
	20 -25 yrs	66	66%
	> 30 yrs	19	19%
Age at Menarche	< 11 yrs	17	17.0%
	11 -12 yrs	46	46.0%
	13 -14 yrs	27	27.0%
	>14 yrs	10	10.0%
Frequency of menstrual cycle	< 26 days	14	14.0%
	26 -32 days	34	34%
	33 -45 days	43	43.0%
	>45 days	9	9.0%
Duration of the menstrual bleeding	< 3 days	14	14.0%
	4 -5 days	18	18.0%
	6 -7 days	32	32.0%
	>7 days	36	36.0%
Quantity of Hb level	Anemic	54	54.0%
	Not anemic	46	46.0%
Menstrual discomfort	Yes	71	71.0%
	No	29	29.0%
Contraceptive measures	Yes	79	79.0%
	No	21	21%
Abortion	Induced	35	35%
	Missed	14	14%
	Spontaneous	19	19%
	No abortion	32	32%

Contributing factors		No. of women	%
Age at first child birth	< 20 yrs	24	24%
	20 - 25 yrs	44	44%
	26 - 30 yrs	16	16%
	> 30 yrs	16	16%

The above table showed the identification of the contributory factors of 100 women having dysfunctional uterine bleeding:

Less than half of the proportion 37(37%) of the women were having the BMI of over weight.

Less than half of 36 (36%) of the women were doing heavy work

Majority 66(66 %) of the women were married at the age of 20-25 years.

Less than half of the proportion 46(46%) of the women attained menarche at the age of 11-12 years.

Less than half of the proportion 43(43 %) of the women were having the frequency of menstrual cycle once in 33-45 days.

Majority 36(36 %) of the women were having the duration of menstrual cycle of >7 days.

Less than half of the proportion 39 (39%) of the women were having the haemoglobin 6-7gm/dl

Majority 71(71%) of the women were experiencing menstrual discomfort 79(79%) of the women following contraceptive measures less than half of the proportion of the women 35(35%) with DUB were having the history of induced abortion.

less than half of the proportion 44 (44 %) of women were having the 20-25 years of age at first child birth.

SECTION IV: ASSOCIATION OF THE IDENTIFIED CONTRIBUTORY FACTORS WITH THE SELECTED DEMOGRAPHIC VARIABLES:

Table No:4.6 Association between the age and the identified contributing factors

N=100

Contributing factors		Age						n	Pearson chi square test
		< 30 yrs		31 -40 yrs		>40 yrs			
		n	%	n	%	n	%		
BMI	Under weight	2	6.1	30	90.9	1	3.0	23	**x2=21.24 P=0.001*** DF=6 significant**
	Normal	2	8.0	21	84.0	2	8.0	15	
	Over weight	5	13.5	30	81.1	2	5.4	37	
	Obesity	0	0.0	2	40.0	3	60.0	25	
Frequency of menstrual cycle	< 26 days	4	28.5	9	64.2	1	7.1	14	**x2=11.89 P=0.02* DF=6 significant**
	26 -32 days	1	2.9	32	94.2	1	2.9	43	
	33 -45 days	2	4.7	40	93.0	1	2.3	34	
	>45 days	2	22.2	2	22.2	5	55.6	9	
Quantity of Hb level	Anemic	13	24	38	70.4	3	5.5	54	**x2=24.55 P=0.001* DF=2 significant**
	Not anemic	33	71.7	10	21.7	3	6.6	46	
Menstrual discomfort	Yes	3	4.2	61	85.9	7	9.9	71	**x2=12.35 P=0.05* DF=6 significant**
	No	6	20.7	22	75.9	1	3.4	29	
Abortion	Induced	2	5.7	32	91	1	2.8	35	**x2=46.88 P=0.001* DF=6 significant**
	Missed	4	28.5	9	64.2	1	7.1	14	
	Spontaneous	1	5.3	17	89.4%	1	5.3	19	
	No abortion	4	12.5	19	59.4	9	28.1	32	

Overweight women, 33-45 days of frequency of menstrual cycle women**,** and anaemic women, women having menstrual discomfort, women with the history of induced abortion were highly significant with the age group of 31-40 years.

CHAPTER V

5.1 DISCUSSION

"Almost everybody is enthusiastic about the promise of biotechnology to cure disease and to relive suffering" – Blaine Lee

In the present study, the investigator made an attempt to identify the various contributing factors of dysfunctional uterine bleeding among women. The main aim of the study was to identify the contributory factors and to associate them with the selected demographic variable. A structured interview technique schedule was used to identify those factors from the sample of 100.

The research study had been discussed based on the objectives and the following supported studies:

The demographic characteristics of 100 women of dysfunctional uterine bleeding where majority 48(48%) of the women were in the age group of 36-40 years of age.

Half of the Proportion 50(50%) of the women were having primary educational status majority 91(91%) of the women were married. Less than half of the proportion 48(48%) of the women were working as coolie. Less than half of the proportion of the women were having the family income of < Rs1000.Majority 80(80%) of the women were Hindu religion. Majority 76(76%) and 65(65%) were having nuclear type of family and residing at rural.

The demopgraphic variables was supported by **Strickler RC.(1985)**, in which Ovulatory DUB is most common in parous women aged 30-45 years. Cycles are regular and predictable and menstrual flows are preceded by breast soreness, mood or energy changes, or pelvic discomfort.

The first objective of the study was to identify the contributing factors of the dysfunctional uterine bleeding.

It represented the the percentage distribution of 100 women who were suffering dysfunctional uterine bleeding in which less than half of the proportion 37(37%) of the women were having the BMI of over weight. Equal proportion 34(34%) of the women were doing heavy. Majority 66(66 %) of the women were married at the age of 20-25 years. Less than half of the proportion 46(46%) of the women attained menarche at the age of 11-12 years. Less than half of the proportion of 43(43 %) of the women were having the frequency of menstrual cycle of 26-32 days. Less than half of the proportion of 36(36 %) of the women were having the duration of menstrual cycle of >7 days. Less than half of the proportion 46(46%) of the women were having the hemoglobin 6-7g/dl. Majority 71(71%) of the women were experiencing menstrual discomfort, less than half of the proportion 44(44%) of the women were following oral contraceptive measures. Less than half of the proportion of the women 35(35%) were having the history of induced abortion. Less than half of the proportion of 45 (45.8 %) of the women were having the 20-25 years of age at first child.

The study was supported by the following study, according to **Goldstein SR, (1997),** conducted a study in which Four hundred thirty-three perimenopausal women with abnormal uterine bleeding (either metrorrhagia, menorrhagia, or both) were evaluated. In lieu of undergoing a sampling procedure they were brought back on days 4 to 6 of the subsequent bleeding cycle, when the endometrium was expected to be its thinnest. If a distinct endometrial echo < or = 5 mm (double layer) was imaged by endovaginal ultrasonography, dysfunctional uterine bleeding was diagnosed.

The investigator proved in her study there was severe bleeding in the duration of menstrual cycle of 7 days, where as in the supported study it was on the days 4-6.

I**mperato F,(2002),** The LNg-IUS is a new contraceptive method combining the advantages of both hormonal and intrauterine contraception. In addition, it can be considered an alternative method in the treatment of menorrhagia and dysfunctional uterine bleeding. On the contrary, in women inserted with Cu-IUDs, the main reason of menorrhagia probably is due both to the shape of device and to copper surface area.

The investigator proved that oral contraceptive measures was one of the contributory risk factors.

The second objective of the study was to associate the identified contributing factors with the selected demographic variables:

Overweight women **(x2= 21.24, p=0.001, DF=6)**, 33-45 days of frequency of menstrual cycle women (**x2=11.89 P=0.02*, DF=6),** anemic women (**x2=24.55 P=0.01*, DF=2) ,**women having menstrual discomfort (**x2=12.35 P=0.05*, DF=2)** and women with the history of induced abortion **(x2=48.88 P=0.01*, DF=6)**were highly significant with the age group of 31-40 years.

This was supported by the study Bittman, 2000, performed a study on to determine the outcome of hysteroscopic endometrial resection for dysfunctional uterine bleeding according to women's age. The risk of DUB was achieved significantly more often in women age 45 to 49 ($p < 0.005$) and 50 or older ($p < 0.05$) than in those age 44 or younger.

This was supported by the study **Imperato F, 2002,** conducted a comparative study on the effects of copper intrauterine device (Cu-IUD) compared toprogesterone (PRG-IUS) or levonorgestrel releasing intrauterine system (Lng- IUS) on menstrual bleeding, menorrhagia and dysfunctional uterine bleeding. On the contrary, in women inserted with Cu-IUDs, the main reason of menorrhagia probably is due both to the shape of device and to copper surface area.

The study finding are consistent with done by **Gijis Wlavaren 2002,** in which a part of a community-based reproductive morbidity survey in rural Gambia, was done on the basis the prevalence and association of menstrual disorders with sociodemographic characteristics and other reproductive morbidities, and with knowledge, attitudes, and beliefs of irregular bleeding.Of 607 menstruating women not using hormonal contraceptives, 16 percent complained to the gynecologist of irregular cycles, 14 percent of dysmenorrhea, 8 percent of spotting, and 4 percent of heavy or prolonged bleeding were severe anemia.

The investigator was also revealed that there was a significant relationship between the anemic women and poor income where as the review proved with the rural women.

The study finding are consistent with done by by **Iain T. Cameron,** according to him the diagnosis of DUB is made by the exclusion of organic disease as a cause of the abnormal menses; the condition accounts for about 80% of cases of menorrhagia. Of these, over 80% were anemic due to the excessive bleeding.

There was significant association between the identified certain risk factors with selected demographic variables. Hence the hypothesis was also accepted.

The third objective of the study was to formulate the self instructional module based on the study

The investigator prepared a self instructional module based on the study findings most of the risk factors are preventable of the women in aware of the factors.

CHAPTER IV

4.0 DATA ANALYSIS AND INTERPRETATION

This chapter deals about the analysis and interpretation of the data collected. Analysis is a method for rendering quantitative, meaningful and providing intelligible information. So that research problem can be studied and tested including the relationship between the variables.

The analysis used for the study was descriptive (mean, SD) and inferential analysis used for the study is chi- square test.

The data collected had been analyzed using appropriate statistical methods and the results are represented below:

ORGANIZATION OF THE DATA:

Section-I: Demographic variable of the data

Section-II: Assess the contributory factors of the dysfunctional uterine bleeding

Section-III: Identification of the contributory factors of the dysfunctional uterine bleeding

Section-IV: Association of the identified contributory factors with the selected demographic variables

SECTION I: DEMOGRAPHIC VARIABLE OF THE DATA

Table no:4.1 Percentage distribution of the demographic variable

N=100

DEMOGRAPHIC VARIABLES		No. of women	%
Age	< 30 years	9	9.0%
	31-35 years	25	25.0%
	36-40 years	48	48.0%
	>40 years	18	18.0%
Educational Status	Non formal	18	18.0%
	Primary	50	50.0%
	Secondary	24	24.0%
	Graduate & others	8	8.0%
Marital Status	Un married	4	4.0%
	Married	91	91.0%
	Divorcee	2	2.0%
	Widow	3	3.0%
Occupation	House wife	34	34.0%
	Cooly	48	48.0%
	Clerical work	6	6.0%
	Professional	12	12.0%
Family Income	<Rs.1000	39	39.0%
	Rs.1000 -3000	32	32.0%
	Rs.3001 -5000	17	17.0%
	>Rs.5000	12	12.0%

DEMOGRAPHIC VARIABLES		No. of women	%
Religion	Hindu	80	80.0%
	Muslim	11	11.0%
	Christian	9	9.0%
Type of Family	Nuclear family	56	56.0%
	Joint family	24	24.0%
	Extended Family	20	20.0%
Residence	Urban	26	26.0%
	Sub urban	15	15.0%
	Rural	59	59.0%

The above table showed that the percentage distribution of 100 women who were suffering dysfunctional uterine bleeding in which less than half of proportion 48(48%) of the women were in the age group of 36-40 years of age.

Half of the Proportion 50(50%) of the women were having primary educational status

Majority 91(91%) of the women were married.

Less than half of the proportion 48(48%) of the women were working as cooly.

Less than half of the proportion 39 (39%) of the women were having the family income of < Rs1000.

Majority 80(80%) of the women were belong to Hindu religion.

More than half of the proportion 56(56%) and 59(59%) were living nuclear type of family and residing at rural.

SECTION II: ASSESS THE CONTRIBUTORY FACTORS OF THE DYSFUNCTIONAL UTERINE BLEEDING

Table No: 4.2 Percentage distribution of the women on the basis of physical factors

N=100

Physical factors		No. of women	%
BMI	Under weight	23	23.0%
	Normal	15	15.0%
	Over weight	37	37.0%
	Obesity	25	25.0%
Nature of work	Heavy work	36	36.0%
	Moderate work	30	30.0%
	Sedentary work	34	34.0%

The above table shows that the percentage distribution of 100 women who were suffering dysfunctional uterine bleeding on the basis of physical factors in which Less than half of the proportion 37(37%) of the women were over weight and 25% were obese.

Less than half of proportion 36(36%) of the women were doing heavy work.

Table No:4.3 Percentage distribution of the women on the basis of social factors

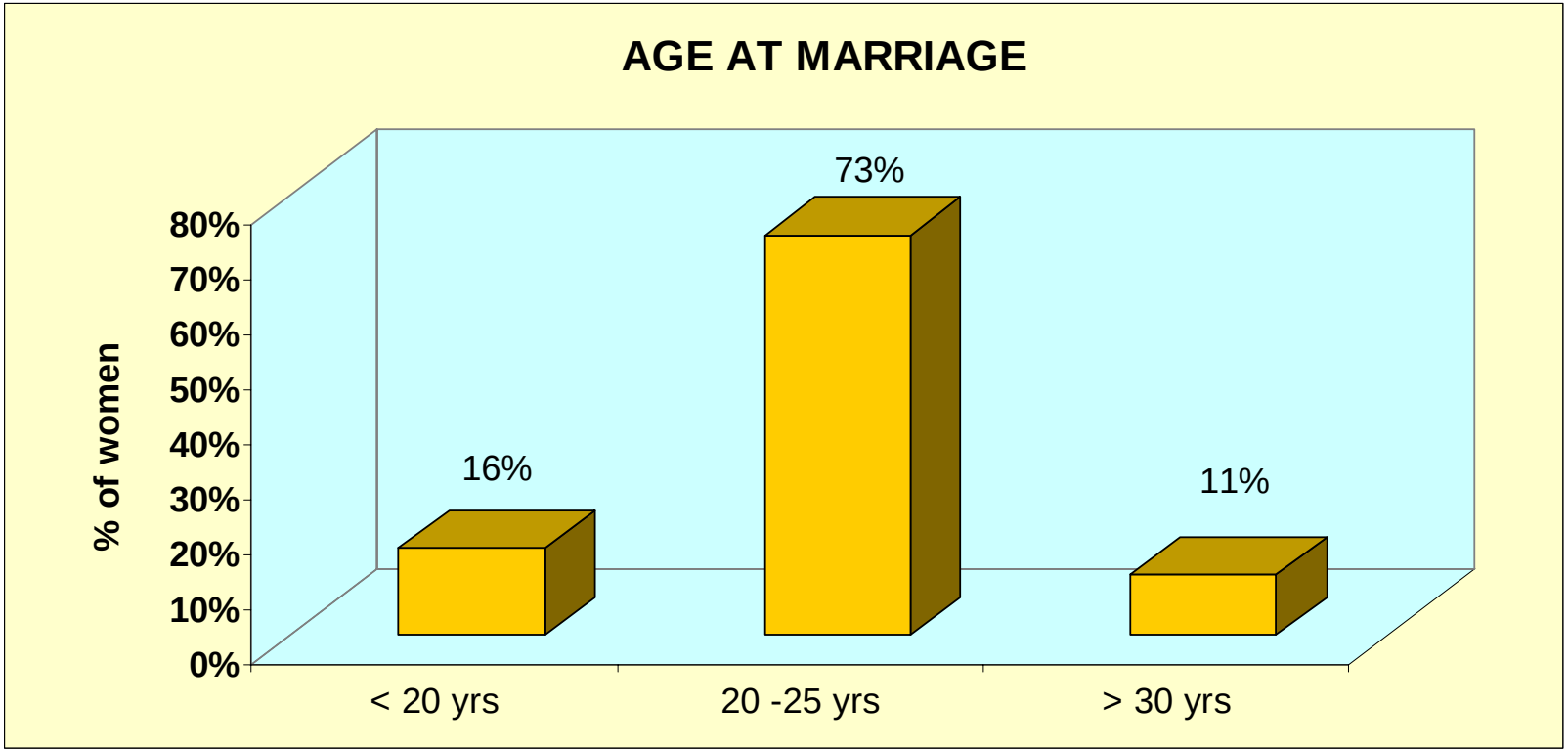
N=100

Social factors		**No. of women**	**%**
Types of marriage	Consanguineous	54	54%
	Non-consanguineous	46	46%

The above table showed that the percentage distribution of 100 women who were suffering dysfunctional uterine bleeding on the social factors in which, More than half of the proportion 54(54%) of the women were got consanguineous marriage.

Figure No:4.1 Percentage distribution of the women on the basis of social factors – Age at marriage

N=100



The above figured showed majority 73%of the women were married at the age of 20-25 years and 16% of women married at the age of <20 years.

Table No:4.4 Percentage distribution of the women on the basis of Gynaecological factors

N=100

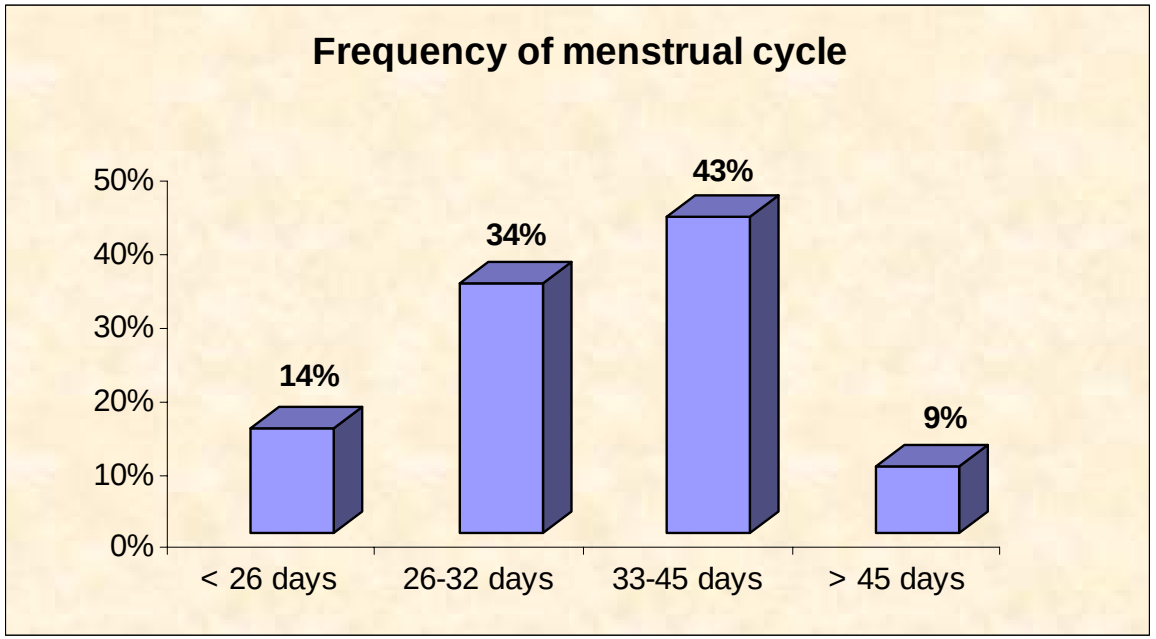
Gynecological factors		No. of women	%
Age at Menarche	< 11 yrs	17	17.0%
	11 -12 yrs	46	46.0%
	13 -14 yrs	27	27.0%
	>14 yrs	10	10.0%
Quantity of Hb level	Anemic	54	54.0%
	Not anemic	46	46.0%
Menstrual discomfort	Yes	71	71.0%
	No	29	29.0%
Family history of abnormal uterine bleeding	Mother	3	3.0%
	Sister	2	2.0%
	Others	2	2.0%
	none	93	93.0%
History of sexual activities	Rarely	10	10.0%
	Once in a week	29	29.0%
	Twice a week	37	37.0%
	Daily	24	24.0%
Use of contraceptive	Yes	79	79.0%
	No	21	21.0%
Family Planning method	Oral contraceptive	44	44.6%
	IUCD	35	35%
	Barrier	4	4%
	Permanent	17	17%
Duration of contraceptive method	< 1 yr	28	28%
	1 - 5 yrs	48	48%
	6 - 10 yrs	24	24%
Oral Contraceptive	1 yrs	20	20%

Gynecological factors		No. of women	%
	2 -3 yrs	24	24%
IUCD	> 1 yr	8	8%
	1 - 3yrs	13	13%
	4 - 6yrs	10	10%
	7 - 10yrs	5	5%
Abortion	Induced	35	35%
	Missed	14	14%
	Spontaneous	19	19%
	No abortion	32	32%
Menopause	Yes	36	36%
	No	64	64%
If Yes, age of menopause	40-45 years	16	16%
	45-50 years	11	11%
	50-55 years	7	7%
	>55 years	2	2%
Hb level	< 6 gm	15	15.0%
	6 -7 gm	39	39.0%
	8 -9 gm	33	33.0%
	10 & above	13	13.0%

The above table showed that the percentage distribution of 100 women who were suffering with dysfunctional uterine bleeding on the basis of gynaecological factors in which, Less than half of the proportion 46(46%) of the women attained menarche at the age of 11-12 years. Majority 54(54%) of the women were anaemic Majority 71(71%) of the women were experiencing menstrual discomfort Majority 37(37%) of the women were having twice in a week sexual activity. High proportion 79% of women following contraceptive measures, in which 44% were taking oral contraceptive pills and 35(35%) were using IUCD. Less than half of the proportion 36% of the women were having the history of the induced abortion and 36 (36%) women with menopause. Less than half of the proportion 39(39%) of the women were having the hemoglobin 6-7gm/dl.

Figure No:4.2 Percentage distribution of the women on the basis of Gynaecological factors – frequency of menstrual bleeding

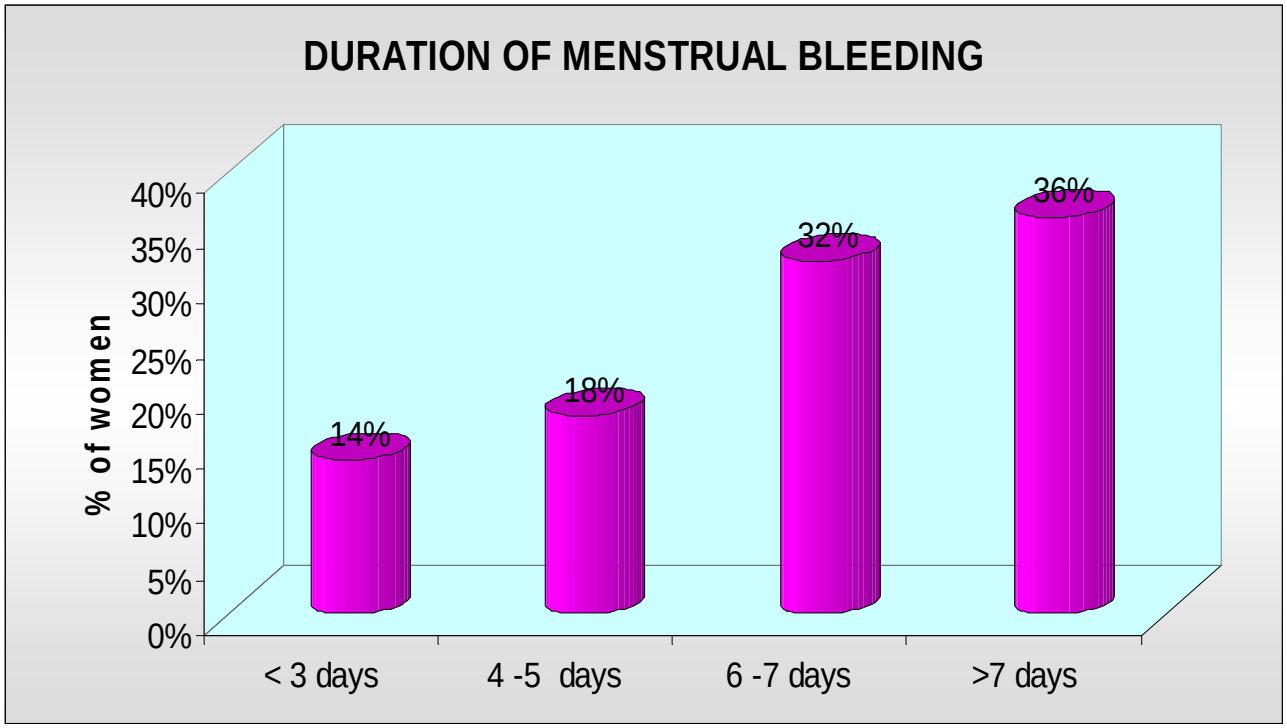
N=100



The above figure showed that the percentage distribution of 100 women who were suffering dysfunctional uterine bleeding on the basis of frequency of menstrual cycle in which, Less than half of the proportion 43(43 %) of the women were having the frequency of menstrual cycle between 33-55 days.

Figure No:4.3 Percentage distribution of the women on the basis of Gynecological factors – duration of menstrual bleeding

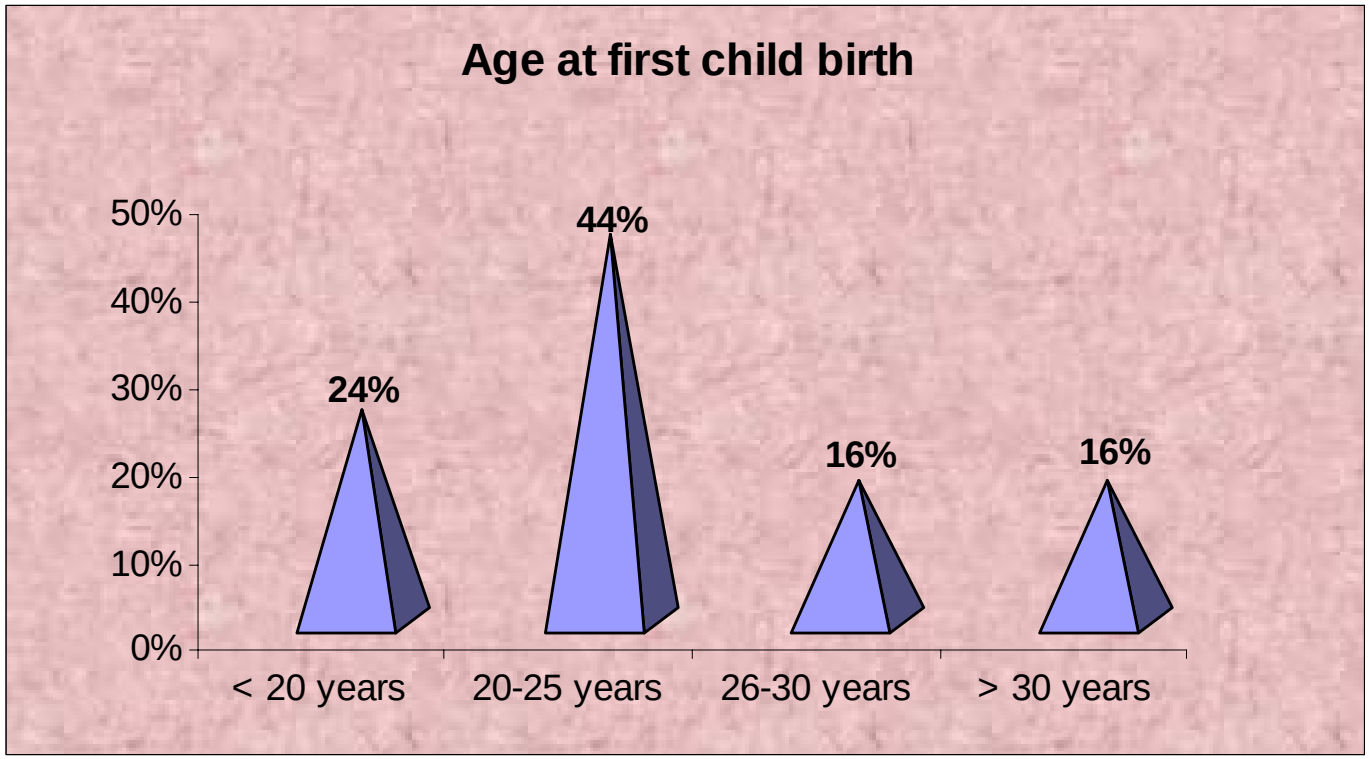
N=100



The above figure showed that the percentage distribution of 100 women who were suffering dysfunctional uterine bleeding on the basis of duration of menstrual bleeding in which, less than half of the proportion 36(36 %) of the women were having the duration of menstrual cycle of >7 days.

Figure No:4.4 Percentage distribution of the women on the basis of obstetricalfactors Age at the child birth

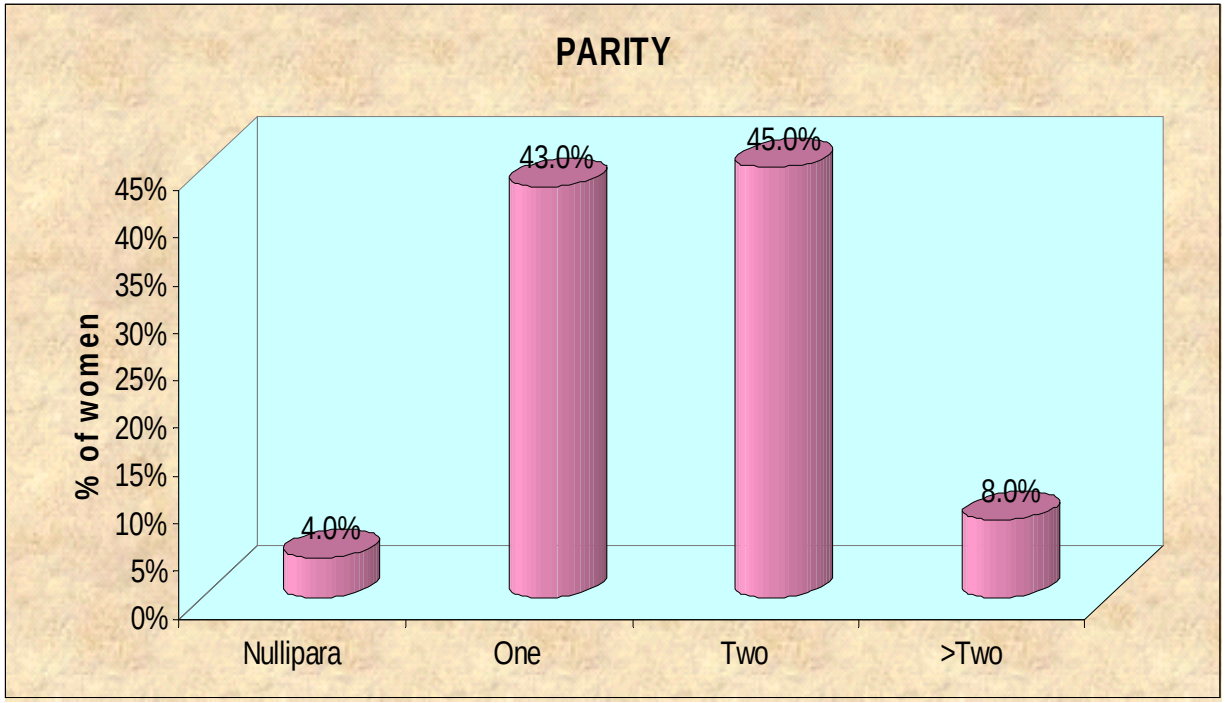
N=100



The above figure showed that the percentage distribution of 100 women who were suffering dysfunctional uterine bleeding on the basis of age at child birth in which, More than half of the proportion 44 (44 %) of the women were having the 20-25 years of age at first child.

Figure No:4.5 Percentage distribution of the women on the basis of obstetrical factors- parity

N=100



The above figure showed that the percentage distribution of 100 women who were suffering dysfunctional uterine bleeding on the basis of parity, in which Less than half of the proportion 45 (45. %) of the women were having 2 children.

SECTION III:IDENTIFICATION OF THE CONTRIBUTORY FACTORS

Table No:4.5 Percentage distribution of the women of the identified contributing factors

N=100

Contributing factors		No. of women	%
BMI	Under	23	23%
	Normal	15	15%
	Over weight	37	37%
	Obesity	25	25%
Nature of work	Heavy work	36	36.0%
	Moderate work	34	34.0%
	Sedentary work	30	30.0%
Age at marriage	< 20 yrs	15	15%
	20 -25 yrs	66	66%
	> 30 yrs	19	19%
Age at Menarche	< 11 yrs	17	17.0%
	11 -12 yrs	46	46.0%
	13 -14 yrs	27	27.0%
	>14 yrs	10	10.0%
Frequency of menstrual cycle	< 26 days	14	14.0%
	26 -32 days	34	34%
	33 -45 days	43	43.0%
	>45 days	9	9.0%
Duration of the menstrual bleeding	< 3 days	14	14.0%
	4 -5 days	18	18.0%
	6 -7 days	32	32.0%
	>7 days	36	36.0%
Quantity of Hb level	Anemic	54	54.0%
	Not anemic	46	46.0%
Menstrual discomfort	Yes	71	71.0%
	No	29	29.0%
Contraceptive measures	Yes	79	79.0%
	No	21	21%
Abortion	Induced	35	35%
	Missed	14	14%
	Spontaneous	19	19%
	No abortion	32	32%

Contributing factors		No. of women	%
Age at first child birth	< 20 yrs	24	24%
	20 - 25 yrs	44	44%
	26 - 30 yrs	16	16%
	> 30 yrs	16	16%

The above table showed the identification of the contributory factors of 100 women having dysfunctional uterine bleeding:

Less than half of the proportion 37(37%) of the women were having the BMI of over weight.

Less than half of 36 (36%) of the women were doing heavy work

Majority 66(66 %) of the women were married at the age of 20-25 years.

Less than half of the proportion 46(46%) of the women attained menarche at the age of 11-12 years.

Less than half of the proportion 43(43 %) of the women were having the frequency of menstrual cycle once in 33-45 days.

Majority 36(36 %) of the women were having the duration of menstrual cycle of >7 days.

Less than half of the proportion 39 (39%) of the women were having the haemoglobin 6-7gm/dl

Majority 71(71%) of the women were experiencing menstrual discomfort 79(79%) of the women following contraceptive measures less than half of the proportion of the women 35(35%) with DUB were having the history of induced abortion.

less than half of the proportion 44 (44 %) of women were having the 20-25 years of age at first child birth.

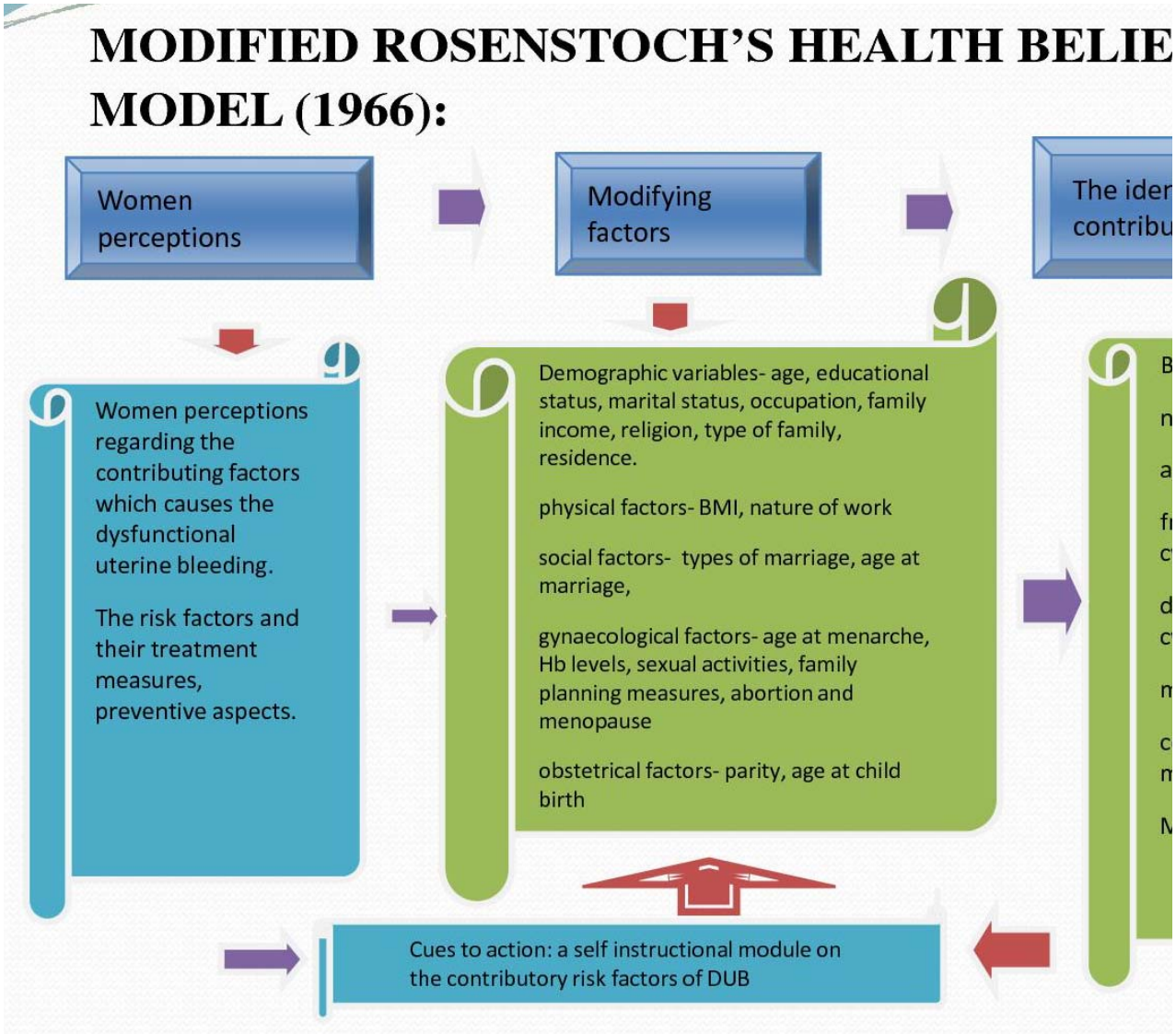
SECTION IV: ASSOCIATION OF THE IDENTIFIED CONTRIBUTORY FACTORS WITH THE SELECTED DEMOGRAPHIC VARIABLES:

Table No:4.6 Association between the age and the identified contributing factors

N=100

Contributing factors		Age						n	Pearson chi square test
		< 30 yrs		31 -40 yrs		>40 yrs			
		n	%	n	%	n	%		
BMI	Under weight	2	6.1	30	90.9	1	3.0	23	**x2=21.24 P=0.001*** DF=6 significant**
	Normal	2	8.0	21	84.0	2	8.0	15	
	Over weight	5	13.5	30	81.1	2	5.4	37	
	Obesity	0	0.0	2	40.0	3	60.0	25	
Frequency of menstrual cycle	< 26 days	4	28.5	9	64.2	1	7.1	14	**x2=11.89 P=0.02* DF=6 significant**
	26 -32 days	1	2.9	32	94.2	1	2.9	43	
	33 -45 days	2	4.7	40	93.0	1	2.3	34	
	>45 days	2	22.2	2	22.2	5	55.6	9	
Quantity of Hb level	Anemic	13	24	38	70.4	3	5.5	54	**x2=24.55 P=0.001* DF=2 significant**
	Not anemic	33	71.7	10	21.7	3	6.6	46	
Menstrual discomfort	Yes	3	4.2	61	85.9	7	9.9	71	**x2=12.35 P=0.05* DF=6 significant**
	No	6	20.7	22	75.9	1	3.4	29	
Abortion	Induced	2	5.7	32	91	1	2.8	35	**x2=46.88 P=0.001* DF=6 significant**
	Missed	4	28.5	9	64.2	1	7.1	14	
	Spontaneous	1	5.3	17	89.4%	1	5.3	19	
	No abortion	4	12.5	19	59.4	9	28.1	32	

Overweight women, 33-45 days of frequency of menstrual cycle women**,** and anaemic women, women having menstrual discomfort, women with the history of induced abortion were highly significant with the age group of 31-40 years.



MODIFIED ROSENSTOCH'S HEALTH BELIEF MODEL (1996)

LIST OF APPENDICES

APPENDIX	TITLE
1.	STANDARD STRUCTURED INTERVIEW SCHEDULE USED TO ASSESS THE CONTRIBUTORY RISK FACTORS
2.	LETTER SEEKING PERMISSION FOR CONDUCTING THE

	STUDY
3.	LETTER SEEKING EXPERT OPINION FOR CONTENT VALIDITY OF THE TOOLS AND CERTIFICATE FOR CONTENT VALIDITY
4.	LIST OF ABBREVIATIONS
5.	PHOTOS

ACKNOWLEDGEMENT

"Oh lord, you have been good,
You have been faithful to all generations"

I praise and thank God for the opportunity he gave me and the blessings, He bestowed on me throughout the course of my study in this esteemed institution.

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department, specially the **women with dysfunctional uterine bleeding** who had, enthusiastically participated in this study, without whom it was not possible for me to complete this study.

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APPENDIX I

Standard structured interview schedule

Sample no:

Part I: Demographic variable:

1. Age
    a. <30 years
    b. 31-35 years
    c. 36-40 years
    d. > 40 years
2. Educational status
    a. Non formal education
    b. Primary education
    c. Secondary education
    d. Graduate and other profession
3. Marital status
    a. Unmarried
    b. Married
    c. Divorcee
    d. Widow
4. Occupation
    a. House wife
    b. Cooly/ Daily wages
    c. Clerical work
    d. Professional

5. Family income
    a. Rs <1000
    b. Rs 1001- Rs 3000
    c. Rs 3001- Rs 5000
    d. Rs 5001 and above

6. Religion
    4. Hindu
    5. Muslim
    6. Christain

7. Type of family
    a. Nuclear family
    b. Joint family
    c. Extended family

8. Residence
    a. Urban
    b. Sub urban
    c. Rural

PART II: ASSESS THE CONTRIBUTORY FACTORS:

I. Physical factors- anthropometric measurements:

1. BMI

   Under weight

   Normal

   Over weight

   Obesity

2. Nature of work

   a. Heavy work

   b. Moderate work

   c. Sedentary work

II. Social factors:

Age at marriage

a. <20 years

b. 20- 25 years

c. >25 years

Type of marriage

a. Consanguineous

b. Non consanguineous

III. Gynecological factors:

1. Age at menarche

   a. <11 years

   b. 11-12 years

   c. 13-14 years

   d. .14 years

2. Frequency of menstrual cycle

a. Less than 26 days

b. 26-32 days

c. 33-45 days

d. More than 45 days

3. Duration of menstrual bleeding

a. <3 days

b. 4-5 days

c. 6-7 days

d. >7 days

4. Hb level

8. <6 g

9. 6-7g

10. 8-9g

11. >10g

5. Menstrual discomfort

a. Yes

b. No

6. If yes

a. Painful

b. Nausea

c. Vomiting

d. Headache

7. History of abnormal uterine bleeding

a. Mother

b. Sister

c. Others

8. How often do you have sexual activity

a. Rarely

b. Once in a week

c. Twice a week

d. More than twice in a week

9. Do you use any contraceptive measures

a. Yes

b. No

10. If yes, type of contraceptive measures

a. Temporary method

b. Terminal method

11. Family planning method

a. Oral contraceptive

b. IUCD

c. Barrier

d. Permanent

12. Duration of contraceptive method

a. <1 years

b. 1-5 years

c. 6-10 years

d. >10 years

13. Oral contraceptive

b. 1 years

c. 2-3 years

d. 4-5 years

e. >5 years

14. IUCD

    a. >1 years

    b. 1-3 years

    c. 4-6 years

    d. 7-10 years

15. Abortion

    a. Induced

    b. Missed

    c. Spontaneous

    d. No Abortion

16. Have you attained menopause

    a. Yes

    b. No

17. If yes, age at menopause

    a. 40-45 years

    b. 45-50 years

    c. 50-55 years

    d. >55 years

IV. obstetrical factors:

- Age at first child birth

    a. <20 years

    b. 20-25 years

    c. 26-30 years

    d. >30 years

- Parity
    a. Nullipara
    b. One
    c. Two
    d. > three

ANNEXURE IV
Abbreviations

DUB	Dysfunctional Uterine Bleeding
IUD	Intrauterine Devices
FSH	Follicle Stimulating Hormone
HPO	Hypothalamic Pituitary Ovarian Axis
ADUB	Anovulatory Dysfunctional Uterine Bleeding
LNGS	Levonorgestrol Releasing Intrauterine System
TCRE	Transcervical Resection Of The Endometrium
NET	Norethisterone
IUS	Intra Uterine System
BMI	Body Mass Index

DISSERTATION ON

"A STUDY TO IDENTIFY THE CONTRIBUTORY RISK FACTORS OF DYSFUNCTIONAL UTERINE BLEEDING AMONG THE WOMEN IN REPRODUCTIVE AGE GROUPS ATTENDING GYNAECOLOGY OUTPATIENT DEPARTMENT AT INSTITUTE OF OBSTETRICS AND GYNAECOLOGY HOSPITAL FOR WOMEN AND CHILDREN, EGMORE, CHENNAI-8."

M.SC (NURSING) DEGREE EXAMINATION

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Certificate

This is to certify that this dissertation titled **"A STUDY TO IDENTIFY THE CONTRIBUTORY RISK FACTORS OF DYSFUNCTIONAL UTERINE BLEEDING AMONG THE WOMEN IN REPRODUCTIVE AGE GROUPS ATTENDING GYNAECOLOGY OUTPATIENT DEPARTMENT AT INSTITUTE OF OBSTETRICS AND GYNAECOLOGY HOSPITAL FOR WOMEN AND CHILDREN, EGMORE, CHENNAI-8."**Is a bonafide workdone by **MRS.M.VIJAYA,** College Of Nursing, Madras Medical College, Chennai – 600003 submitted to the TAMILNADU DR.M.G.R. MEDICAL UNVERSITY, CHENNAI In Partial fulfillment of the requirements for the award of the Degree of **Master of Science in Nursing, Branch III, OBSTETRICS AND GYNAECOLOGICAL NURSING,** under our guidance and supervision during the academic period from 2009 – 2010.

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