EFFECTIVENESS OF EARLY AMBULATION ON POST OPERATIVE RECOVERY AMONG THE WOMEN WHO HAS UNDERGONE ABDOMINAL HYSTERECTOMY AT GOVERNMENT RAJAJI HOSPITAL MADURAI

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A dissertation submitted to

THE TAMIL NADU DR.M.G.R MEDICAL UNIVERSITY

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ABSTRACT

Title: Effectiveness of sodium chloride application on episiotomy wound healing among postnatal mothers. **Objectives:** To assess the episiotomy wound healing among postnatal mothers in interventional and control group at GRH Madurai. To evaluate the effectiveness of sodium chloride application on episiotomy wound healing among postnatal mothers in interventional group at GRH Madurai. To associate the episiotomy wound healing among postnatal mothers both interventional and control group with their socio demographic variable and obstetrical variables. **Hypotheses:** There is a significant difference between pre test and post test episiotomy wound healing among postnatal mothers in interventional group at GRH Madurai. There is a significant association between episiotomy wound healing among post natal mothers both interventional and control group with their socio demographic and obstetrical variables. **Methodology:** Quantitative approach true experimental pre test and post test design was used. 60 subjects were selected by simple random sampling. 30 interventional group and 30 in control group. Sodium chloride application twice a day for 3 consecutive days given for interventional group. **Results:** The findings revealed that improve the wound healing after intervention confirmed by paired "t" test ($t = 11.74$ and $p = < 0.001\%$) level.

Key words: sodium chloride application, episiotomy wound healing, postnatal mothers.

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Introduction

CHAPTER I

INTROUCTION

"Happiness is a state of Activity.

- Aristotle .Quotes

Women's health is a total well being of reproductive health of women's it is the refers to the health of women is an example of population health it is patch work of guilt many of this around women's health related to reproductive health including maternal health and child health, genital health, breast health, endocrine health, birth control and menopause.

Reproductive health is a crucial feature of healthy human development and of general health. It may be a reflection of a healthy childhood, is crucial during adolescence, and sets the stage for health in adulthood and beyond the reproductive years for both men and women.

Reproductive life span does not begin with sexual development at puberty and end at menopause for a woman or when a man is no longer likely to have children. Rather, it follows throughout an individual's life cycle and remains important in many different phases of development and maturation life, individual reproductive health needs may differ.

The most common gynecological problems are like breast cancer, uterine bleeding menstrual disorder uterine prolopse fibroid cancer cervix, ovarian cancer endometriosis those can be treated by surgical management such as hysterectomy, Hysterotomy , Salphino oophrectomy, endometry ablation procedure, loop electro excision procedure.

Hysterectomy is the surgical removal of the uterus. In a total hysterectomy, the uterus and cervix are removed. In some cases, the fallopian tubes and ovaries are removed along with the uterus (called hysterectomy with bilateral salpingo oophorectomy. In a subtotal hysterectomy, only the uterus is removed. In a radical hysterectomy, the uterus, cervix, ovaries, oviducts, lymph nodes, and lymph channels are removed. The type of hysterectomy performed depends on there as on abdominal hysterectomy, vaginal hysterectomy. The surgeon makes a cut in the vagina and removes the uterus through this incision. The incision is closed, leaving no visible scar. Vaginal prolapse (part of the vagina coming out of the body) Vaginal – via incision through the superior part of the vagina. Vaginal hysterectomy that performed through the vagina.

In all cases, menstruation stops and a woman loses the ability to bear children. A hysterectomy can be classified by the amount of tissue resected. An abdominal hysterectomy is a surgical procedure that removes your uterus through an incision in your lower abdomen. Total abdominal hysterectomy – removal of the uterus and cervix. Sub-total hysterectomy – removal of the body of the uterus only, leaving the cervix behind.

Total hysterectomy and bilateral salpingo oophorectomy removal of the uterus, cervix, fallopian tubes and ovaries. Radical hysterectomy removal of the uterus and cervix, the parametrium, a vaginal cuff and part of or the whole of the fallopian tubes. This procedure is carried out in selected cases of cervical cancer.

This surgery for women is the most common non-obstetrical surgical procedure in the United States. Approximately 300 out of every 100,000 women will undergo a hysterectomy. The most common reason hysterectomy is performed is for uterine fibroids depending on the reason for the hysterectomy, a surgeon may choose

to remove all or only part of the uterus. Patients and health care providers sometimes use these terms inexactly, so it is important to clarify if the cervix and/or ovaries are removed:

A hysterectomy might be the only option. But for other conditions including fibroids, endometriosis and uterine prolapse able to try less invasive treatments first. During hysterectomy surgery, surgeon might also perform a related procedure that removes both of ovaries and fallopian tubes (bilateral salpingo oophorectomy) which results is known as surgical procedure of menopause.

Definition and meaning for word ambulation Early walking after surgery is one of the most crucial things can do to prevent problems A technique of postoperative care in which a patient gets out of bed and engages in light activity (such as sitting, standing, or walking) as soon as possible after an operation. Procedure to accelerate the ability of a patient to walk or move about by reducing the time to ambulation. It is characterized by a shorter period of hospitalization or recumbency than is normally practiced.

Depending on the type of surgery, there are many potential complications that can arise. For example, many surgeries put patients at risk of infection, bleeding at the surgical site, and blood clots caused by inactivity. Prolonged inactivity can also cause to lose some of muscle strength and develop respiratory complications. Ask for more information about the potential complications of your specific procedure.

During abdominal hysterectomy, detaches your uterus from the ovaries, fallopian tubes and upper vagina, as well as from the blood vessels and connective tissue that support it. The lower part of your uterus (cervix) is usually removed (total hysterectomy) but may sometimes be left in place (partial hysterectomy). If necessary, your surgeon may remove additional pelvic organs and tissue, such as ovaries or fallopian tubes.

Abdominal surgery is a very common operative procedure. The prevalence of intra abdominal surgery among those in the age of60 is 43.8% (Nunoo-Mensah, Rosen, Chan, Wasserberg & Beart, 2009). Notably, therate of abdominal operation increases with age, and females found to have a significantly higher rate than men (Nunoo-Mensah et al., 2009; Primatesa & Goldacre,1994; Steiner, Bass, Talamini, Pitt, & Steinberg, 1994).Though operation is a form of treatment, it significantly affects patient's functional activity, activities of daily living and psychological wellbeing.

It is believed that abdominal surgery seems to be the most painful procedure among all types of operation (Giuffre,s1991; Kalkman et al., 2003). According to the literature review, researchers have widely asserted that patients who had undergone abdominal operations develop many unpleasant symptoms after surgery such as pain, nausea, vomiting, anxiety, fatigue, etc., (Huang, Cunningham, Laurito, & Chen, 2001; Kalkman, et al.2003; Lin & Wang,2005; Mei et al., 2009; Rubin, Hardy, & Hotopf, 2004; Sinclair, Chung, & Mezei, 1999).These are the symptoms that follows after abdominal surgery seems to be problematic than other types of surgery,

Data from 56 countries showed that in the year 2004 the annual volume of major surgery was estimated to be 187-281 million operations. This is large and previously unappreciated volume with significant implications for public health. Studies in developing countries suggest a death rate of 5-10% associated with major surgery 79% ,and the rate of mortality during general anesthesia is reported to be as high as1in150inpartsofsub-Saharan Africa (10), infections and other postoperative complications are also a serious concern around the world. Globally, in 2010, data monitor estimates that here were 7.4 million major abdominal surgeries done that is expected to grow or increase by 8.1 million surgeries in 2020. Out of that about

20,000 patients died in a year following complications of the abdominal surgeries done between the 2010-2020 in the seven major countries (US, Japan, France, Germany, Italy, Spain and UK).

Early ambulation is procedure characterized by a shorter period of hospitalization or recumbency or by more rapid of mobilization than the normal practice in the presence of guider after any surgical interruption or loss of independent mobility can have a wide ranging effect on all aspects of person's life. As nurse, researcher or as therapist a knowledge of methods, helps available to maintain and/or increase a person's level of mobility is essential part of being able to help restore him to high as functional level as is practicable .

Early ambulation is an important component of postoperative care after abdominal surgery. Its benefits were first reported in 1940's, when early ambulation was observed to hasten recovery and reduce the incidence of postoperative pulmonary complications (Briger 1983). Early ambulation involves an upright position appears to be of great benefits in the early postoperative period with evidence of improvement in pulmonary function (Nielson et al 2003). Upright ambulation assists in the prevention of functional decline and may have a positive effect on depression and anxiety (Brooks- Bruun 1995). Modified early ambulation following abdominal surgery has been measured as the time taken to achieve mobility goals such as sitting out of bed, ambulating withassistance or ambulating independently (Mackay and Ellis 2002, Olsen et al 1997). Emily Rices (1899) gynecologist in Chicago reported first, about the benefits of early ambulation after surgical procedures. During this time American surgeons gave only little attention to his contribution, but in continental Europe, early ambulation was clinics.

Early ambulation was reintroduced by Daniel J. Leithauser (1930) chief surgeon at St. Joseph mercy hospital in Detroit published the report about a 38 years male patient who had appendectomy in 1938, few hours after surgery, he got up and walked against the medical advice. He was warned about the danger of exercising immediately after surgery. The patient insisted the doctor that he needs to go home on the first postoperative day. On the second day he drove 30 miles and went for shopping, worked in the garden. On fourth postoperative day he drove 40 miles to visits the doctor or postoperative check-up. Leithauser's was impressed with the most apparent effect of ambulation. He advised the patient to get out of the bed on the first postoperative day after appendectomy.

Canavarro (1946) wrote that prior to his study, routine ambulation began on or about postoperative Days 10-14. He initiated a program in 1946 that changed the practice to postoperative Day 1. Today's clinicians can appreciate the results of Canavarro's (1946) early ambulation program, including "definite reduction of all postoperative complications" by approximately 50% as a breakthrough for modern practice. Canavarro reported a rapid return to normal bodily functions with the reduction in medication use, rectal treatments, and nursing care. In addition, he wrote, "there is a saving in time and money and a more rapid turnover of patients per bed per month". Ramachandran (1972) conducted an experimental study on the effects of structured and unstructured preoperative teaching on early ambulation during elective abdominal surgery.

One of the major purposes of the early ambulation process is to help patients to achieve as high a level of functional independence as possible within the limit of their particular impairments. Human ambulation or gait is one of the basic components of independent functional, commonly affected by either disease process,

injury or by surgery. The desired outcome of most physical therapy interventions is to either restore or to improve a patient's ambulatory status.

- Early movements prevent deep vein thrombosis. The mobilization will helps the bowels to move and the gasses to expelled, thus eliminating the discomfort of abdominal distention, constipation as well as it improves appetite.
- Early ambulation prevents joint stiffness and contractures.

The 1st or 2nd days of minimal movements and gentle turning .Patients will advised to under go slow mobilization within there limit and depending on the surgical interventions as well as patient state. Early ambulation arise from the fact that, tissue recovery as well as returning of normal day to day functions would depend on the movements that takes place at the phase of post operative recovery .Thus knowing what benefits will bring would be useful in being motivated to do so even with significant of discomfort of this time.

1.1 Need for study

After surgery often the patient's freedom of movement is restricted due to intravenous infusion, various tubes or drains that must accompany the patient during ambulation. Modified early ambulation provides patient to develop self confidence, reduce anxiety and ensure a sense of participation in care, thus protecting the patient from injury, harm and complications (Hegyvary, 1993; Rhodes & McDaniel, 1995). Among the adverse effect of lengthy bed rest that have been noted are: a slowing down of the basal metabolic rate, a decrease in muscle strength, tone and size, postural changes, constipation, increased vulnerability to pulmonary and urinary tract infection, circulatory problems such as thrombosis and embolism (Briger 1983). The person usually develops feeling of anxiety and frequently hostility as a result of

disturbed functioning of physical, physiological and mental activity, as well as disruption of his sleep.

Common general postoperative complications include atelectasis, pneumonia, orthostatic hypotension, decreased cardiac output and stroke volume, urinary retention, negative nitrogen balance, depression and sensory deprivation, decrease tissue sensitivity to insulin, deep vein thrombosis, constipation and fecal impaction, loss of muscle tone and decubitus ulceration in the dependent areas that is subjected to pressure due to prolonged bed rest. Early postoperative ambulation has been practiced on the surgical services since August 1944. There were 500 abdominal surgery cases compared with the 500 similar cases, they were left in bed to the 10-14 days. The study group allowed walking as early as possible. The control group were not ambulated and used for comparison. In ambulated group there was a total 43 postoperative complications as compared with 93 for non-ambulated. Incidence of broncho pneumonia has been reduced from 6% to 3%, atelectasis from 1.2% to 0.4%, phlebothrombosis from 2.4% to 1% in ambulated group.

The early ambulation assists in the prevention of functional decline and may have positive effect on depression and anxiety. In the past the measurement of ambulation has presented a challenge to the researcher. Early ambulation following abdominal surgery has been measured as the time taken to achieve mobility goals such as sitting out of bed, ambulating with assistance or ambulating independently (Lewis, Heitkemper & Dirksen (2004)). "Early ambulation is the most significant general nursing measure to prevent postoperative complications".

The commonly accepted postoperative benefits include a decrease in venous stasis, stimulation of circulation, prevention of deep venous thrombosis/pulmonary embolism, increases in muscle tone, coordination and independence, and improved

gastrointestinal, genitourinary and pulmonary function Many perioperative events can affect postoperative respiratory complications. General anesthesia and surgery prolonged more than three hours are associated with high risk of pulmonary complications. Notably, transverse and upper

Abdominal incisions are also related to greater rate of postoperative respiratory complications the longitudinal midline and lower abdominal incisions. Therefore, it is recommended for nurses to assess patent airway appropriately. The suitable method is observing the client and assessing the breathing pattern at rest (Black & Hawks, 2009). Pulmonary complications are a leading cause of morbidity and mortality following abdominal surgery (Smetana et al 2006). The incidence of postoperative pulmonary complications in this population ranges from 9% to 40% depending on the criteria used for diagnosis of postoperative pulmonary complications (Brook-Brunn 1997). As pulmonary complications contribute to prolonged hospital stay and additional health care cost. In order to minimize postoperative complications of abdominal surgery, early initiation of postoperative mobility is necessary. According to society of hospital medicine, it was observed that the number of pulmonary complications after abdominal surgery been increased between the year 1989 and 2004. Therefore to treat the pulmonary complications increases hospital stay as well as cost of care.

Postoperative pulmonary complications (PPCs) following surgery were first described by Pasteur in 1908 and remain an important cause of postoperative morbidity, contribution significant increases in patient discomfort, length of hospital stay (LOS), resulted in high expensive care (Brooks Brunn 1995). PPCs have been defined as a pulmonary abnormality that produces identifiable disease or dysfunction that is clinically significant and adversely affects the clinical course (O'Donohue

1992). Over the past two decades widespread developments in postoperative pain management, together with advances in surgical and anesthetic techniques, have led to reduction complications following major surgery and faster discharge from hospital. Early ambulation is a widely practiced and important component of postoperative care following abdominal surgery. Its benefits were first reported in the1940whenearlyambulation was observed to hasten recovery and reduced the incidence of postoperative pulmonary complications. Early ambulation include: moving in bed, sitting out of bed, standing, limited walk and extended walk. Ambulation increases ventilation and reduces stasis of bronchial secretions in lungs. Besides prevention of respiratory complications, improving pulmonary function is also an important issue. After upper abdominal surgery, pain and the reduction of diaphragmatic contraction are considered as causofalterinin diaphragmatic function. Consequently, pulmonary function is repaired (Van de Leur & Van deSchans, 2003).Therefore pain management is essential to improve respiratory function after surgery. Patients undergoing abdominal surgery experience reduced gastro peristalsis due to surgical manipulation of the bowel and administration of opioid medications after surgery. It is asserted that improving the return of bowel function after abdominal surgery is an important nursing goal (Crainic et al., 2009). Many interventions have been using to stimulate bowel function after surgery, such as decompression of the stomach with a nasogastric tube, reduction in opioid use, early mobilization of the patient to stimulate bowel function, and early postoperative feeding

(Cranic, et al., 2009). The normal function of the bowel will help to reduce abdominal distention making patients feel more comfortable. Postoperative ileus (POI) is usually defined as a transient impairment of bowel motility that may occur

after major surgery, it is a form of gastrointestinal dysfunction that commonly occurs in patients after abdominal surgery sand results in absent or delayed gastrointestinal motility, food intolerance, gas retention, and pain. POI may last for four to five days and complicate the full and timely recovery of the patient. Literature suggests that the duration of POI is in part related to the degree of surgical trauma and is most severe following extensive surgeries of the colon. (Holte Kehlet, 2000; Kehlet, 1PP997).It is documented in the literature that the postoperative return of bowel functioning varies by location. That is, the return of functioning appears to occur first in the small intestine within several hours after surgery, the stomach in 24-48 hours, and the colon within 3-5 days (Huge et al., 2000; Le Blanc-Lowery et al., 2002;

Schuster & Montie20B Waldhausen et al., 1990). POI can last for up to four to five days and significantly extend the patient's Time to Discharge and increase risks of complications.

(Barnes et al., 1997; Le Blanc-Louvry et al., 2002; Luckey et al., 2003; Miedema & Johnson, 2003; Schuster & Montie, 2002). It has been noted that impaired bowel motility may last longer when the surgery involves the distal rather than the proximal digestive tract, especially if there has been distal colonic re anastomosis (Huge et al., 2000). POI is a major health problem because it places postoperative abdominal surgery patients at increased risk for development of circulatory and pulmonary complications associated with reduced physical activity due to pain and other immobilizing symptoms. Previous research provides overwhelming evidence that POI extends the affected patient's post-surgical recovery period for several days (Prasad & Matthews, 1999), significantly delaying the healing and adds more than $1 billion annually to the costs of related health care to treat the problem. Postoperative ileus is a pervasive problem after major abdominal surgery

and may lead to significant postoperative morbidity, prolonged hospitalization, and increased health care costs. One common non-invasive postoperative standard of care intervention that is believed to prevent and resolve POI is early ambulation of the patient followed by orders to increase the time spent sitting in a chair and walking (Waldhausen & Schirmer, 1990). Evidence to support the effectiveness of these interventions remain unchallenged and unconvincing (Brieger, 1983; Holte & Kehlet, 2002; Schuster & Montie, 2002).

Venous thromboembolism is an important cause of perioperative mortality and morbidity. At least 30 cases of deep vein thrombosis identified by phlebography can be suspected among 100 clients who have undergone abdominal surgery. The incidence of venous thromboembolism in Indian Scenario is more than 50% among the patients undergoing surgical procedures and 10-40% in the patients undergoing abdominal surgery. A study shown that, venous thromboembolism is an important health care problem over the world. Resulting in significant morbidity, mortality and restore expenditure as well as delayed progress. Early ambulation should be strongly encouraged in all such post surgical patients. It has proved to be associated with a lower incidence of both symptomatic and ultrasonically diagnosed thromboembolism.

The early postoperative ambulation and physical therapy should be integral part of all the post surgical management as well as global approach to venous thromboembolism. Prophylactic randomized trials showing that early ambulation and physical activity reduces the risk of venous thrombo embolism. The non-ambulatory post operative period is a high time for development for thrombosis and venous stasis. Physical therapists, nurses should work together to get out of bed and ambulate as early as possible. More over early ambulation helps to reduce length of stay in the hospital and optimizing mobility prior discharge. Holte and Kehlet (2000) reported

difficulties with using the passage of flatus and stool as evidence that POI has reached its endpoint or has been resolved. They report that the passage of flatus is highly subjective and based on subjects' self-report, while the passage of stool may indicate that only the distal bowel has emptied. It is concluded that the early ambulation after surgery provide evidence that complete gastrointestinal tract functioning has returned.

Mobilization in postoperative patients may be defined as low intensity exercise that aims to elicit cardiopulmonary responses which enhance oxygen transport and assist in the reduction of postoperative pulmonary complications (Dean 2002). It is the belief among physiotherapists that mobilization results in increased tidal volumes which may assist the reversal of atelectasis leading to improved gas exchange (Dean 2002).

However the evidence surrounding this remains inconclusive. Scheidegger et. al., (1976) investigated the effects of early mobilization in non-intubated patients following a wide range of surgical procedures requiring general anesthesia. Early mobilization was shown to improve forced vital capacity, maximum voluntary ventilation, and arterial oxygenation more than breathing exercises alone. These researchers suggested that the changes were the result of increased tidal volumes with mobilization compared with breathing exercises.

This has been challenged by Orfanos et. al., (1999) who observed that mobilization resulted in smaller increases in tidal volumes when compared with breathing exercises in non-intubated abdominal surgical patients. Orfanos et al (1999) suggested that patients should be encouraged to perform deep breathing exercises during mobilization to enable re-expansion of collapsed alveolar lung units. Hence the precise mechanisms by which mobilization affects lung function are presently theoretical and require further research (Dean 1994, Dean and Ross 1989, Stiller 2000). Mary Rodts stated that changing position in bed, walking and prescribed

exercise promotes circulation. Good blood flow discharges the formation of blood clots and enhancing healing.

The most important thing to prevent blood clot is early ambulation. Without this message by 13 Each day that patient is encouraged to increase physical activity and to be as independent as possible. This is personal hygiene, getting in and out of bed without assistance and walking Waldhauson and Bruce D. Schirmer believed that early ambulation aids in the restoration of normal bowel functions allows patients to move easily pass flatus and stool and resume normal bowel habits. Pandula Siribaddana (2009) explains the benefits of early ambulation following surgery. It is necessary to encourage such early mobilization arise from the fact that tissue recovery as well as returning of normal day to day functions

In our clinical settings I have observed the post operative complication occurred in abdominal hysterectomy patient. So I have selected this study to encourage early ambulation for enhancing the post operative recovery and reduce the risk of complications of the patients.

1.2 Statement of the problem

A study to evaluate the effectiveness of early ambulation on post operative recovery among the women who has undergone abdominal hysterectomy at Government Rajaji Hospital, Madurai

1.3 Objectives

1. To assess the post operative recovery among the women who has undergone abdominal hysterectomy at Government Rajaji Hospital Madurai.
2. To evaluate the effectiveness of early ambulation on post operative recovery among the women who has undergone abdominal hysterectomy at Government Rajaji Hospital Madurai

3. To associate the post operative recovery among the women who has undergone abdominal hysterectomy and their selected sociodemographic variables..

1.4 Hypotheses

H_1: There is a significant difference between the post test level of post-operative recovery among women who has undergone abdominal hysterectomy at Government Rajaji Hospital Madurai.

H_2: There is a significant association between the post operative recovery among the women who has undergone abdominal hysterectomy and their selected socio demographic variables

1.5 Operational Definitions

Effectiveness

It refers to significant changes in post operative period and activities of daily living, among abdominal hysterectomy patients and its measured by observation checklist

Early Ambulation

It refers to accelerate the ability of the post operated abdominal hysterectomy patients to walk or move around the bed or short distance in the ward for 5-to 10minutes, 3 times a day for three consecutive days.

Abdominal Hysterectomy

In this study abdominal hysterectomy refers to subject who is diagnosed fibroid, endometriosis, abnormal uterine bleeding, cervical dysplasia and plan to removal of the uterus by abdominal surger**y.**

Post Operative Recovery

Refers to restorations of patients who undergone abdominal hysterectomy surgery, to their normal or near to normal condition. The post operative recovery has measured in terms of activity of daily living, functional activities and sense of well being.

1.6 Assumptions

1. Abdominal hysterectomy have differ in post operative recovery.
2. Early ambulation helps the abdominal hysterectomy patients recovered from post operative period

1.7 Delimitations

1. The study is limited to abdominal hysterectomy admitted at Government Rajaji Hospital
2. The duration of the study period is limited 4 to 6 weeks.

1.8 Projected Outcome

Early ambulation will enhance the post operative recovery among the abdominal hysterectomy patients and also it will be use full in reducing post operative complications.

Review of Literature

CHAPTER II

REVIEW OF LITERATURE

A Literature review is a body of text that aims to review the critical points of current knowledge including substantive findings as well as theoretical and methodological contributions to a particular topic. Literature reviews are secondary sources, and as such, do not report any new or original experimental work. Also, a literature review can be interpreted as a review of an abstract accomplish human

Literature review serves a number of important functions in research process. It helps the researcher to generate ideas or to focus on a research approach, methodology, meaning tools and even type of statistical analysis that might be productive in pursuing the research problem. Review of literature in the study is organized under the following headings. This chapter deals with two parts,

Part – I Review of literature related to studies.

Part - II: Conceptual framework.

Part - The related literature is post operative gynaecology under the following headings.

I: Literature related to early ambulation and its effectiveness.

II: Literature related to effectiveness of early ambulation on abdominal hysterectomy

2.1: Literature related to early ambulation and its effectiveness

Marilyn Szekendi. (2013) conducted a experimental study on early ambulation reducing the risk of venous thrombosis on total knee replacement. This study was performed to analyze the association between acute VTE and potential risk

factors, including delivery of pharmacologic prophylaxis, degree of obesity and duration of immobility. 463 patients after the surgery was selected randomly. Data obtained by standardized chart abstraction included age, gender, BMI, type of TKA (unilateral vs. simultaneous bilateral), use of pharmacologic and mechanical prophylaxis, and timing of initiation of post-op ambulation. 47% of cases first ambulated on day 3 or later, vs. 37% of controls; 61% of all patients ambulated within 24 hours following surgery. The study concluded that Ambulation within 48 hours was associated with a 70% reduction in the risk of VTE. This finding demonstrated that early ambulation, a nursing and physical therapy function, directly affects this important health care outcome

Lunn TH, Kristensen .B (2012) conducted a experimental study on Possible effects of mobilization on acute post-operative pain and nociceptive function after total knee arthroplasty. Thirty patients undergoing TKA under standardized anesthesia and analgesia underwent an exercise (mobilization) strategy on the first post-operative morning consisting of 25-m walking twice, with a 20-min interval. Pain was assessed at rest and during passive hip and knee flexion before, and 5 and 20 min after walk, as well as during walk. Nociceptive function (pain threshold and tolerance) was assessed with pressure algometry and an electrical stimulus. The findings revealed that Pain at rest (supine) and during hip and knee flexion was significantly reduced 5 min ($P < 0.03$) and 20 min ($P < 0.003$) after walk compared with before walk, and pain was reduced during the second walk compared wise

first walk (P < 0.034). Knee pain pressure threshold (P = 0.002) but not tolerance (P = 0.27) was increased following walk compared with before walk. Thus the study concluded that mobilization promote analgesic effects in post-surgical patients.

Sasima Tonqsai, Visanu Thamlikitkul (2012) conducted a randomized controlled trials study to compare the safety of early versus late ambulation in the management of patients after percutaneous coronary interventions. They performed a meta-analysis of five randomized controlled trials to compare the safety of early versus late ambulation in the treatment of cardiac patients undergoing PCI. Among 1854 patients, 1083 were assigned to an early ambulation (range: 2–4 h of bed rest time) and 771 were assigned to late ambulation (range: 6–10 h of bed rest time). The study revealed that there was no evidence that early ambulation was more harmful than late ambulation in terms of hematoma or bleeding event. This study also confirmed the findings reducing the rest time from 6–10 h to 2–4 h after removal of the arterial sheath, and supporting early mobilization.

Wagenbach A, Saladino A (2010) conducted a prospective study on safety of early ambulation after diagnostic and therapeutic neuroendo vascular procedures. The objective of the study is to evaluate the safety of manual compression and early ambulation after diagnostic and therapeutic neuroendo vascular procedures. Data were prospectively collected and retrospectively analyzed for consecutive patients undergoing diagnostic or therapeutic neuroendo vascular procedures. Manual compression at the femoral access site was applied. The target for early ambulation was 2 hours after compression. Three hundred forty-three patients were enrolled, of whom 295 were eligible for early ambulation. Ambulation occurred at 2 hours for 82 patients who underwent diagnostic and 11 patients who under procedure. This study

concluded that early ambulation is feasible and safe after diagnostic and therapeutic procedures and manual compression.

Old meadow L B, et.al., (2006) conducted a experimental study on early ambulation after hip surgery accelerates recovery.. Sixty patients were selected for study. Randomization was either early ambulation (first walk postoperative day 91 or 2) or delayed ambulation (first walk post operative day 3 or 4). Functional levels on day 7 surgery, acute hospital length of stay and destination at discharge were compared. The results of the study revealed that patients in early ambulation group walked further than those in delayed ambulation group (p=0.03) and required less assistance to transfer (p=0.009). Patients in early ambulation group were more likely to be discharged directly home from acute care than those in delayed ambulation group (26.3 compared with 2.4%) and less likely to need high-level care (36.8 compared to 56%). A failed early ambulation subgroup had significantly more post operative cardiovascular instability and worse results for all outcome measures. The study concluded that early ambulation after hip fracture surgery accelerates functional recovery and is associated with more discharges directly home and less to high level care.

Mundy LM, et.al., (2003) conducted a study on Early mobilization of patients hospitalized with community acquired pneumonia. 458 patients with community acquired pneumonia admitted to 17 general medical units were selected as samples. Early ambulation was defined as sitting out of bed or ambulating for at least 20 minutes during the first 24 hours of hospitalization. Intervention (n=227) and usual care patients (n=231) were similar in age, gender, disease severity. Hospital length of stay for early ambulation vs. usual care was significantly less (means .8 vs. 6.9 days; adjusted obsolete difference, 1 to 2 days, 2 to 3 days. The study concluded

that early ambulation of hospitalized patients with community acquired pneumonia reduced overall hospital length of stay and institutional resources without increasing the risk of adverse outcomes.

Barkman A, Lunse CP (2010) conducted a experimental study on the effect of early ambulation at 3 versus to 6hours on patient comfort and delayed bleeding pain and anxiety after cardiac angiogram. The sample consists of 39 patients who underwent cardiac angiograms. The experimental group ambulated at 3 hours after cardiac angiogram; the control group ambulated at 6 hours. Delayed bleeding was evaluated by sanguineous drainage through a standard gauze pressure dressing and/or the presence of a palpable hematoma greater than 5 cm in width. Melzack's Present Pain Intensity Scale and Spielberger's State Anxiety Inventory were used to evaluate patient comfort at 2, 4, and ours after angiogram and the next day. The study revealed that none of the patients bleeding. The study concluded that there is significant decrease in back pain of patient who ambulated earlier.

2.2 : Literature related to effectiveness of early ambulation on abdominal hysterectomy

Harmanjyot Kaur, Sukhjit Kaur, PoojaSikka (2017) conducted the quasi-experimental study on effect of early ambulation among abdominal hysterectomy. 80 subjects were enrolled by total enumerative sampling technique, 40 in each experiment and control group. Subjects in experiment group were early ambulated at 6 hours of abdominal hysterectomy covering a distance of 40 meters whereas control group was ambulated as per routine care, after 13-14 hours of abdominal hysterectomy. Postoperative recovery was assessed in both the groups by structured nursing assessment sheet including intensity of pain perceived by be abdominal hysterectomy fore and after ambulation, use of analgesics after ambulation, duration

of catheterization, self-void after removal of catheter, passage of first flatus, initiation of oral intake and independently. Pain score was assessed with numerical pain rating scale. Results showed that there was significant difference between the mean post-operative pain score after ambulation among experimental and control group as shown by Independent t-test ($p<0.05$).Other aspects of Post-operative recovery were compared between experiment and control group by independent t-test. This difference was statistically significant in all the variables except duration of catheterization as per the independent t-test ($p<0.05$). So, it was concluded that early ambulation was effective in postoperative recovery among abdominal hysterectomy.

Rowlands IJ, Redshaw M (2012) conducted a study on Mode of women's psychological and physical wellbeing in the abdominal hysterectomy. This study uses data from 5,332 women who responded to a national survey of women's experiences of well being in England. The study examined women's well being in the first three months after surgery, and whether these varied by mode of surgery. The study used multinomial logistic regression models to examine the association between women's self-reported psychological symptoms, health problems and mode. Women who had reported the poorest health and wellbeing, while those of women who had unassisted abdominal hysterectomy were less affected by the health well being.

CitakKarajaya L, Yuksel L (2012) conducted an experimental study on effects of physiotherapy on incision pain and functional activities after cesarean delivery. Fifty women were evaluated after Cesarean operation with regard to times of ambulation and return of bowel activity, intensity of incision pain, difficulty in functional activities and number of analgesics required additional to routine pain control procedure. Twenty-four women received only routine nursing care, and a physiotherapy program was applied to the study group ($n = 26$), additionally post

operative ambulation and return. The study revealed that there was no increase in ileus with early feeding post-Caesarean delivery under spinal anesthesia, with added benefits of earlier intravenous cannulae removal, ambulation, breastfeeding initiation and potential for shorter hospitalization. The study revealed that there was no increase in ileus with early feeding post-Caesarean delivery under spinal anesthesia, with added benefits of earlier intravenous cannulae removal, ambulation, breastfeeding initiation and potential for shorter hospitalization.

Karlstrometal (2007), conducted a Descriptive study on women's experience of post operative pain and pain relief on early ambulation after abdominal hysterectomy and factors associated with pain. A descriptive patient survey conducted in central Swedish country hospital, maternity unit and data were collected through a questionnaire. Sample of 60 women undergoing abdominal hysterectomy were taken. The results were women reported high level of pain during the first 24 hours, which can be seen as inadequately treated pain. The Study concluded that there is a need for adequate pain treatment for women undergoing abdominal hysterectomy as high levels of pain interfere with early ambulation.

Malhotra N, Khanna S (2005) conducted a experimental study on early oral hydration and its impact on bowel activity after elective abdominal hysterectomy. Hundred women were selected from the maternity wards and alternately assigned into control and study groups of 50 each. Women with medical complications and antepartum hemorrhage were excluded. In the study group, oral hydration was started 6 hours post extubation irrespective of presence of bowel sounds. Solid food was started after bowel sounds appeared. Passage of flatus and bowel evacuation was earlier in the study group than in the control. Women ambulated faster in the study group than the control group. Mean oral fluid intake was much more and return to

soft and then full diet was faster in the study group. Sixty percent women preferred early feeding to the traditional one. The study concluded that early oral hydration in the postoperative period helps in the faster recovery of the patient by means of quicker return to normal feeding habits and early ambulation, the two main concerns of any surgeon before discharging the woman.

Weinberg, Goldman, and Huskins (2005) conducted an experimental study on the effect of deep breathing exercise and early ambulation after abdominal hysterectomy in California, 2005. A sample of 300 patients after abdominal hysterectomy was included in the study. Half of the mothers are randomly selected and assigned to the study group and others to the control group. The study group was instructed about the interventions and they implemented it to the group. The results showed that none of the patients in the study group developed deep vein thrombosis and respiratory complications. On the other hand 12% of the patients in the control group developed deep vein thrombosis and 6% developed respiratory complications. Thus the study concluded that early ambulation is effective in prevention of post operative complication.

PART – II

2.3 Conceptual Frame Work

The conceptual framework for research study presents the measure on which the purpose of the proposed study is based. The framework provides the perspective from which the investigator views the problem.

Conceptual framework refers to interrelated concepts or abstractions that are assembled together in some rational scheme by virtue of their relevance to a common theme.

(Polit and Hunger- 1997).

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

The conceptual frame work of this study was derived from Self Care Deficit Theory (Dorothea. E.Orem, 1980, Orem (1991) has identified three classifications of nursing system to meet self-care requisites of each system describes nursing responsibilities, role of the nurse and patient, rationale for the nurse – patient relationship and types needed to meet the patients relationship, and types of actions needs to meet patients self-care agency and therapeutic self-care demand. These systems are;

- The wholly compensatory system
- The partial compensatory system.
- The supportive educative system.

When the individual cannot meet self-care requisites (Client is unable to perform self-care activities by himself) it necessitates nursing to meet the self-care

requisites through five methods of help acting, doing for guiding, teaching, supporting and providing an environment to promote the client ability to meet current or future demands.

Orem (1991) enumerated five areas of activity for nursing practice. They are as follows.

Self-care : self-care is the learned, goal oriented activity of individual. In an adult, they cared for themselves, whereas infants, the aged, the ill and the disabled require assistance with self-care activities, when self-care action is limited because of health deviation.

In this study, self-care is the abdominal hysterectomy women have limited mobilization during immediate post operative period due to surgical pain and other devices used for nutrition and elimination.

Self-care agency: Self-care agency is a learned ability and is a deliberate action. Human need continuous self-care maintenance and regulation and it is provided by caring for self, which enables purposeful action. Self-activities maintain life, health and wellbeing. Nurse must focus on limitations in self -care abilities and must accurately assess self-care deficit, the socio demographic variables (age, religion, marital status, education, occupation, income per month, locality of residence, dietary habits) and base line variables (weight, parity, type of anesthesia , indications).

In this study, self -care agency is the investigator .assessed limitation of movements among the women who has undergone abdominal hysterectomy.

Self-care demands : Demands or requisites are the activities of daily living. Self-care requisites can be defined as actions directed toward the provision of self care.

Three kinds of requisites are mentioned, they are universal, development and health deviation.

In this study, self care demand is the abdominal hysterectomy patients need assistance for early ambulation for their post operative recovery.

Deficit: Nursing agency is required, when an individual is incapable of or limited in the provision of continuous effective self -care.

In this study self care abilities is the abdominal hysterectomy women not to practice early ambulation due to pain and intravenous infusion and urinary catheter.

Nursing agency: "Nursing agency is a continuing series of actions produced, when nurses link one way or a number of ways of helping to their own actions or actions of persons under care that are directed to meet these persons therapeutic self care demands or to regulate their self-care agency"

In this study, Nursing agency is the researcher act as a self care agency to meet the need of post operative recovery by early ambulation among interventional group 15 to 20 minutes ,three times a day, for 3 consecutive days The nursing system implement the early ambulation among women who has undergone abdominal hysterectomy for their post operative recovery and it is measured by Modified constipation assessment scale, urinary tract infection symptoms assessment questionnaire, wound healing assessment

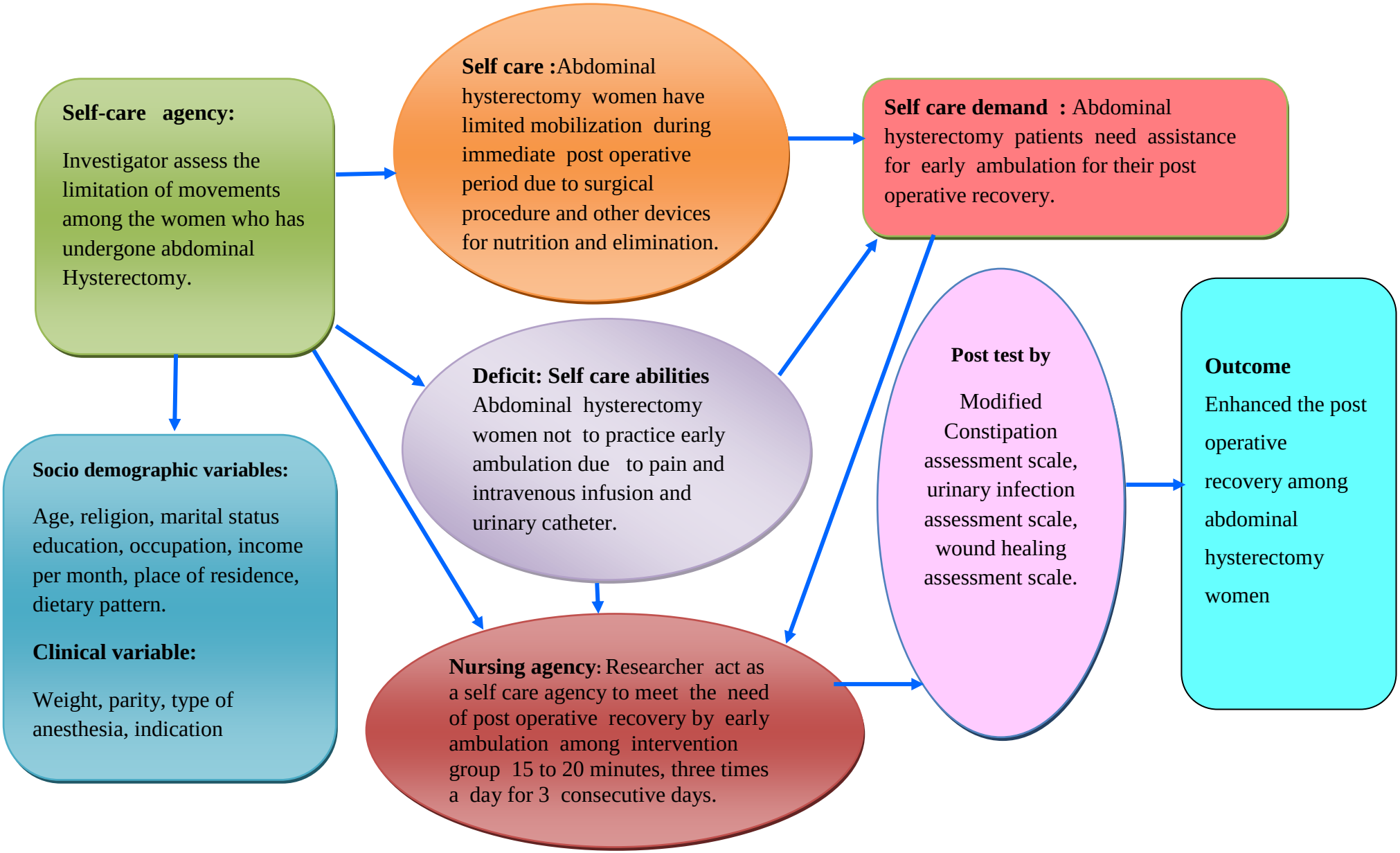


FIGURE: FRAMEWORK BASED ON MODIFIED DOROTHO OREM SELF CARE DEFICIT THEORY (1980)

Research Methodology

CHAPTER III

RESEARCH METHODOLOGY

Research methodology is the overall plan for addressing the research problem and it covers multiple aspects of study's structure. It acts as a guide for planning, implementation and analysis of the study. It includes the descriptions of the research approaches, research design dependent and independent variables, sampling design, description of the tool, pilot study, and a planned format for data collection and a plan for data analysis.

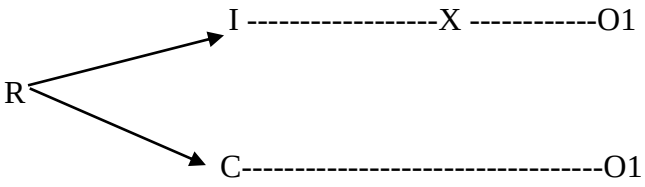
This chapter deals with the methodology to evaluate the effectiveness of early ambulation on post - operative recovery among abdominal hysterectomy patients at Government Rajaji Hospital, Madurai.

3.1 Research Approach

Quantitative Evaluative Approach is used in this study.

3.2 Research Design

The research design used for this study is true -experimental design.



R - Randomization

I - Interventional group.

C - Control group

X - Early Ambulation for 15- 20 minutes three times a day for 3 Consecutive days.

O1 = Post -test on Intervention group.

O1 = Post – test on control group

3.3 Research variables

Variables are characters that can have more than one value. The three categories of variables in the present study.

Independent variables

In this study early ambulation is the independent variable.

Dependent variables

In this study the dependent variable is post operative recovery.

Socio demographic variables

In this study socio demographic variables are age, religion, marital status, education, occupation, monthly income, place of residence and dietary habits. In this study clinical variable such as weight, parity, type of Anesthesia and indication.

3.4 Setting of the study

This study was conducted among abdominal hysterectomy women who are admitted in the gynecology post operative ward at Government Rajaji Hospital Madurai. It is a multispecialty medical college attached hospital and it provide a comprehensive care. Madurai Medical college is the second largest Hospital in Tamil Nadu. Department of Obstetrics and gynecology consists of 750 beds, approximately 120 surgeries per month performed. The study was conducted in Gynecology post operative ward of Government Rajaji Hospital Madurai.

3.5 Population

Target population

The target population of the study was women who has undergone abdominal Hysterectomy .

Accessible population

The study population comprised of women who has undergone abdominal hysterectomy in Gynecology post - operative ward at Government Rajaji Hospital Madurai.

3.6 Sample

The sample of the present study was abdominal hysterectomy women who were admitted in Gynecology post – operative ward at Government Rajaji Hospital, Madurai and who were fulfilled the inclusion criteria.

3.7 Sample size

The sample size consists of 60 (30 subjects in Interventional group and 30 subjects in control group who were admitted in the gynecology post operative ward at Government Rajaji Hospital, Madurai

3.8 Sampling technique

Sampling technique used in this study was probability (simple Random) sampling technique.

3.9 Criteria for Sample Selection

Inclusion criteria

Post Abdominal hysterectomy who were

1. Undergone general anesthesia
2. Both emergency and elective abdominal hysterectomy patients without any complications.
3. Who is not a critically ill clients .
4. Age group less than 55 years.

Exclusion criteria

Post Abdominal hysterectomy with

1. Not willing to participate in the study.
2. Women with postural hypotension and unstable Tachycardia.

3.10 Description and Development of Tool

The tool was developed and standardized from extensive review of literature and discussion with the experts in the field. The tool consists of three sections. They were

Section A: Socio demographic variables.

Section B: Baseline variables.

Section C: Modified standardized tool of constipation assessment scale, wound healing assessment scale, urinary tract symptoms assessment questionnaire,

Description of the tool

The tool consists of three sections

Section A

Consists of Socio demographic variables age, religion, marital status occupation, monthly income, education status, occupation, religion, diet pattern, Residence.

Section B

Consists of Clinical variables like Weight, parity, Type of Anesthesia, Indications.

Section C

Modified kendall constipation assessment scale consists of 4 Questionnaires, barber wound healing assessment scale consists of 5 Questionnaire, Bristol urinary tract symptoms assessment questionnaire Consists of 4 Questionnaire.

3.11 Scoring Interpretation

Section A : No scoring was allotted for the Socio demographic Variables.

Section B : No scoring was allotted for the baseline variables.

Section C I : Modified kendall constipation assessment scale was used for assessing the level of constipation. The tool consist of 4 Questionnaire. The total Score is 4 which were given by 0 – No Problem, 1 – 2 Mild problem 3-4 Moderate problem.

Scores	Level of Problem
0	No Problem
1 – 2	Mild Problem
3-4	Moderate problem

Section C II

Modified barber wound healing assessment Scale was used for assessing the level of Wound Healing. The tool consist of 5 Questionnaires. The total Score is 15 which were given by 0 – Normal, 1 – 5 Good Healing, 6 – 10 Average Healing, 11-15 Poor Healing.

Scores	Level of Problem
0	Normal
1-5	Good healing
6-10	Average Healing
11-15	Poor Healing

Section C III

Modified bristol urinary Tract Symptoms Assessment Questionnaire was used for assessing the level of Urinary Tract Infection. The tool consist of 4 Questionnaires. The total Score is 4 which were given by 0 – No Problem, 1 – 2 Mild problem 3-4 Moderate problem

Scores	Level of Problem
0	No Problem
1 – 2	Mild Problem
3-4	Moderate problem

3.12 Testing of the tool

Validity

In order to measure the validity, content and tool ,the was given to expert in the field of three obstetrical and Gynecological nursing and Professors of Obstetrical and Gynecological department. They were judge the items for clarity relatedness meaningfulness and adequacy of the contents. Tool was translated in to tamil and retranslated to English to confirm the language validity.

Reliability

The tool was assessed by using inter-rater reliability method and its correlation coefficient r–value was 0.85 (UTI score), 0.82 (Constipation) and 0.87 (Wound healing). These correlation coefficient is very high and it is good tool for evaluate the effectiveness of early ambulation on post-operative recovery among the women who has undergone abdominal hysterectomy in gynecology post-operative ward at Government Rajaji Hospital, Madurai.

3.13 Pilot Study

A Formal permission was obtained from Ethical committee and Professors in Obstetrical and Gynecological department, Government Rajaji Hospital, Madurai. The pilot study was conducted at above department for a period of 7 days from 21.05.2018 to 27.05.2018. The investigator selected 10 subjects who were met their inclusive criteria by using simple random sampling technique in gynecology post operative ward in which the interventional group receives. Intervention of early ambulation of 15 to 20 minutes thrice a day for three consecutive days. The study was practicably feasible to be conducted with a larger sample size.

3.14 Ethical and legal consideration

This study was conducted after the approval from the Ethical committee, Madurai Medical College, Madurai-20. All respondents were carefully informed about the purpose of the study and their part during the study and how the privacy was guarded. Ensured confidentiality of the study result. Written permission was obtained from all participants.

3.15 Procedure for data collection

Permission was obtained from Head of the department in Obstetrics and Gynecology and Ethical committee in Government Rajaji Hospital Madurai – 20.The main study was done from 04.06.2018 to 13.07.2018. The data was collected at Gynecology post operative ward in Government Rajaji Hospital Madurai.

Rapport established with abdominal hysterectomy women after a brief introduction about the study and its purpose. The informed oral and written consent was obtained from the women undergone abdominal hysterectomy after fully explaining the procedure of the study. Based on the inclusion criteria, 60 subjects for the study were selected by using simple random sampling technique (lottery method). In which the interventional group receives early ambulation for 15-20 minutes thrice a day for 3 consecutive days. Post test were conducted after 6 days for both groups by using the constipation assessment scale, same procedure followed for four weeks until the fulfillment of required samples. Then the result were analyzed and compared.

3.16 Plan for data analysis

The Data analysis involved the translation of information collected during the course of research project into an interpretable and managerial form. It involved the use of statistical procedures to give an organization and meaning to the data. Descriptive and inferential statistics used for data analysis.

Descriptive statistics

1. Frequency and Percentage distribution is used to analyze the socio demographic variables.
2. Mean and standard deviation were be used for assessing the post - test level of post – operative recovery among the women who has undergone abdominal hysterectomy.

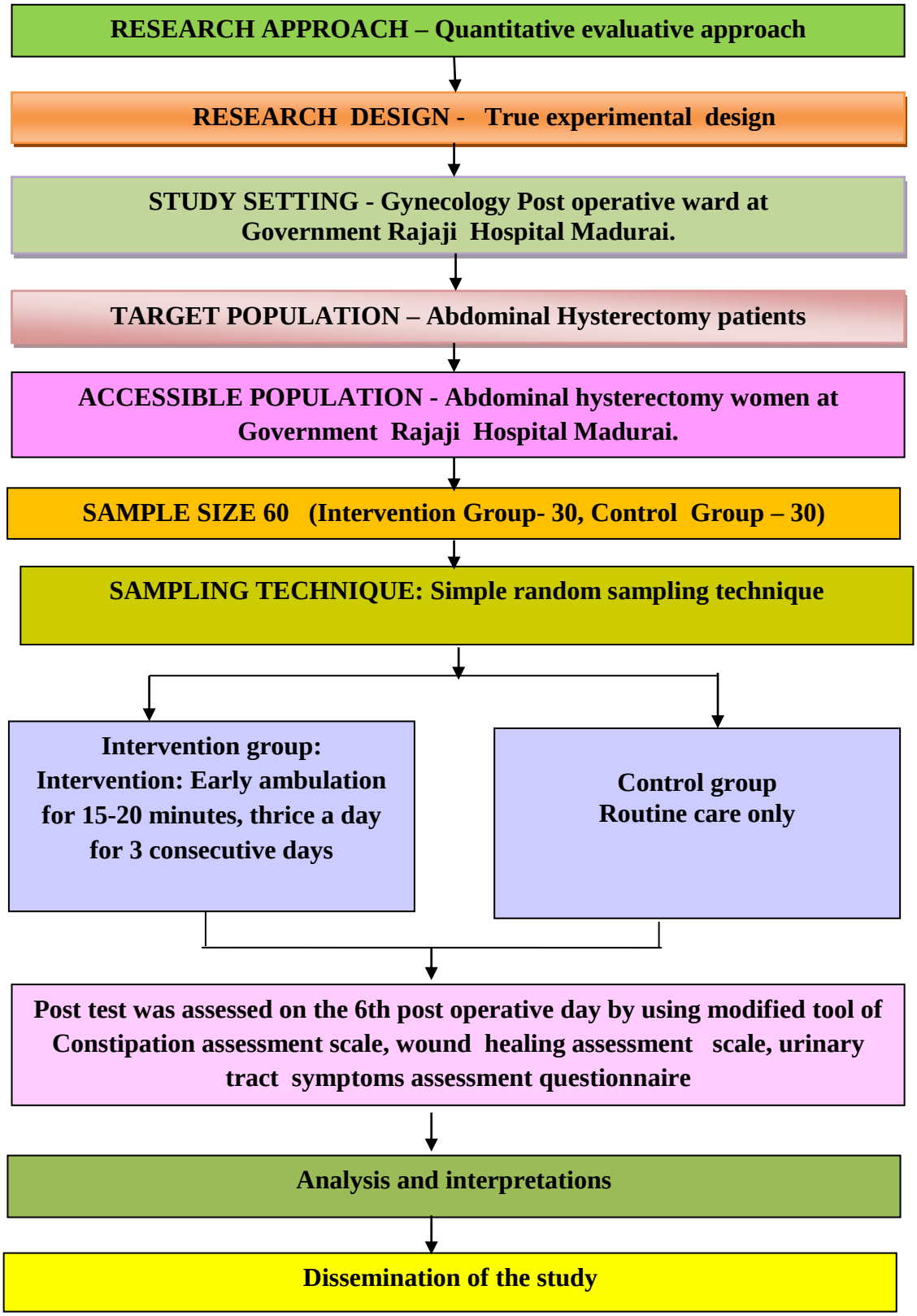
Inferential statistics

1. **Unpaired t – test** was used to analyze the effectiveness of early ambulation on the women who has undergone abdominal hysterectomy between the experiment group and control group.
2. **Chi- square test** was used to find out the association between post test among the women who has undergone abdominal hysterectomy with their selected socio demographic variables and clinical variable.

3.17 Protection of human rights

The investigator obtained approval from dissertation committee, College of Nursing, the Ethical committee of Government Rajaji Hospital, Madurai. Formal permission was obtained from the Head of the Department in Obstetrics and gynecology. An informed oral and written consent of each study samples was obtained before starting the data collection. The advantage of the study were explained to the samples. Assurance was given to the subjects that confidentiality and anonymity was maintained throughout the study.

3.18 SCHEMATIC REPRESENTATION OF RESEARCH METHODOLOGY



Data Analysis and Interpretation

CHAPTER IV

DATA ANALYSIS AND INTERPRETATION

The chapter deals with the analysis and interpretation of the data collected from 60 abdominal hysterectomy women. A study to evaluate the effectiveness of early ambulation on post operative recovery among the women who has undergone abdominal hysterectomy at Government Rajaji Hospital Madurai. The analysis used for this study was descriptive and inferential statistics.

Organization of the data

The analysis and interpretation of data was organized under the following

Section- I : Distribution of abdominal hysterectomy women according to their selected socio demographic variables.

Section- II: Distribution of abdominal hysterectomy women according to their clinical variables.

Section- III : Effectiveness of early ambulation on post operative recovery among the women who has under gone abdominal hysterectomy.

Section- IV: Association between post operative recovery among the women who has undergone abdominal hysterectomy with their selected socio demographic variables and clinical variables.

SECTION - I

Distribution of abdominal hysterectomy women according to their selected socio demographic variables

Table 1

Frequency and percentage distribution of subjects according their selected socio demographic variables

n=30

Socio demographic variables		Group				χ^2
		Intervention(n=30)		Control(n=30)		
		f	%	f	%	
Age	< 50 years	11	36.67%	10	33.33%	χ2=0.19 P=0.91(NS)
	51 -60 years	16	53.33%	16	53.33%	
	>60 years	3	10.00%	4	13.33%	
Religion	Hindu	15	50.00%	14	46.67%	χ2=0.32 P=0.85(NS)
	Christian	9	30.00%	11	36.66%	
	Muslim	6	20.00%	5	16.67%	
Marital status	Unmarried	2	6.67%	3	10.00%	χ2=0.55 P=0.75(NS)
	Married	21	70.00%	22	73.33%	
	Others	7	23.3 3%	5	16.67%	
Education status	No formal education	6	20.00%	7	23.33%	χ2=3.94 P=0.13(NS)
	Primary Education	11	36.67%	17	56.67%	
	Higher Education	13	43.33%	6	20.00%	

Occupation status	Home maker	5	16.67%	8	26.67%	$\chi 2=1.61$ P=0.44(NS)
	Govt employee	14	46.66%	15	50.00%	
	Private employee	11	36.67%	7	23.33%	
	Former	0	0.00%	0	0.00%	
	Others	0	0.00%	0	0.00%	
Monthly income	Rs.1001 – 3000	4	13.33%	3	10.00%	$\chi 2=0.61$ P=0.73(NS)
	Rs.3001- 5000	15	50.00%	18	60.00%	
	> Rs.5000	11	36.67%	9	30.00%	
Place of residence	Urban	11	36.67%	14	46.67%	$\chi 2=0.61$ P=0.43(NS)
	Rural	19	63.33%	16	53.33%	
Dietary pattern	Vegetarian	9	30.00%	6	20.00%	$\chi 2=0.80$ P=0.37(NS)
	Non vegetarian	21	70.00%	24	80.00%	

The above table 1 explains the distribution of abdominal hysterectomy women according to their selected socio demographic variables.

In aspects of age in intervention group, majority of subjects 16 (53.33%) belongs to the age group between 51-60 years , 11 (36.67%) belongs to the age group less than 50 years, 3 (10.00%) belongs to the age group more than 60 years. Whereas in the control group , 16 (53.33%) belongs to the age group between 51-60 years, 10 (33.33%) belongs to the age group between 50 years and 4 (13.33%) belongs to the age group more than 60 years.

Regarding religion in intervention group ,majority of the subjects 15 (50.00%) were Hindu ,9 (30.00%) were Christian and 6 (20.00%) were MJuslim. Whereas in the control group, majority of the women 14 (46.67%) were Hindu, 11 (36.66%) were Christian, 5 (16.67%) were Muslim.

With regards to marital status in intervention group, majority of the subjects 21 (70.00%) of them were married, 2 (6.67%) were unmarried, 7 (23.33%) of them were in other religion. Whereas in the control group, majority of them 22 (73.33%) were married , 5 (16.67%) were unmarried, 3 (10.00%) were in other religion.

When the education is considered in intervention group, majority of the subjects 13 (43.33%) were studied upto higher education, 11 (36.67%) were studied upto primary education, 6 (20.00%) were had no formal education .Whereas in the control group majority of the subjects 17 (56.67%) were studied upto primary education, 7 (23.33%) were had no formal education, 6 (20.00%) were studied upto higher education

Regarding occupation status in intervention group , majority of the subjects 14 (46.66%) were Govt employee, 11 (36.67%) were private employee, 5 (16.67%) were homemakers,whereas in the control group, majority of the subjects 15 (50.00%) were Govt employee, 8 (26.67%) were home maker, 7 (23.33%) were private employee.

With the aspect of monthly income in intervention group, majority of the subjects 15 (50.00%) were earned between Rs.3001-5000, 11 (36.67%) were earned more than Rs 5000, 4 (13.33%) were earned between Rs.1001-3000. Whereas in the control group, majority of the subjects 18 (60.00%) were earned between Rs.3001-5000, 9 (30.00%) were earned more than Rs 5000, 3 (10.00%) were earned between Rs.1001-3000 per month..

When the place of residence in interventional group majority of the subjects 19 (63.33%) were hailed from rural, 11 (36.67%) were hailed from urban. Whereas in the control group, majority of the subjects 16 (53.33%) were hailed from rural, 14 (46.67%) were hailed from urban.

Regarding the diet pattern in intervention group, majority of the subjects 21 (70.0) were vegetarian, 9 (30.00 %) were non vegetarian. Where as in the control group, majority of the Subjects 24 (80.00) were non vegetarian, 6 (20.00%) were vegetarian.

Distribution of subjects according to age

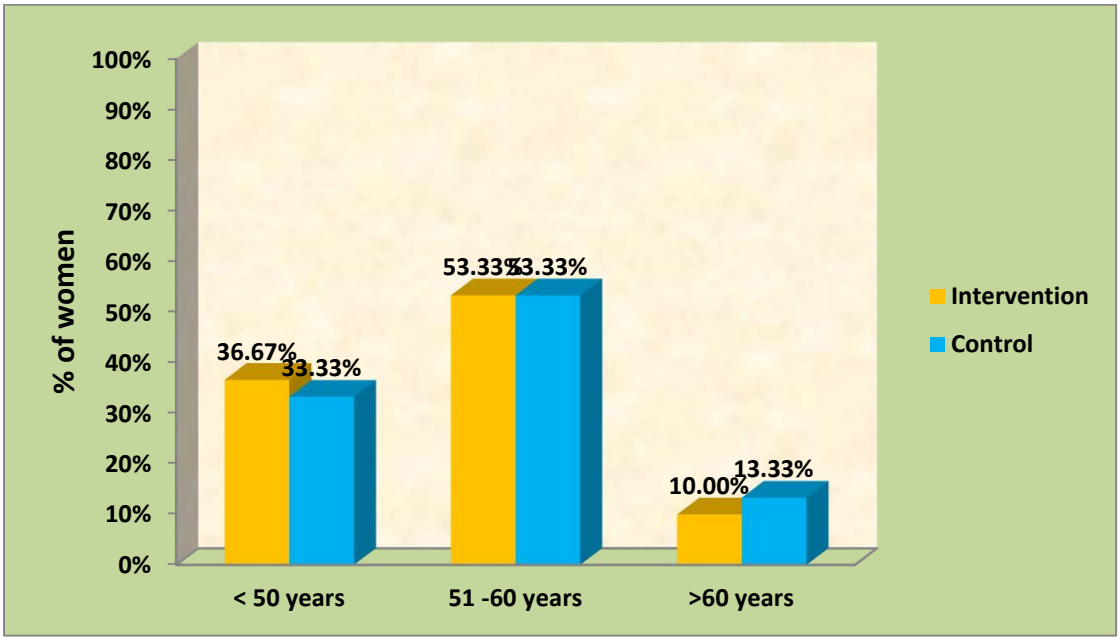


Figure 2 : Bar diagram shows that distribution of that subjects according to their age

In intervention group, majority of subjects 16 (53.33%) belongs to the age group between 51-60 years, 11 (36.67%) belongs to the age group less than 50 years, 3 (10.00%) belongs to the age group more than 60 years. Whereas in the control group, 16 (53.33%) belongs to the age group between 51-60 years, 10 (33.33%) belongs to the age group less than 50 years and 4 (13.33%) belongs to the age group more than 60 years.

Distribution of subjects according to religion

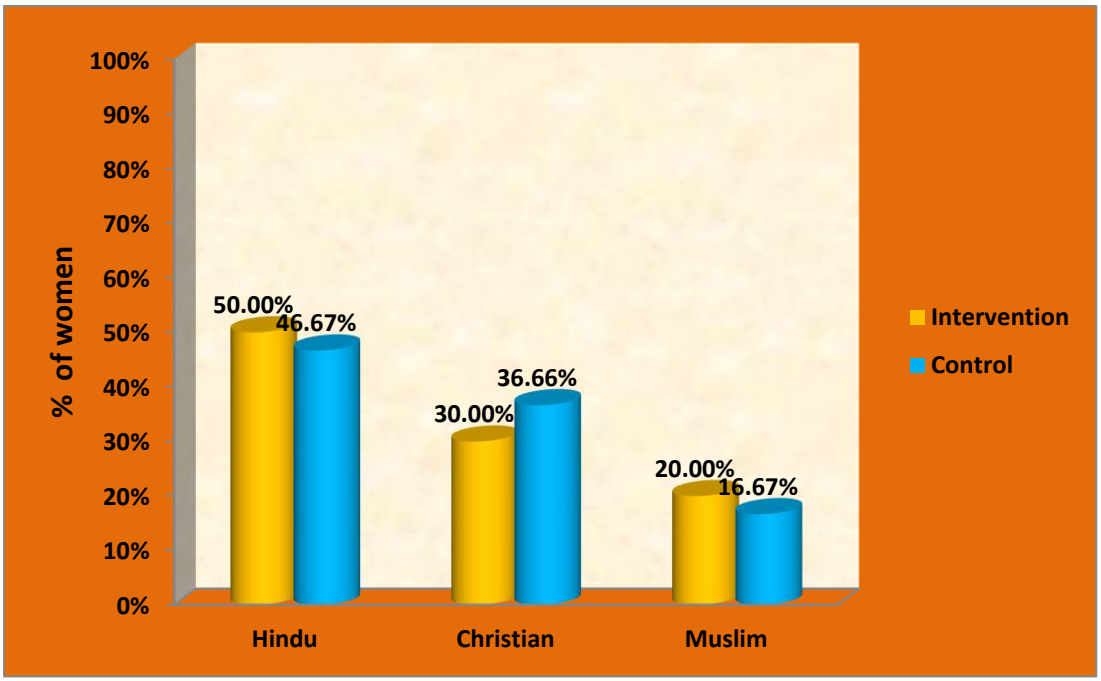


Figure 3 : Cylindrical diagram shows that distribution of subjects according to their religion

In intervention group, majority of the subjects 15 (50.00%) were Hindu ,9 (30.00%) were Christian and 6 (20.00%) were Muslim. Whereas in the control group, majority 14 (46.67%) were Hindu, 11 (36.66%) were Christian, 5 (16.67%) were Muslim

Distribution of subjects according to marital status

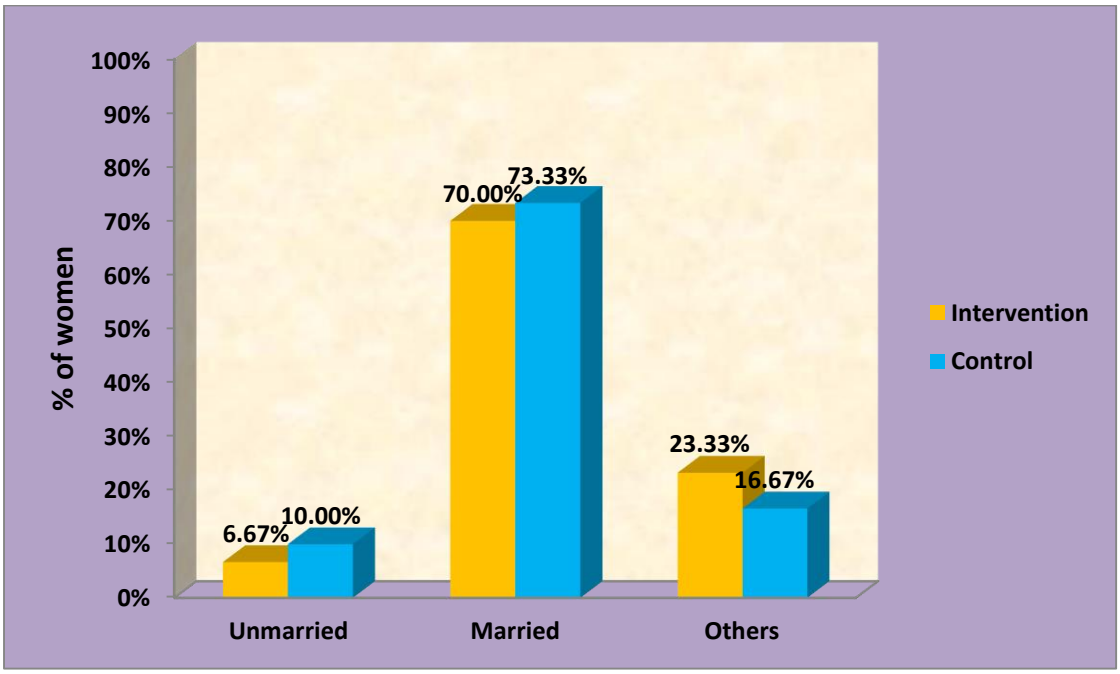


Figure 4 : Bar diagram represents that distribution of subjects according to their marital status

In intervention group, majority of the subjects 21 (70.00%) of them married, 2 (6.67%) were unmarried, 7 (23.33%) of them were in other religion. Whereas in the control group, majority 22 (73.33%) were married, 5 (16.67%) were unmarried, 3 (10.00%) were in other religion.

Distribution of subjects according to education status

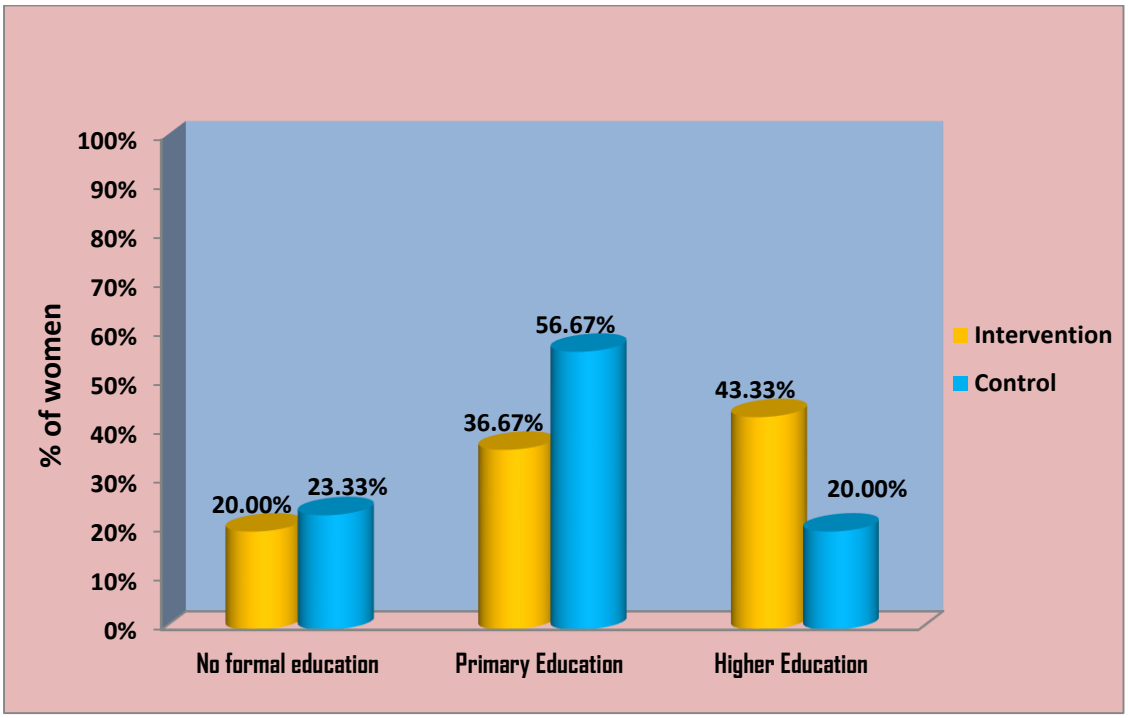


Figure 5 :Cylindrical diagram represents that distribution of subjects according to their education status

In intervention group ,majority of the subjects 13 (43.33%) were studied up to higher education, 11 (36.67%) were studied up to primary education, 6 (20.00%) were had no formal education .Whereas in the control group majority of the subjects 17 (56.67%) were studied up to primary education, 7 (23.33%) were had no formal education ,6 (20.00%) were studied up to higher education

Distribution of subjects according to occupation status

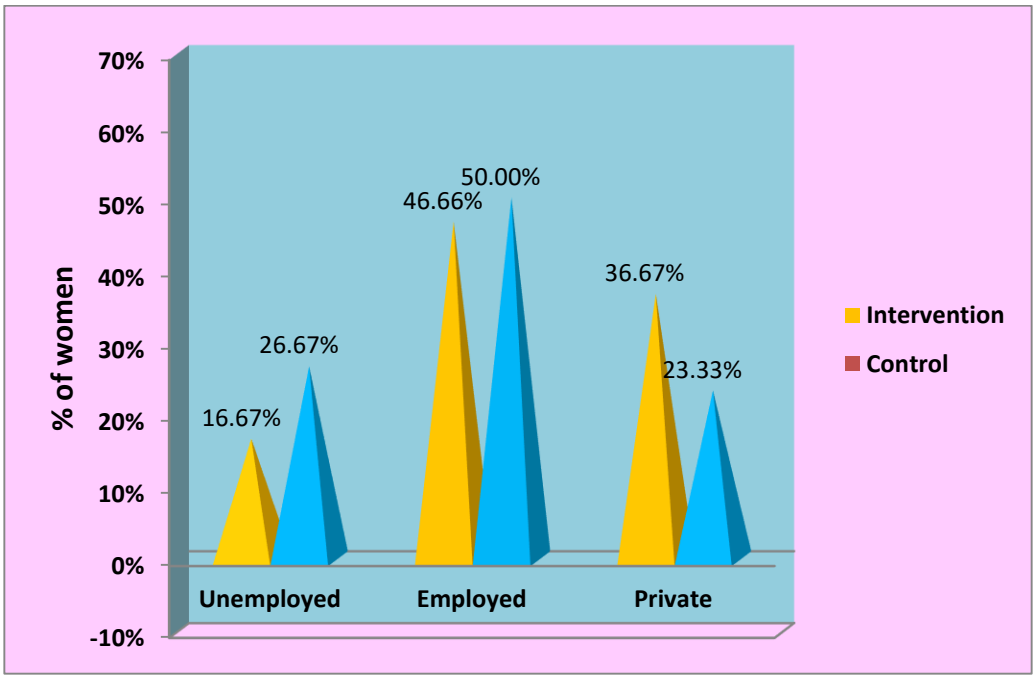


Figure 6 : Cone diagram shows that distribution of subjects according to their occupation status

In intervention group, majority of the subjects 14 (46.66%) were Govt employee, 11 (36.67%) were private employee, 5 (16.67%) were homemakers, whereas in the control group, majority 15 (50.00%) were Govt employee, 8 (26.67%) were home maker, 7 (23.33%) were private employee.

Distribution of subjects according to monthly income

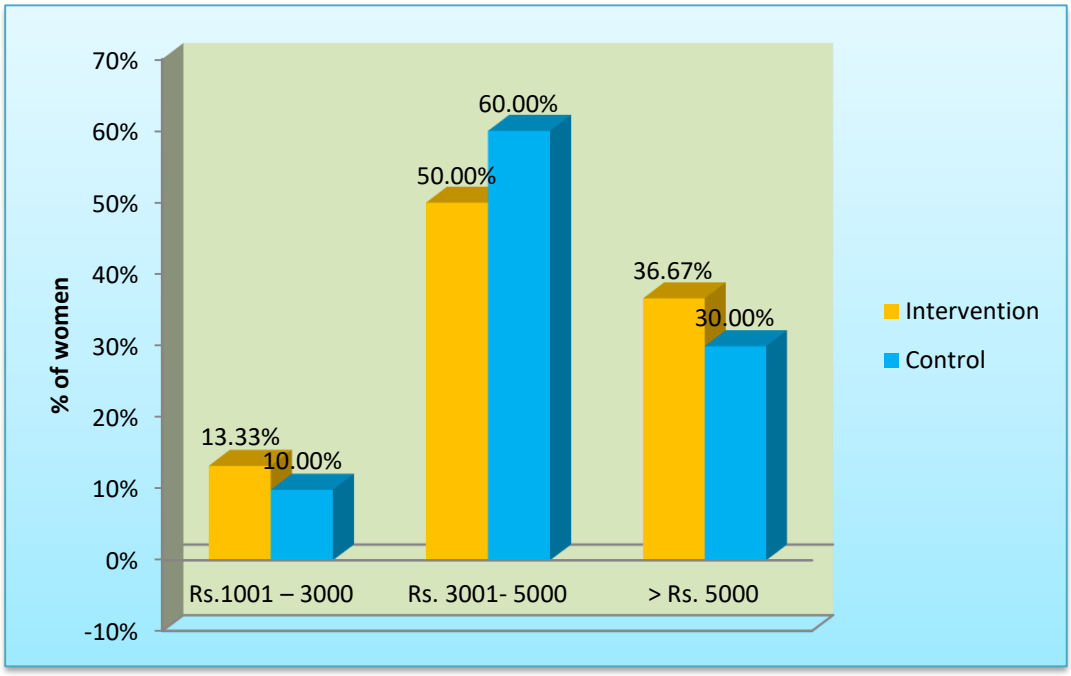


Figure 7 :Bar Diagram shows that distribution of that subjects according to their monthly income

In intervention group, majority of the subjects 15 (50.00%) were earned between Rs.3001-5000 per month , 11 (36.67%) were earned between more than Rs 5000, 4 (13.33%) were earned between Rs.1001-3000. Whereas in the control group, majority 18 (60.00%) were earned between Rs.3001-5000, 9 (30.00%) were earned between more than Rs 5000 per month, 3 (10.00%) were earned between Rs.1001-3000 per month..

Distribution of subjects according to place of residence

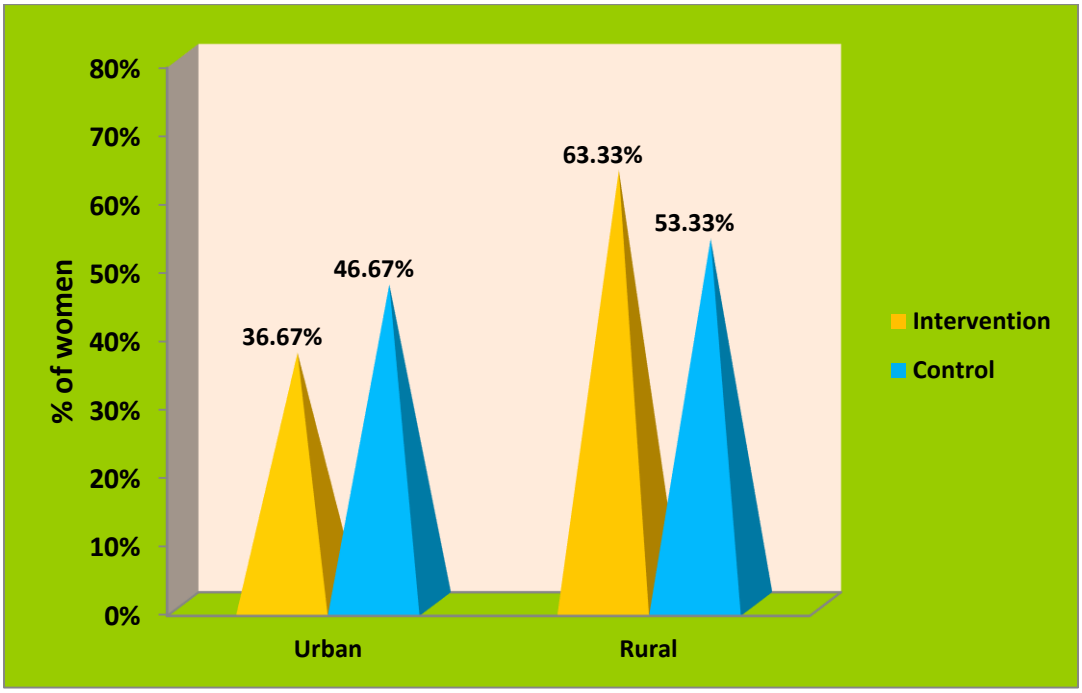


Figure 8 : Pyramid diagram represents that distribution of that subjects according to their place of residence.

In intervention group 19 (63.33%) were hailed from rural, 11 (36.67%) were hailed from urban. Whereas in the control group , majority 16 (53.33%) were hailed from rural, 14 (46.67%) were hailed from urban.

Distribution of subjects according to diet pattern

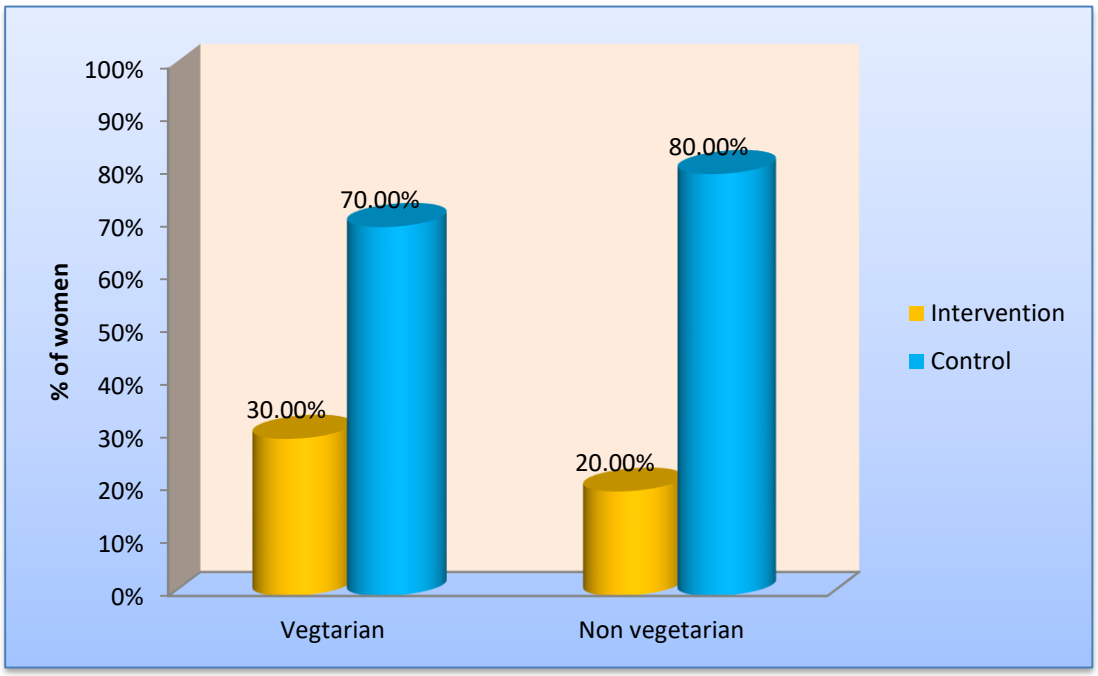


Figure 9: The cylindrical diagram represents that distribution of subjects according to their diet pattern.

In intervention group majority of the subjects 21 (70.0) were vegetarian, 9 (30.00 %) were non vegetarian. Whereas in the control group, majority 24 (80.00) were non vegetarian , 6 (20.00%) were vegetarian.

SECTION II

Distribution of the abdominal hysterectomy women according to their selected clinical variable in intervention group and control group .

Table - 2

Frequency and percentage distribution of the abdominal hysterectomy women according to their clinical variable.

n=60

Clinical variables		Group				χ^2
		Intervention group (n=30)		Control group (n=30)		
		f	%	f	%	
Weight	< 50Kg	7	23.33%	5	16.67%	χ^2=0.58 p=0.74(NS)
	50Kg -60kg	16	53.34%	16	53.33%	
	>60kg	7	23.33%	9	30.00%	
Parity	nulliparous	2	6.67%	2	6.67%	χ^2=0.71 P=0.70(NS)
	< 3 delivery	20	66.66%	17	56.67%	
	> 3 delivery	8	26.67%	11	36.66%	
Type of anaesthesia	Regional	10	33.33%	6	20.00%	χ^2=1.47 P=0.48(NS)
	General	15	50.00%	19	63.33%	
	0thers	5	16.67%	5	16.67%	
Indications	Dysfunctional uterine bleeding	5	16.67%	3	10.00%	χ^2=0.68 P=0.71(NS)
	Fibroids	15	50.00%	15	50.00%	
	Carcinomauterus	10	33.33%	12	40.00%	

The above table 2 shows that distribution of the abdominal hysterectomy women according to their clinical variables.

When comparing the weight in interventional group, majority of the subjects 16 (53.34%) were had 50 Kg - 60kg, and 7 (23.33%) of them were had less than 50 kg and remaining 7 (23.33%) were had more than 60kg of weight. Whereas in the control group, majority of the subjects 16 (53.33%) were had 50 kg-60 kg, 9 (30.00%) were had more than 60 kg and remaining 5 (16.67%) were had less than 50 kg.

Regarding parity in intervention group , majority of the subjects 20 (66.66%) were had less than three delivery, 8 (26.67%) were had more than three delivery and remaining 2 (6.67%) of them nulliparaous. Whereas in the control group , majority of the subjects 17 (56.67%) were had more than three delivery, 11 (36.66%) were had less than three delivery and remaining 2 (6.67%) of them nalliparous..

When comparing the type of anaesthesia, in intervention group, the majority of subjects 15 (50.00s%) were had general anaesthesia, 10 (33.33%) were had regional anaesthesia, remaining 5 (16.67%) of them were had other type of anaesthesia. Whereas in the control group, majority of the subjects 19 (63.38%) were had general anaesthesia, 6 (20.00%) were had regional anaesthesia and remaining 5 (16.67%) of them were had other type of anaesthesia.

In view of indications in the intervention group ,majority of the subjects 15 (50.00%) were had fibroids , 10 (33.33%) were had carcinoma uterus and remaining 5 (16.67) of them were had dysfunctional uterine bleeding. Whereas in the control group, 15 (50.00%) were had dysfunctional uterine bleeding, 12 (40.00%) were had fibroids, remaining 3 (10.00 %) of them were had carcinoma uterus

Distribution of the subjects according to weight

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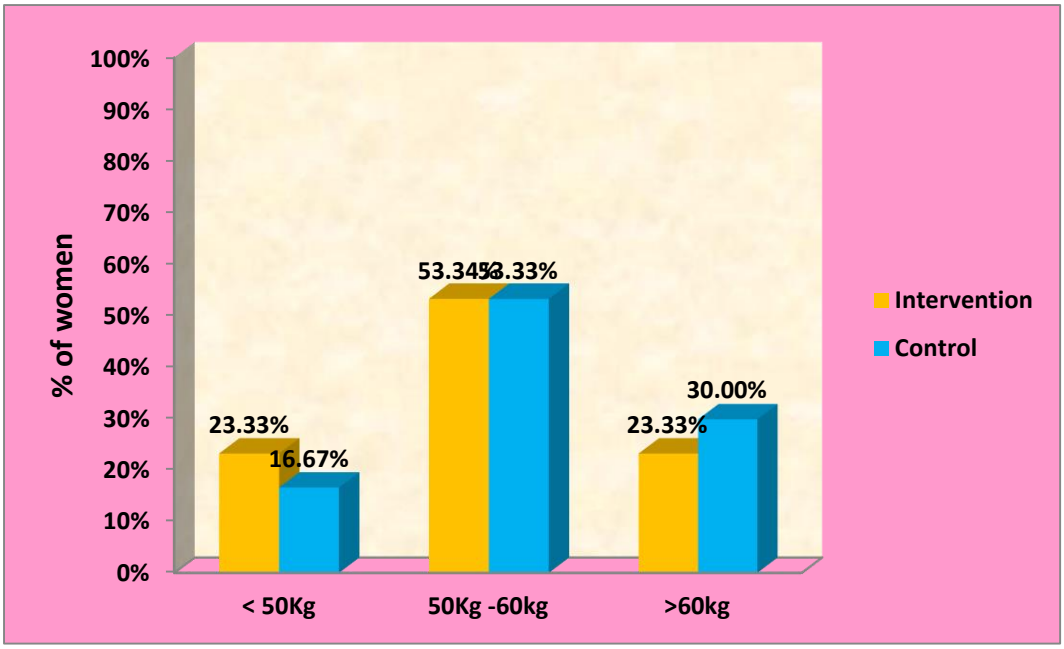

Figure :10 Bar diagram depicts that distribution of subjects according to their weight

In interventional group, majority of the subjects 16 (53.34%) were had 50 Kg - 60 kg, and 7 (23.33%) of them were had less than 50 kg and remaining 7 (23.33%) were had more than 60kg of weight. Where as in the control group , majority of the subjects 16 (53.33%) were had less than 50 kg-60 kg, 9 (30.00%) were had more than 60 kg, 5 (16.67) were had less than 50 kg.

Distribution of the subjects according to parity

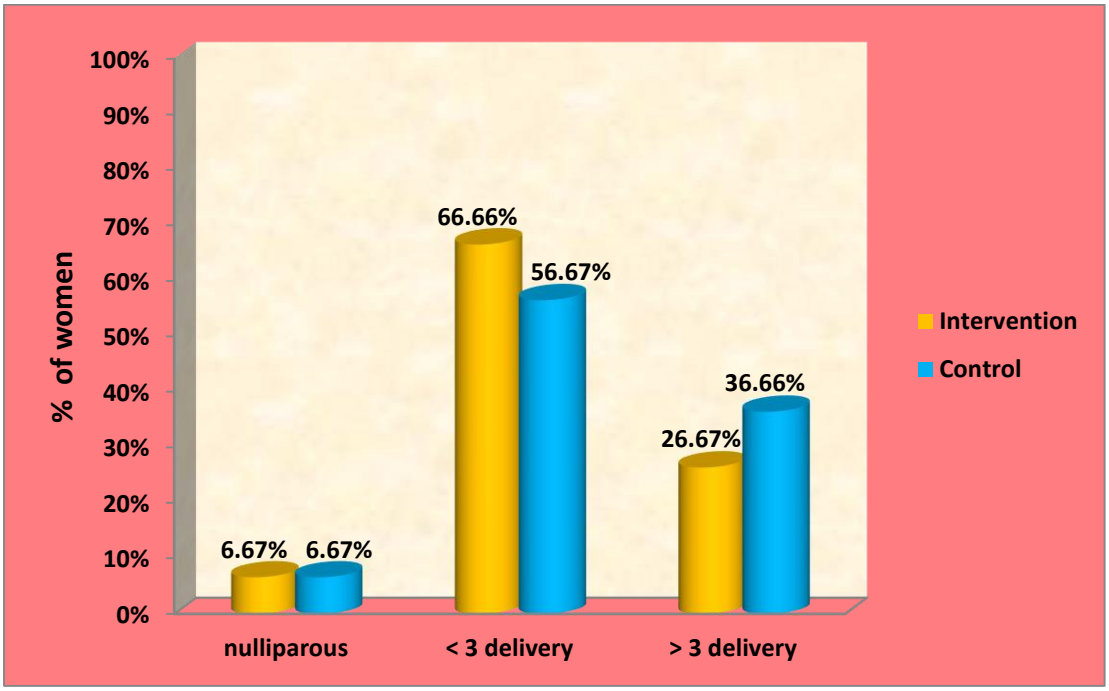

Figure: 11 cylinder diagram represents that distribution of subjects according to their parity.

In intervention group, majority of the subjects 20 (66.66%) were had less than three delivery, 8 (26.67%) were had more than three delivery and remaining 2 (6.67%) of them nulliparaous. Whereas in the control group, majority of the subjects 17 (56.67%)were had more than three delivery, 11 (36.66%) were had less than three delivery and remaining 2 (6.67%) of them nulliparous..

Distribution of subjects according to type of anesthesia

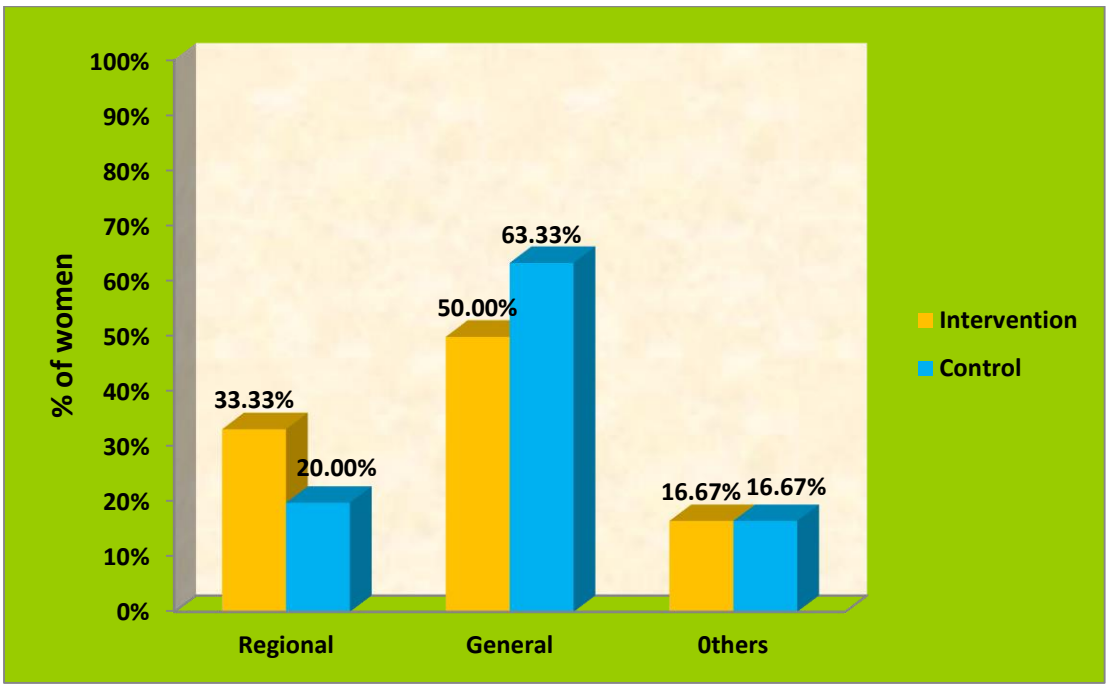

Figure :12 Bar diagram represents that distribution of the subjects according to their type of anesthesia.

In intervention group, the majority of subjects 15 (50.00s%) were had general anaesthesia, 10 (33.33%) of them were had regional anaesthesia ,and remaining 5 (16.67%) of them were had other type of anaesthesia.. Whereas in the control group, majority of the subjects 19 (63.38%) were had general anaesthesia , 6 (20.00%) were had regional anaesthesia and remaining 5 (16.67%) of them were had other type of anaesthesia.

Distribution of the subjects according to indications.

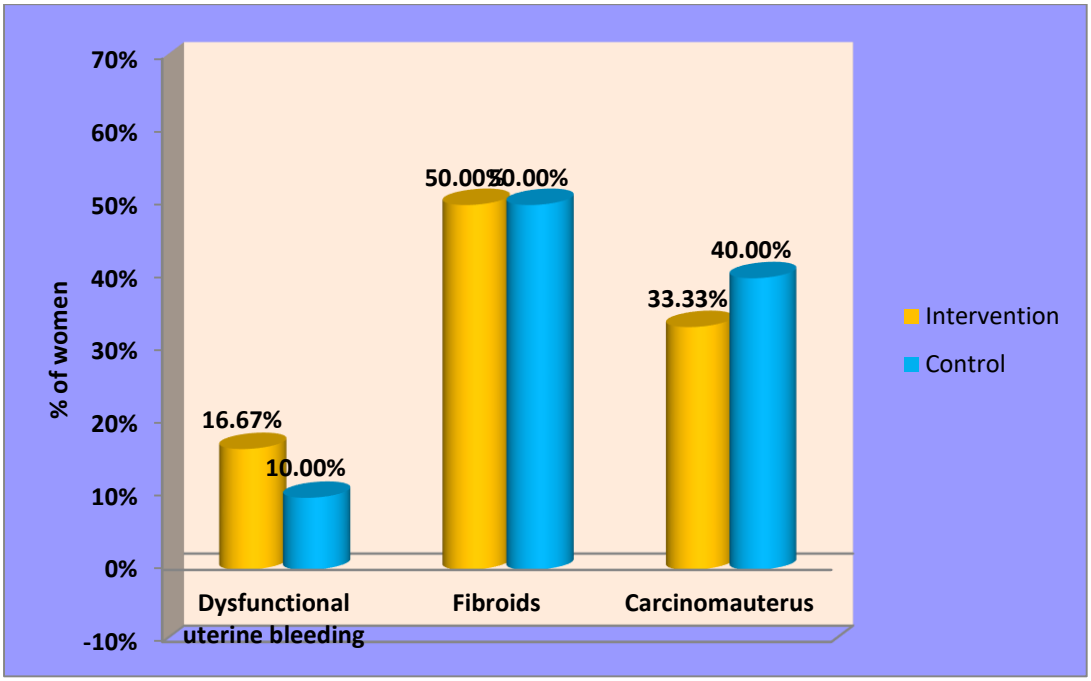

Figure : 13 Cylindrical diagram depicts that distribution of the subjects according to their indications of abdominal hysterectomy..

In the intervention group, majority of the subjects 15 (50.00%) were had fibroids, 10 (33.33%) were had carcinoma uterus and remaining 5 (16.67) of them were had dysfunctional uterine bleeding. Whereas in the control group, 15 (50.00%) were had dysfunctional uterine bleeding, 12 (40.00%) were had fibroids, remaining 3 (10.00 %) of them were had carcinoma uterus.

SECTION - III

Effectiveness of early ambulation on post operative recovery among the women who has undergone abdominal hysterectomy women.

Table 3

Frequency and percentage distribution of post test level of constipation .

n=60

Constipation	Group				$\chi 2$
	Intervention		Control		
	f	%	f	%	
No problem	25	83.33%	0	0.00%	**$\chi 2$=48.33 P=0.001***(S)**
Mild problem	5	16.67%	7	23.33%	
Moderate problem	0	0.00%	23	76.77%	
Total	**30**	**100.0%**	**30**	**100.0%**	

Table 3 Portrays that distribution of post test level of constipation score among intervention group and control group.

In intervention group, majority of subjects 25 (83.33%) were had no problem, remaining 5 (16.67%) were had mild problem and none of them had moderate problem. Whereas in the control group, 23 (76.77) were had moderate problem, remaining 7 (23.3 %) were had mild problem and none of them were had no problem. $\chi 2$=48.33 showed a difference in the post test level of constipation among intervention and control group

Post test level of constipation

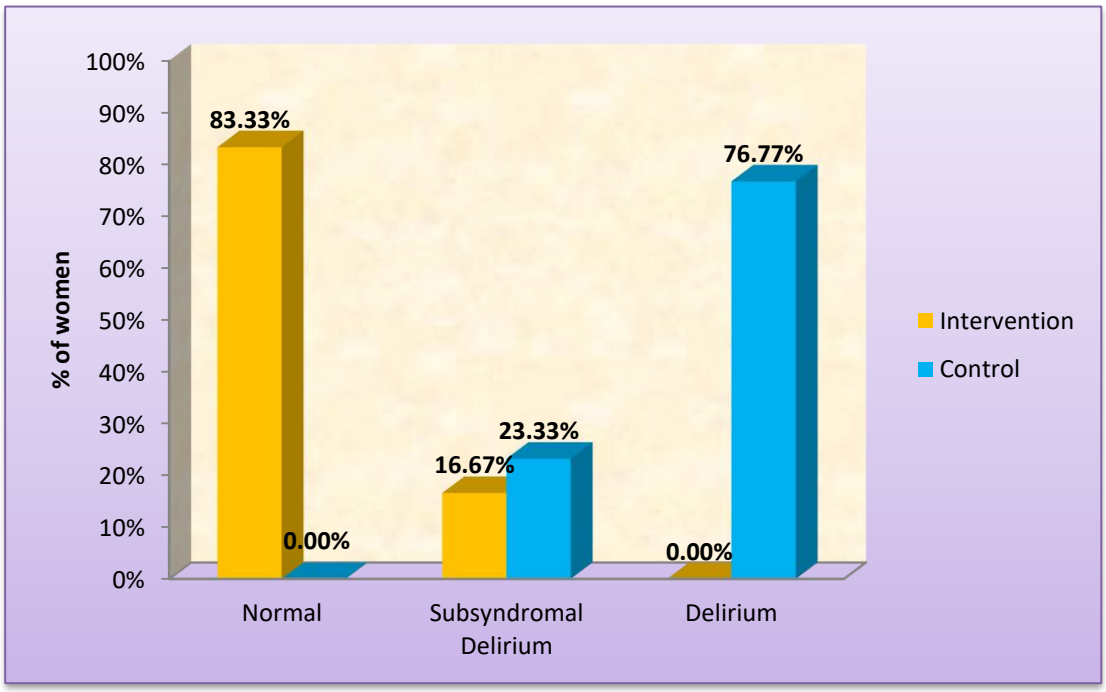

Figure 14 : Bar diagram represent that distribution of subjects according to their post test level of constipation.

In intervention group, majority of subjects 25 (83.33%) were had no problem, remaining 5 (16.67%) were had mild problem and none of them were had moderate problem. Whereas in the control group, 23 (76.77) were had moderate problem, remaining 7 (23.3 %) were had mild problem and none of them were had no problem $\chi 2=48.33$ showed a difference in the post test level of constipation among intervention group and control group.

Table : 4 Frequency and percentage distribution of post test level urinary tract infection symptoms.

n=60

Urinary tract infection symptoms	**Group**				**$\chi 2$**
	Intervention		**Control**		
	f	**%**	**f**	**%**	
No problem	25	83.33%	0	0.0%	$\chi 2$=43.7
Mild problem	5	16.67%	22	73.33%	0P=0.001***(S)
Moderate problem	0	0.00%	8	26.67%	
Total	**30**	**100.0%**	**30**	**100.0%**	

Table 4 Portrays that distribution of post test level of urinary tract infection symptoms among intervention group and control group.

In intervention group, majority of subjects 25 (83.33%) were had no problem, remaining 5 (16.67%) were had mild problem and none of them were had moderate problem. Where as in the control group , majority of subjects 22 (73.33%) were had moderate problem, remaining 8 (26.67 %) were had mild problem and none of them had no problem $\chi 2$=43.70 showed a difference in the post level of urinary tract infection symptoms among intervention group and control group .

Post test level of urinary tract Infection symptoms

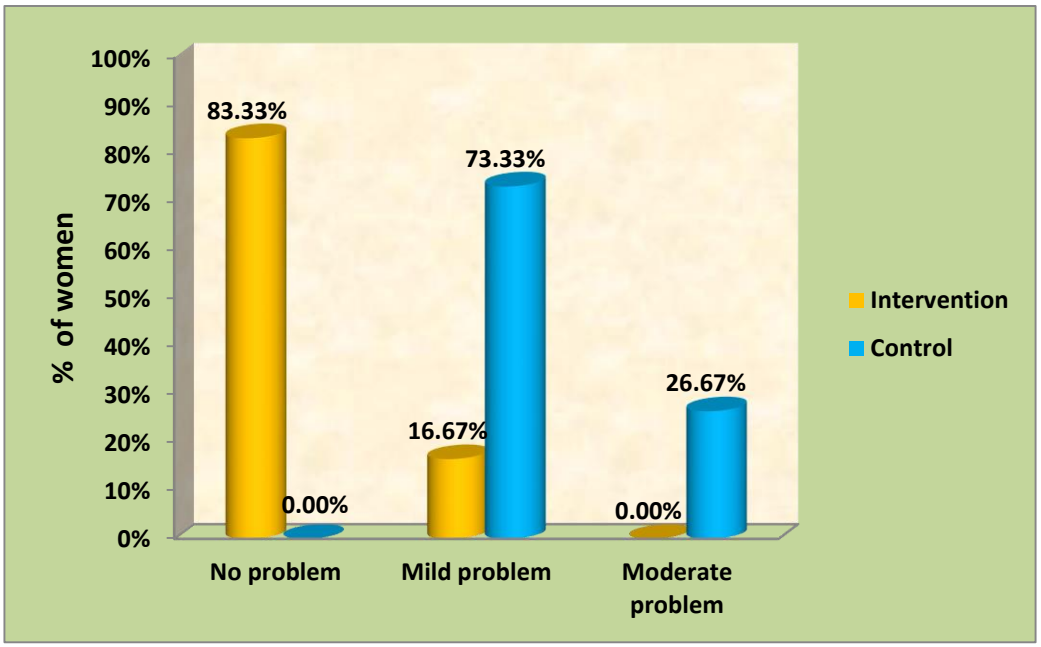

Figure : 15 Cylinder diagram revealed that distribution subjects according to their post test level of urinary tract infection symptoms

In intervention group, majority of subjects 25 (83.33%) were had no problem, remaining 5 (16.67%) were had mild problem and none of them were had moderate problem in urinary tract infection symptoms. whereas in the control group, 22 (73.33%) were had moderate problem, remaining 8 (26.67 %) were had mild problem and none of them were had in urinary tract infection. In $\chi 2=43.70$ showed a difference in the post level of urinary tract infection symptoms among intervention group and control group.

Table : 5 Frequency and percentage distribution of post test level of wound healing

n=60

Wound healing	Group				χ^2
	Intervention		Control		
	f	%	f	%	
Normal	24	80.00%	0	0.00%	**χ^2=5.93 p=0.02*(S)**
Good wound healing	6	20.00%	15	50.00%	
Poor wound healing	0	0.00%	15	50.00%	
Total	**30**	**100.0%**	**30**	**100.0%**	

Table 5 Portrays that distribution subjects according to their post test level of wound healing score among abdominal hysterectomy women.

In intervention group, majority of subjects 24 (80.00%) were had normal wound healing, remaining 6 (20.00%) were had good wound healing and none of them were had poor wound healing . whereas in the control group , 15 (50.00) were had poor healing and good wound healing and none of them were had normal wound healing . χ2=5.93 showed a difference in the post test level of wound healing among intervention group and control group

Post test level of wound healing

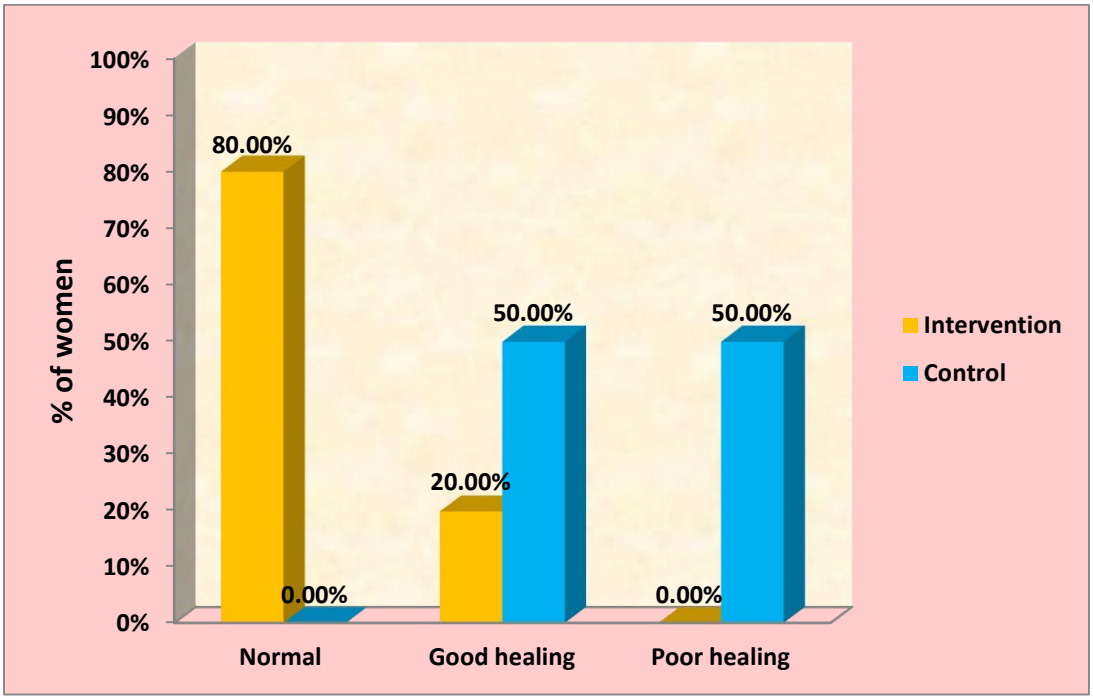

Figure 16 : Bar diagram represents that distribution of subjects according to their post test level of wound healing .

In intervention group, majority of subjects 24 (80.00%) were had normal wound healing, remaining 6 (20.00%) were had good wound healing and none of them had poor wound healing. whereas in the control group, 15 (50.00) were had poor healing and good wound healing and none of them were had normal wound healing $\chi 2=5.93$ showed a difference in the post test level of wound healing among intervention group and control group .

Table : 6 Comparison of post test level of post operative recovery among abdominal hysterectomy women

n=60

	Group	n	Mean	SD	Student independent t-test
Constipation	Intervention	30	*.33*	*.75*	**t=14.16 P=0.001*** (S)**
	Control	30	*3.03*	*.71*	
Urinary	Intervention	30	.33	.75	**t=10.01**
	Control	30	2.13	.62	**P=0.001*** (S)**
Wound	Intervention	30	2.37	.96	**t=8.03**
	Control	30	5.53	1.85	**P=0.001*** (S)**

The above table 6 shows that post test level of post operative recovery among abdominal hysterectomy women both intervention group and control group.

In intervention group, the mean constipation score was 0 .33, with standard deviation 0.75. Where as in the control group, the mean score was 3.03, with standard deviation 0.71 . The student independent "t" test was done to find out the difference between intervention and control group . The calculated "t" value 14.16 was greater than table value which was significant at 0.001 level.

In intervention group, the mean urinary infection symptoms score was 0 .33, with the standard deviation 0. 75. whereas in the control group , the mean score 2.13, with standard deviation 0.62. The student independent 't' test was done to find out the difference between intervention and control group . The calculated 't' value 14.16 was greater than table value which was significant at 0.001 level.

In intervention group, the mean wound healing score was 2.37, with standard deviation 0.96 . Where as in the control group, the mean score was 5.53, with standard deviation 1.85. The student independent ‘t’ test was done to find out the difference between intervention and control group. The calculated “t” value 8.03 was greater than table value which was significant at 0.001 level.

Tale 7 : Effectiveness of early ambulation on post operative recovery among abdominal hysterectomy women

n=60

	Group	**n**	**Mean**	**percentage %**	**% of difference**
Constipation	Intervention	4	.33	8.3%	**67.5%**
	Control	4	3.03	75.8%	
Urinary	Intervention	4	.33	8.3%	**45.0%**
	Control	4	2.13	53.3%	
Wound	Intervention	15	2.37	15.8%	**21.1%**
	Control	15	5.53	36.9%	

The above table 7 shows the effectiveness of early ambulation on post operative recovery among abdominal hysterectomy women

In intervention group, the mean score was 0.33 with percentage 8.3, whereas in the control group, mean score was 3.03 with percentage was 75.8, percentage of difference 67.5 in constipation score of post operative recovery.

In intervention group, the mean score was 0.33, with percentage 8.3, whereas in the control group, the mean score was 2.13, with percentage was 53.3 and percentage of difference 45.0 in urinary tract infection symptom score of post operative recovery

In intervention group, the mean score was 2.37, with percentage 15.8, whereas in the control group, the mean score 5.53, with percentage 36. 9 and percentage of difference 21.1 in wound healing of post operative recovery.

SECTION IV

Association between the post operative recovery among the women with their selected socio demographic variables in the intervention group .

Tables - 8

Association between the post operative recovery (constipation) with their selected socio demographic variables in the intervention group.

n = 30

Socio demographic variables		Constipation score						n	χ^2
		No problem		Mild problem		Moderate problem			
		f	%	f	%	f	%		
Age	< 50 years	11	100.0%	0	0.0%	0	0.0%	11	**χ^2=7.65**
	51 -60 years	13	81.2%	3	18.8%	0	0.0%	16	
	>60 years	1	33.3%	2	66.7%	0	0.0%	3	**P=0.02*(S)**
Religion	Hindu	13	86.7%	2	13.3%	0	0.0%	15	χ^2=0.32 P=0.85(NS)
	Christian	7	77.8%	2	22.2%	0	0.0%	9	
	Muslim	5	83.3%	1	16.7%	0	0.0%	6	
Marital status	Unmarried	2	100.0%	0	0.0%	0	0.0%	2	χ^2=2.57 P=0.27(NS)
	Married	16	76.2%	5	23.8%	0	0.0%	21	
	Others	7	100.0%	0	0.0%	0	0.0%	7	
Education status	No formal education	5	83.3%	1	16.7%	0	0.0%	6	χ^2=0.83 P=0.66(NS)
	Primary Education	10	90.9%	1	9.1%	0	0.0%	11	
	Higher Education	10	76.9%	3	23.1%	0	0.0%	13	
Occupation status	Unemployed	3	60.0%	2	40.0%	0	0.0%	5	χ^2=2.89 P=0.23(NS)
	Employed	13	92.9%	1	7.1%	0	0.0%	14	
	Private	9	81.8%	2	18.2%	0	0.0%	11	
	Former	0	0.0%	0	0.0%	0	0.0%	0	
	Others	0	0.0%	0	0.0%	0	0.0%	0	

Monthly income	Rs.1001 – 3000	4	100.0%	0	0.0%	0	0.0%	4	$\chi 2=0.93$ P=0.62(NS)
	Rs.3001- 5000	12	80.0%	3	20.0%	0	0.0%	15	
	> Rs.5000	9	81.8%	2	18.2%	0	0.0%	11	
Place of residence	Urban	9	81.8%	2	18.2%	0	0.0%	11	$\chi 2=0.03$ P=0.86(NS)
	Rural	16	84.2%	3	15.8%	0	0.0%	19	
Dietary pattern	Vegetarian	9	100.0%	0	0.0%	0	0.0%	9	**$\chi 2=4.07$ P=0.05*(S)**
	Non vegetarian	16	76.2%	5	24.8%	0	0.0%	21	
Weight	< 50Kg	7	100.0%	0	0.0%	0	0.0%	7	$\chi 2=2.16$ P=0.33(NS)
	50Kg -60kg	13	81.3%	3	18.8%	0	0.0%	16	
	>60kg	5	71.4%	2	28.6%	0	0.0%	7	
Parity	nulliparous	2	100.0%	0	0.0%	0	0.0%	2	$\chi 2=0.66$ P=0.71(NS)
	< 3 delivery	16	80.0%	4	20.0%	0	0.0%	20	
	> 3 delivery	7	87.5%	1	12.5%	0	0.0%	8	
Type of anesthesia	Regional	8	80.0%	2	20.0%	0	0.0%	10	$\chi 2=1.20$ P=0.54(NS)
	General	12	80.0%	3	20.0%	0	0.0%	15	
	0thers	5	100.0%	0	0.0%	0	0.0%	5	
Indication	Dysfunctional uterine bleeding	5	100.0%	0	0.0%	0	0.0%	5	$\chi 2=2.40$ P=0.30(NS)
	Fibroids	13	86.7%	2	13.3%	0	0.0%	15	
	Carcinoma uterus	7	70.0%	3	30.0%	0	0.0%	10	

The above table 8 explains the significant association between the post operative recovery among the women with abdominal hysterectomy (constipation) and their selected socio demographic variables in the intervention group. Chi square test reveals that, there was significant association between post operative recovery (constipation) and **age** ($\chi 2=7.65$), (P=0.02), and **dietary pattern** ($\chi 2=4.07$) , (P=0.05) and post operative recovery constipation score .

Table : 9 Association between the post operative recovery (urinary infection symptoms) with their selected socio demographic variables in the intervention group

n = 30

Socio demographic variables		Urinary infection symptom score						n	χ^2
		No problem		Mild problem		Moderate problem			
		f	%	f	%	f	%		
Age	< 50 years	8	72.7%	3	27.3%	0	0.0%	11	χ^2=1.69 P=0.42(NS)
	51 -60 years	14	87.5%	2	12.5%	0	0.0%	16	
	>60 years	3	100.0%	0	0.0%	0	0.0%	3	
Religion	Hindu	12	80.0%	3	20.0%	0	0.0%	15	χ^2=0.32 P=0.85(NS)
	Christian	8	88.9%	1	11.1%	0	0.0%	9	
	Muslim	5	83.3%	1	16.7%	0	0.0%	6	
Marital status	Unmarried	2	100.0%	0	0.0%	0	0.0%	2	χ^2=0.51 P=0.77(NS)
	Married	17	81.0%	4	19.0%	0	0.0%	21	
	Others	6	85.7%	1	14.3%	0	0.0%	7	
Education status	No formal education	6	100.0%	0	0.0%	0	0.0%	6	χ^2=1.60 P=0.44(NS)
	Primary Education	9	81.8%	2	18.2%	0	0.0%	11	
	Higher Education	10	76.9%	3	23.1%	0	0.0%	13	
Occupation status	Unemployed	2	40.0%	3	60.0%	0	0.0%	5	**χ^2=8.12 P=0.02*(s)**
	Employed	13	92.9%	1	7.1%	0	0.0%	14	
	Private	10	90.9%	1	9.1%	0	0.0%	11	
	Former	0	0.0%	0	0.0%	0	0.0%	0	
	Others	0	0.0%	0	0.0%	0	0.0%	0	

Monthly income	Rs.1001 – 3000	4	100.0%	0	0.0%	0	0.0%	4	$\chi 2$=1.81 P=0.40(NS)
	Rs.3001- 5000	13	86.7%	2	13.3%	0	0.0%	15	
	> Rs.5000	8	72.7%	3	27.3%	0	0.0%	11	
Place of residence	Urban	11	100.0%	0	0.0%	0	0.0%	11	$\chi 2$=3.47 P=0.06(NS)
	Rural	14	73.7%	5	26.3%	0	0.0%	19	
Dietary pattern	Vegetarian	9	100.0%	0	0.0%	0	0.0%	9	**$\chi 2$=4.07 P=0.05*(S)**
	Non vegetarian	17	77.3%	5	22.7%	0	0.0%	21	
Weight	< 50Kg	7	100.0%	0	0.0%	0	0.0%	7	$\chi 2$=5.05 P=0.08(NS)
	50Kg -60kg	14	87.5%	2	12.5%	0	0.0%	16	
	>60kg	4	57.1%	3	42.9%	0	0.0%	7	
Parity	nulliparous	2	100.0%	0	0.0%	0	0.0%	2	$\chi 2$=0.66 P=0.71(NS)
	< 3 delivery	16	80.0%	4	20.0%	0	0.0%	20	
	> 3 delivery	7	87.5%	1	12.5%	0	0.0%	8	
Type of anesthesia	Regional	8	80.0%	2	20.0%	0	0.0%	10	$\chi 2$=0.24 P=0.88(NS)
	General	13	86.7%	2	13.3%	0	0.0%	15	
	0thers	4	80.0%	1	20.0%	0	0.0%	5	
Indication	Dysfunctional uterine bleeding	4	80.0%	1	40.0%	0	0.0%	5	$\chi 2$=2.40 P=0.30(NS)
	Fibroids	14	93.3%	1	6.7%	0	0.0%	15	
	Carcinomauterus	7	70.0%	3	30.0%	0	0.0%	10	

The above table 9 explains the significant association between the post operative recovery among the women with abdominal hysterectomy (urinary infection symptoms) and their selected socio demographic variables in the intervention group, Chi square test reveals that, there was significant association between post operative recovery (urinary infection) and **occupational status** ($\chi 2$=8.12) , (P=0.02) and **dietary pattern** ($\chi 2$=4.07), (P=0.05) .

Table : 10 Association between the post operative recovery (wound healing) with their selected socio demographic variables in the intervention group.

n=30

Socio demographic variables		Wound healing score						n	χ^2
		Normal		Good healing		Average healing			
		f	%	f	%		%		
Age	< 50 years	0	0.0%	11	100.0%	0	0.0%	11	**χ^2=7.08 P=0.05*(S)**
	51 -60 years	0	0.0%	12	66.7%	4	33.3%	16	
	>60 years	0	0.0%	1	33.3%	2	66.7%	3	
Religion	Hindu	0	0.0%	11	73.3%	4	26.7%	15	χ^2=1.94 P=0.37(NS)
	Christian	0	0.0%	7	77.8%	2	22.2%	9	
	Muslim	0	0.0%	6	100.0%	0	0.0%	6	
Marital status	Unmarried	0	0.0%	2	100.0%	0	0.0%	2	χ^2=0.83 P=0.65(NS)
	Married	0	0.0%	16	76.2%	5	23.8%	21	
	Others	0	0.0%	6	85.7%	1	14.3%	7	
Education status	No formal education	0	0.0%	5	83.3%	1	16.7%	6	χ^2=3.11 P=0.21(NS)
	Primary Education	0	0.0%	7	63.6%	4	36.4%	11	
	Higher Education	0	0.0%	12	92.3%	1	7.7%	13	
Occupation status	Unemployed	0	0.0%	3	60.0%	2	40.0%	5	χ^2=2.08 P=0.35(NS)
	Employed	0	0.0%	11	78.6%	3	21.4%	14	
	Private	0	0.0%	10	90.9%	1	9.1%	11	
	Former	0	0.0%	0	0.0%	0	0.0%	0	
	Others	0	0.0%	0	0.0%	0	0.0%	0	
Monthly income	Rs.1001 – 3000	0	0.0%	3	75.0%	1	25.0%	4	χ^2=1.29 P=0.52(NS)
	Rs.3001- 5000	0	0.0%	11	73.3%	4	26.7%	15	
	> Rs.5000	0	0.0%	10	90.9%	1	9.1%	11	
Place of residence	Urban	0	0.0%	9	81.8%	2	18.2%	11	χ^2=0.04 P=0.85(NS)
	Rural	0	0.0%	15	78.9%	4	21.1%	19	

Dietary pattern	Vegetarian	0	0.0%	6	66.7%	3	33.3%	9	$\chi 2=1.42$ P=0.23(NS)
	Non vegetarian	0	0.0%	18	85.7%	3	14.3%	21	
Weight	< 50Kg	0	0.0%	4	57.1%	3	42.9%	7	**$\chi 2=8.57$ P=0.05*(S)**
	50Kg -60kg	0	0.0%	16	100.0%	0	25.0%	16	
	>60kg	0	0.0%	4	57.1%	3	42.9%	7	
Parity	nulliparous	0	0.0%	1	50.0%	1	50.0%	2	$\chi 2=1.56$ P=0.48(NS)
	< 3 delivery	0	0.0%	17	85.0%	3	15.0%	20	
	> 3 delivery	0	0.0%	6	75.0%	2	25.0%	8	
Type of anesthesia	Regional	0	0.0%	6	60.0%	4	40.0%	10	$\chi 2=4.16$ P=0.12(NS)
	General	0	0.0%	14	93.3%	1	6.7%	15	
	0thers	0	0.0%	4	80.0%	1	20.0%	5	
Indication	Dysfunctional uterine bleeding	0	0.0%	5	100.0%	0	0.0%	5	$\chi 2=1.87$ P=0.39(NS)
	Fibroids	0	0.0%	12	80.0%	3	20.0%	15	
	Carcinomauterus	0	0.0%	7	70.0%	3	30.0%	10	

The above table 10 explains the significant association between the post operative recovery (wound healing) among the women with abdominal hysterectomy and their selected socio demographic variables in the intervention group. Chi square test reveals that, there was significant association between post operative recovery (wound healing) and age ($\chi 2=7.08$, P=0.05) weight ($\chi 2=8.57$ P=0.05).

Table : 11 Association between the post operative recovery (wound healing) with their socio demographic variables in the control group.

n=60

Socio demographic variables		Wound healing score						n	χ^2
		Normal		Good healing		Average healing			
		f	%	f	%	f	%		
Age	< 50 years	0	0.0%	4	40.0%	6	60.0%	10	χ^2=1.40 P=0.49(NS)
	51 -60 years	0	0.0%	8	50.0%	8	50.0%	16	
	>60 years	0	0.0%	3	75.0%	1	25.0%	4	
Religion	Hindu	0	0.0%	4	28.6%	10	71.4%	14	χ^2=5.04 P=0.08(NS)
	Christian	0	0.0%	8	72.7%	3	27.3%	11	
	Muslim	0	0.0%	3	60.0%	2	40.0%	5	
Marital status	Unmarried	0	0.0%	2	66.7%	1	33.3%	3	χ^2=2.86 P=0.23(NS)
	Married	0	0.0%	9	40.9%	13	59.1%	22	
	Others	0	0.0%	4	80.0%	1	20.0%	5	
Education status	No formal education	0	0.0%	2	28.6%	5	71.4%	7	χ^2=2.01 P=0.36(NS)
	Primary Education	0	0.0%	9	52.9%	8	47.1%	17	
	Higher Education	0	0.0%	4	66.7%	2	33.3%	6	
Occupation status	Unemployed	0	0.0%	2	25.0%	6	75.0%	8	χ^2=5.63 P=0.06(NS)
	Employed	0	0.0%	7	46.7%	8	53.3%	15	
	Private	0	0.0%	6	85.7%	1	14.3%	7	
	Former	0	0.0%	0	0.0%	0	0.0%	0	
	Others	0	0.0%	0	0.0%	0	0.0%	0	
Monthly income	Rs.1001 – 3000	0	0.0%	0	0.0%	3	100.0%	3	χ^2=3.33 P=0.18(NS)
	Rs.3001- 5000	0	0.0%	10	55.6%	8	44.4%	18	
	> Rs.5000	0	0.0%	5	55.6%	4	44.4%	9	
Place of residence	Urban	0	0.0%	7	50.0%	7	50.0%	14	χ^2=0.00 P=1.00(NS)
	Rural	0	0.0%	8	50.0%	8	50.0%	16	

Dietary pattern	Vegetarian	0	0.0%	4	66.7%	2	33.3%	6	$\chi 2$=2.86 P=0.23(NS)
	Non vegetarian	0	0.0%	11	45.8%	13	54.2%	24	
Weight	< 50Kg	0	0.0%	1	20.0%	4	100.0%	5	$\chi 2$=2.91 P=0.23(NS)
	50Kg -60kg	0	0.0%	10	62.5%	6	37.5%	16	
	>60kg	0	0.0%	4	44.4%	5	55.6%	9	
Parity	nulliparous	0	0.0%	1	50.0%	1	50.0%	2	$\chi 2$=3.74 P=0.15(NS)
	< 3 delivery	0	0.0%	6	35.3%	11	64.7%	17	
	> 3 delivery	0	0.0%	8	72.7%	3	28.3%	11	
Type of anesthesia	Regional	0	0.0%	1	16.7%	5	83.3%	6	$\chi 2$=4.18 P=0.12(NS)
	General	0	0.0%	12	63.2%	7	36.8%	19	
	0thers	0	0.0%	2	40.0%	3	60.0%	5	
Indication	Dysfunctional uterine bleeding	0	0.0%	0	0.0%	3	100.0%	3	$\chi 2$=4.40 P=0.11(NS)
	Fibroids	0	0.0%	7	46.7%	8	53.3%	15	
	Carcinomauterus	0	0.0%	8	66.7%	4	33.3%	12	

The above table-11 explains the significant association between the post operative recovery among the women with abdominal hysterectomy (wound healing) and their selected socio demographic variables, where as in the control group. Chi square test reveals that, there was no significant association between the level of post operative recovery (wound healing) with their socio demographic variables in the control group.

Discussion

CHAPTER V

DISCUSSION

This chapter deals with the detailed discussion of the results of the data interpreted through statistical analysis. The focus of the study was to evaluate the effectiveness of early ambulation on post operative recovery among the women who has undergone abdominal hysterectomy at Government Rajaji Hospital, Madurai.

The investigator adopted–true experimental design. 60 abdominal hysterectomy women were selected from the age group 35 -55 by simple random sampling technique. The Post – operative recovery was assessed by Modified kendall constipation assessment scale, Modified Bristol Urinary Tract infection symptoms assessment scale, Modified Barber wound healing process. These scale was used to explain the effectiveness of early ambulation on post -operative recovery among the women with abdominal hysterectomy patients . The result discussed according to the objectives with supportive studies.

Objectives of the study were

1. To assess the post operative recovery among the women who has undergone abdominal hysterectomy at Government Rajaji Hospital, Madurai.
2. To evaluate the effectiveness of early ambulation on post operative recovery among the women who has undergone abdominal hysterectomy at Government Rajaji Hospital, Madurai
3. To associate the postoperative recovery among the women who has undergone abdominal hysterectomy and their selected socio demographic variables.

Hypotheses were tested at 0.05 level of significance

H_1: There is a significant difference between the s post test level of post operative recovery among women who has undergone abdominal hysterectomy at Government Rajaji Hospital, Madurai.

H_2: There is a significant association between the post operative recovery among the women who has undergone abdominal hysterectomy with their selected socio demographic variables.

The finding of the study were discussed under the following headings.

- Distribution of abdominal hysterectomy women according to their selected socio demographic variables.
- Distribution of abdominal hysterectomy women according to their clinical variables.
- Effectiveness of early ambulation on post operative recovery among the women who has under gone abdominal hysterectomy .
- Association between post operative recovery among the women who has undergone abdominal hysterectomy with their selected socio demographic variables and clinical variables.

Data from 56 countries showed that in the year 2004 the annual volume of major surgery was estimated to be 187-281 million operations. This is large and previously unappreciated volume with significant implications for public health. Studies in developing countries suggest a death rate of 5-10% associated with major surgery 79% ,and the rate of mortality during general anesthesia is reported to be as high as1in150inpartsofsub-Saharan Africa (10), infections and other postoperative complications are also a serious concern around the world. Globally, in 2010, data monitor estimates that there were 7.4 million major abdominal surgeries done that is

expected to grow or increase by 8.1 million surgeries in 2020. Out of that about 20,000 patients died in a year following complications of the abdominal surgeries done between the 2010-2020 in the seven major countries (US, Japan, France, Germany, Italy, Spain and UK).

Effectiveness hence the study aimed in evaluating the sample of early ambulation on post operative recovery among women undergone abdominal hysterectomy

5.1 Description of abdominal hysterectomy women according to their socio demographic variables.

It is interesting to note that while mentioning the age in intervention group, majority of subjects 16 (53.33%) belongs to the age group between 51-60 years . whereas in the control group 16 (53.33%) belongs to the age group between 51-60 years..

Regarding religion in intervention group, majority of the subjects 15 (50.00%) were Hindu . Where as in the control group 14 (46.67%) were Hindu.

With regards to marital status in intervention group, majority of the subjects 21 (70.00%) of them were married. Where as in the control group, 22 (73.33%) of them were married.

When the education is considered in intervention group, majority of the subjects 13 (43.33%) were studied upto higher education. Whereas in the control group 17 (56.67%) were studied upto primary education.

Regarding occupation status in intervention group, majority of the subjects 14 (46.66%) were government employee, Where as in the control group 15 (50.00%) were government employee.

With the aspect of monthly income in intervention group , majority of the subjects 15 (50.00%) were earned between Rs.3001-5000 per month. Where as in the control group 18 (60.00%) were earned between Rs..3001-5000 per month.

When the place of residence in interventional group majority of the subjects 19 (63.33%) were hailed from rural. Where as in the control group 16 (53.33%) were hailed from rural.

Regarding the diet pattern in intervention group majority of the subjects 21 (70.0) were vegetarian. Where as in the control group 24 (80.00) were non vegetarian..

In the view of the weight , in intervention group majority of the subjects 16 (53.34%) were 50kg-60kg. Where as in the control group majority of the subjects 16 (53.33%) were 50 kg-60 kg.

Regarding parity in intervention group majority of the subjects 20 (66.66%) were had less than three number of delivery. Where as in control group 17 (56.67%) were had than three number of delivery,

In the aspects of type of Anesthesia, in intervention group the majority of subjects 15 (50.00 %) were had General anesthesia. Where as in control group 19 (63.38%) were had General anesthesia.

In view of indications for abdominal hysterectomy in the intervention group majority of the subjects 15(50.00%) were fibroids. Where as in the control group 15 (50.00%) were dysfunctional uterine bleeding .

5.2 Discussion of the study based on its objectives

The first objective was to assess the post operative recovery among the women who has undergone abdominal hysterectomy at Government Rajaji hospital Madurai.

Kendall scale was used to assess the post operative recovery (constipation), in intervention group , majority of subjects 25 (83.33%) had no problem, remaining 5 (16.67%) had mild problem and none of them had moderate problem. Whereas in the control group, 23 (76.77) were had moderate problem , remaining 7 (23.3 %) were had mild problem and none of them were had no problem. $\chi 2=48.33$ showed a difference in the post test level of constipation among intervention and control group

Bristol scale was used to assess the post operative recovery (urinary infection symptoms) in intervention group , majority of subjects 25 (83.33%) had no problem, remaining 5 (16.67%) had mild problem and none of them had moderate problem. Where as in the control group, majority of subjects 22 (73.33%) were had moderate problem, remaining 8 (26.67 %) were had mild problem and none of them had no problem $\chi 2=43.70$ showed a difference in the post level of urinary tract infection symptoms among intervention group and control group .

Barber scale was used to assess the post operative recovery wound healing, in intervention group , majority of subjects 24 (80.00%) had normal wound healing , remaining 6 (20.00%) had good wound healing and none of them had poor wound healing . Whereas in the control group , 15 (50.00) were had poor healing and good wound healing and none of them were had normal wound healing . $\chi 2=5.93$ showed a difference in the post test level of wound healing among intervention group and control group

Goldman, and Huskins (2016) conducted an experimental study on the effect of early ambulation after abdominal hysterectomy in California, 2005. A sample of 300 patients after abdominal hysterectomy was included in the study. Half

of the mothers are randomly selected and assigned to the study group and others to the control group. The study group was instructed about the interventions and they implemented it to the group. The results showed that none of the patients in the study group developed deep vein thrombosis and respiratory complications. On the other hand 12% of the patients in the control group developed deep vein thrombosis and 6% developed respiratory complications. The independent t-test ($p<0.05$). So, it was concluded that early ambulation was effective in postoperative recovery among abdominal hysterectomy.

The second objective of the study was to evaluate the effectiveness of early ambulation on post-operative recovery among experimental and control groups of abdominal hysterectomy.

In intervention group, the mean constipation score was 0 .33 with the standard deviation 0.75 in the post test , whereas the control group the post test mean score 3.03 with standard deviation 0.71.The student independent "t" test was done to find out the difference between intervention and control group. The calculated "t" value 14.16 was greater than table value which was significant at 0.001 level.

Post test level of the mean urinary infection symptoms score was 0.33 with the standard deviation 0. 75 in intervention group, where as in the control group the mean score (2.13) with standard deviation 0.62.The student independent t test was done to find out the difference between intervention and control group .The calculated "t" value 14.16 was greater than table value which was significant at 0.001 level.

Among the intervention group, the post test mean wound healing score was 2.37 with the standard deviation 0.96, where as in the control group the

mean score 5.53 with standard deviation 1.85.The student independent test was done to find out the difference between intervention and control group .The calculated "t" value (t=8.03) was greater than table value which was significant at 0.001 level.

Effectiveness of kendall constipation score on post operative recovery in intervention group, the mean score was 0.33 with percentage 8.3, whereas in the control group , mean score was 3.03 with percentage was 75.8, percentage of difference 67.5

Effectiveness of Bristol urinary infection symptoms score on post operative recovery in intervention group, the mean score was 0.33 , with percentage 8.3, whereas in the control group, the mean score was 2.13 , with percentage was 53.3 and percentage of difference 45.0 .

Effectiveness of Barber wound healing of post operative recovery in intervention group , the mean score was 2.37, with percentage 15.8 , whereas in the control group, the mean score 5.53, with percentage 36. 9 and percentage of difference 21.1.

Pooja Sikka et al., (2017) conducted a quasi-experimental study effect of early ambulation on abdominal hysterectomy total 80 subjects were enrolled by total enumerative sampling technique, 40 in each experiment and control group. Subjects in experiment group were early ambulated at 6 hours of abdominal hysterectomy covering a distance of 40 meters whereas control group was ambulated as per routine care, after 13-14 hours of abdominal hysterectomy. The study result shows that difference was statistically significant in all the variables except duration of catheterization as per the independent t-test ($p<0.05$). So, it was concluded that early ambulation was effective in postoperative recovery among abdominal hysterectomy.

Hence the stated Hypothesis H_1 - There is a significant difference between effectiveness of post test level of post-operative recovery among women who has undergone abdominal hysterectomy at Government Rajaji Hospital Madurai was accepted .

The third objectives of the study was to associate the post operative recovery among the women who has undergone abdominal hysterectomy and their selected socio demographic variables.

In order to find out the significant association between the post operative recovery among the women with abdominal hysterectomy (constipation) and their selected socio demographic variables in the intervention group. Chi square test reveals that , there was significant association between **age** ($\chi 2=7.65$) , (P=0.02), and **dietary pattern** ($\chi 2=4.07$), (P=0.05) and post operative recovery constipation score.

In order to find out the significant association between the post operative recovery among the women with abdominal hysterectomy (urinary infection symptoms) and their selected socio demographic variables in the intervention group, Chi square test reveals that, there was significant association between **occupational status** ($\chi 2=8.12$), (P=0.02) and **dietary pattern** ($\chi 2=4.07$), (P=0.05) and post operative recovery (urinary infection symptoms score).

In order to find out the significant association between the post operative recovery (wound healing) among the women with abdominal hysterectomy and their selected socio demographic variables in the intervention group . Chi square test reveals that , there was significant association between **age** ($\chi 2=7.08$, P=0.05) **weight** ($\chi 2=8.57$ P=0.05) and post operative recovery (wound healing) among the

women with abdominal hysterectomy and their socio demographic variables in the intervention group.

In order to find out the significant association between the post operative recovery among the women with abdominal hysterectomy (wound healing) and their selected socio demographic variables, where as in the control group .Chi square test reveals that, there was no significant association between the level of post operative recovery (wound healing among the women with abdominal hysterectomy and their socio demographic variables in the control group.

Hence the stated Hypotheses H_2 - there is a significant association between the post operative recovery among the women who has undergone abdominal hysterectomy with their selected socio demographic variables was accepted.

The results of present study implies that early ambulation has contributed more benefits which in turn increase post operative recovery among women who has undergone abdominal hysterectomy .

Summary and Conclusion, Implications & Recommendations

CHAPTER – VI

SUMMARY, CONCLUSION, IMPLICATIONS AND RECOMMENDATIONS

This chapter deals with the summary of the study and conclusions drawn. It also clarifies the limitations of the study, the implications for different were as like nursing educations, administrations, nursing practice, nursing research and recommendations.

6.1 Summary

The present study was aimed to evaluate the effectiveness of early ambulation on post operative recovery among the women who has undergone abdominal hysterectomy at Government Rajaji Hospital, Madurai.

Objectives

1. To assess the post operative recovery among the women undergone abdominal hysterectomy at Government Rajaji Hospital Madurai.
2. To evaluate the effectiveness of early ambulation on post operative recovery among the women who has undergone abdominal hysterectomy at Government Rajaji Hospital Madurai
3. To associate the post operative recovery among the women who has undergone abdominal hysterectomy and their selected socio demographic variables

The following Hypotheses were tested at 0.05 level

H_1 : There is a significant difference between the post test level of post-operative recovery among women who has undergone abdominal hysterectomy at Government Rajaji Hospital Madurai

H_2: There is a significance association between the post operative recovery among the women who has undergone abdominal hysterectomy with their selected socio demographic variable.

The study assumptions were

- Women who has undergone abdominal hysterectomy differ in post operative recovery.
- Early ambulation helps the abdominal hysterectomy women recovered from post operative period.

The study was conducted in Gynaecology post operative ward. The conceptual framework was based on modified Dorothea Orem Self care Deficit Theory. The study was conducted by using true experimental post test only design. Probability (simple random) sampling technique was used to select 60 samples of abdominal hysterectomy women at Government Rajaji Hospital. After testing the validity and reliability of the tool, pilot study was conducted among 10 non study subjects in Gynaecology post operative ward at Government Rajaji Hospital, to find out the feasibility and practicability. The main study was started from 04.06.2018 to 13.07.2018. The data was gathered and analysed by using descriptive and inferential statistics.

The data collection tool consisted of three parts.

The tool consists of three section

Section A

Consists of Socio demographic variables includes age, religion, marital status occupation, education status, occupation, religion, monthly income, Diet pattern, Residence.

Section B

Consists of clinical variables such as weight, parity, Type of Anesthesia, Indications.

Section C

Consists of modified standardized tool of constipation assessment scale consists of 4 Questionnaires, Barber wound healing assessment scale consists of 5 Questionnaire, Pristol urinary tract symptoms assessment questionnaire Consists of 4 Questionnaire,

Scoring Interpretation

Section A: No scoring was allotted for the Socio demographic Variables.

Section B: No scoring was allotted for the clinical variables.

Section C I : Modified kendall constipation assessment scale was used for assessing the level of constipation. The tool consist of 4 Questionnaire. The total Score is 4 which were given by 0 – No Problem, 1 – 2 Mild problem 3-4 Moderate problem.

Section C II : Modified barber wound healing assessment Scale was used for assessing the level of Wound Healing. The tool consist of 5 Questionnaires. The total Score is 15 which were given by 0 – Normal, 1 – 5 Good Healing, 6 – 10 Average Healing, 11- 15 Poor Healing.

Section C III : Modified bristol urinary Tract Symptoms Assessment Questionnaire was used for assessing the level of Urinary Tract Infection. The tool consist of 4 Questionnaires. The total Score is 4 which were given by 0 – No Problem, 1 – 2 Mild problem 3-4 Moderate problem.

6.2 Major findings of the study

In aspects of age in intervention group, majority of subjects 16 (53.33%) belongs to the age group between 51-60years, whereas in control group 16 (53.33%) belongs to the age group between 51-60years.

Regarding religion in intervention group, majority of the subjects 15 (50.00%) were Hindu, whereas in control group majority of the women 14 (46.67%) were Hindu.

With regards of marital status is considered in intervention group, majority of the subjects 21 (70.00%) of them were married, whereas in control group majority of them 22(73.33%) were married .

When the education is considered in intervention group, majority of the subjects 13 (43.33%)were studied upto higher education, whereas in control group majority of the subjects 17 (56.67%) were studied upto primary education.

Regarding occupation status in intervention group majority of the subjects 14 (46.66%) employed, where as in control group majority of the subjects 15 (50.00%) were employed.

With the aspect of monthly income in intervention group, majority of the subjects 15 (50.00%)were earned between Rs.3001-5000, whereas in control group majority of the subjects 18 (60.00%) were earned between Rs.3001-5000.

When the place of residence in interventional group, majority of the subjects 19 (63.33%) were hailed from rural area, whereas in control group majority of the subjects 16 (53.33%) were hailed from rural area.

Regarding the diet pattern in intervention group, majority of the subjects 21(70.00%) were vegetarian, whereas in control group majority of the subjects 24 (80.00) were non vegetarian

In the view of the weight in intervention group, majority of the subjects 16 (53.34%) were had 50kg-60kg,where as in control group majority of the subjects 16 (53.33%) were had 50kg-60kg.

Regarding parity in intervention group majority of the subjects 20 (66.66%) were had number of delivery, whereas in control group the majority of the subjects 17(56.67%) were had less than 3 number of delivery.

In the aspects of type of Anesthesia in intervention group the majority of subjects 15 (50.00%) were General anesthesia, where as in control group majority of the subjects 19 (63.38%) were General anesthesia

In view of indications in intervention group majority of the subjects 15 (50.00%) were fibroids, whereas in control group majority of the subjects 15 (50.00%) were dysfunctional bleeding

Kendril scale was used to assess the post test level of constipation In intervention group, majority of subjects 25 (83.33%) ,whereas in the control group majority of the subjects 23 (76.77) were had moderate problem.

Bristol scale was used to assess the post test level of urinary tract infection symptoms in intervention group , majority of the subjects 25 (83.33%) were had no problem, where as in control group majority of the subjects 22 (73.33%) were had moderate problem.

Barber scale was used to assess the post test level of wound healing in intervention group, majority of the subjects 24 (80.00%) were had normal wound healing, whereas in control group 15 (50.00) were had poor healing

Effectiveness of kendall constipation score on post operative recovery in intervention group, the mean score was 0.33 with percentage 8.3, whereas in

the control group, mean score was 3.03 with percentage was 75.8, percentage of difference 67.5

Effectiveness of Bristol urinary infection symptoms score on post operative recovery in intervention group, the mean score was 0.33, with percentage 8.3, whereas in the control group, the mean score was 2.13, with percentage was 53.3 and percentage of difference 45.0 .

Effectiveness of Barber wound healing of post operative recovery in intervention group, the mean score was 2.37, with percentage 15.8, whereas in the control group, the mean score 5.53, with percentage 36. 9 and percentage of difference 21.1.

In order to find out the association between the post operative recovery among the women with abdominal hysterectomy (constipation) and their selected socio demographic variables in the intervention group. Chi square test reveals that , there was no significant association between the level of constipation among the women with abdominal hystrectomy and their socio demographic variables in the intervention group.

While associating the postoperative recovery among the women with abdominal hysterectomy (urinary infection symptoms) and their selected socio demographic variables in the intervention group. Chi square test reveals that , there was significant association between **occupational status** ($\chi 2=8.12$, P=0.02), **dietary pattern** ($\chi 2=4.07$, P=0.05) and post operative recovery (urinary infection symptoms) among the women with abdominal hysterectomy and their socio demographic variables in the intervention group.

In order to associate the post operative recovery (wound healing) among the women with abdominal hysterectomy and their selected socio demographic variables in the intervention group . Chi square test reveals that , there was significant association between **age** ($\chi 2=7.08$, P=0.05) **weight** ($\chi 2=8.57$ P=0.05) and post operative recovery (wound healing) among the women with abdominal hysterectomy and their socio demographic variables in the intervention group.

6.3 Conclusion

Statistical evidence proved that early ambulation is an effective intervention to enhance the post operative recovery which increases the confident and motivate the women to do their daily activities and functional activities independently .during the first day of the post operative period

6.4 Implications

The investigator had drawn implications from this study for various areas such as nursing practice, nursing education, nursing administration and nursing research.

Implications for nursing practice

- The nurses must have the knowledge to provide non-pharmacological, cost effective approaches to improve the self care activities and its comfort to the women during post operative period.
- Nursing personnel can incorporate the provision of early ambulation in first post operative day as a routine part of level of post operative recovery in their clinical practice.
- The nurses must be trained to assess the level of post operative recovery among the women who has undergone abdominal hysterectomy by using Bristol constipation scale.

Implications for nursing education

- Continuing nursing education programme is the key components to update and improve the knowledge of all nursing personnel
- The nursing students should be taught the importance of post operative care and wound healing among the abdominal hysterectomy women.
- Nurse educator should orient the students towards various complimentary therapy forms of interventions for post operative recovery in the gynecology post operative ward.
- Nurse educator motivate student nurses to use Barber wound healing scale among the abdominal hysterectomy women to identify the wound healing status.

Implications for nursing administration

- With technological advances and ever growing challenges of health care means, the administrations have a responsibility to arrange nurses with substantive continuing education opportunities regarding post operative care.
- The nurse administrators can motivate, supervise and take initiative to implement the early ambulation on post operative recovery among abdominal hysterectomy women.
- The nurse administrator enable the nurses to update their knowledge in the latest innovations on postoperative recovery for abdominal hysterectomy patients.

Implications for nursing research

- It is necessary to undertake more research in the field of early ambulation and post operative recovery among women underwent abdominal hysterectomy to achieve holistic care to clients in the post operative period.

- One of the aim of nursing research to explain the broaden and scope of nursing finding of the study will provide baseline data regarding early ambulation and post operative recovery. Hence it can be used for further studies in their area.
- Nurse researcher should challenged to perform scientific work and take part the assessment of wound healing ,and functional ability and evaluation of post operative recovery for clients with abdominal hysterectomy.

6.5 Recommendations

- This study can be replicated with a large sample size for better generalizations
- The hospital authority can practice early ambulation from first post operative period
- A similar study can be done to identify the \effect of early ambulation enhanced the post operative recovery with five or seven days nursing intervention.
- True experimental post test can be used

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Appendices

APPENDIX – I

ETHICAL COMMITTEE APPROVAL LETTER

MADURAI MEDICAL COLLEGE
MADURAI, TAMILNADU, INDIA -625 020
(Affiliated to The Tamilnadu Dr.MGR Medical University,
Chennai, Tamil Nadu)

ETHICS COMMITTEE CERTIFICATE

Name of the Candidate	:	G.Meenakshi
Course	:	M.Sc., in Obstetrics and Gynecological Nursing
Period of Study	:	2016-2018
College	:	MADURAI MEDICAL COLLEGE
Research Topic	:	A study to assess the effectiveness of early ambulation and post operative recovery among the women has undergone abdominal hysterectomy at GRH, Madurai
Ethical Committee as on	:	13.04.18

The Ethics Committee, Madurai Medical College has decided to inform that your Research proposal is accepted.

Member Secretary

Chairman
Prof Dr V Nagaraajan
M.D., MNAMS, D.M., Dsc.,(Neuro), Dsc (Hon)
CHAIRMAN
IEC - Madurai Medical College
Madurai

Dean / Convenor
Madurai Medical College
Madurai-20

16 MAY 2018

APPENDIX - II

CONTENT VALIDITY CERTIFICATE

This is to certify that the tool,

Section A: Socio – demographic data

Section B : obstetrical Variable

Section C : Modified observation checklist for evaluation of post – operative recovery

Prepared by G.Meenakshi, II year M.Sc (N) College of Nursing, Madurai Medical College, Madurai, who has undertaken the study field on dissertation titled **"A study to evaluate the effectiveness of early ambulation on post operative recovery among the women who has undergone abdominal hysterectomy at government rajaji hospital, MADURAI-20"**. has been validated by me.

SIGNATURE OF THE EXPERT :

DESIGNATION : PRINCIPAL

NAME : PROF. M. SHABERABANU

DATE : 04-06-2018

PRINCIPAL
VIKRAM COLLEGE OF NURSING
SIVAGANGAI RING ROAD JUNCTION
MADURAI-625 020

CERTIFICATE OF VALIDITATION

This is to certify that the tool,

Section A: Socio – demographic data

Section B : obstetrical Variable

Section C : Modified observation checklist for evaluation of post – operative recovery

Prepared by Meenakshi G , II year M.Sc (N) College of Nursing, Madurai Medical College, Madurai, who has undertaken the study field on dissertation titled **"A study to evaluate the effectiveness of early ambulation on post operative recovery among the women who has undergone abdominal hysterectomy at government rajaji hospital, MADURAI-20"**. has been validated by me.

Sudha K.N.

SIGNATURE OF THE EXPERT : MS. SUDHA K.N., M.Sc.(N)OBG.

DESIGNATION : ASSOC. PROFESSOR.

NAME : RASS ACADEMY COLLEGE OF NURSING POOVANTHI

DATE : 18.5.18.

RASS ACADEMY COLLEGE OF NURSING POOVANTHI 630 311

CERTIFICATE OF VALIDITATION

This is to certify that the tool,

Section A: Socio – demographic data

Section B : obstetrical Variable

Section C : Modified observation checklist for evaluation of post – operative recovery

Prepared by G.Meenakshi, II year M.Sc (N) College of Nursing, Madurai Medical College, Madurai, who has undertaken the study field on dissertation titled **"A study to evaluate the effectiveness of early ambulation on post operative recovery among the women who has undergone abdominal hysterectomy at government rajaji hospital, MADURAI-20"**. has been validated by me.

SIGNATURE OF THE EXPERT : MRS. R. AARTHY SOODI. M.Sc(Nsg)Phd

DESIGNATION ASST. PROFESSOR, OBG. Dept.

NAME :

DATE :

CERTIFICATE OF VALIDITATION

This is to certify that the tool,

Section A: Socio – demographic data

Section B : obstetrical Variable

Section C : Modified observation checklist for evaluation of post – operative recovery

Prepared by G.Meenakshi, II year M.Sc (N) College of Nursing, Madurai Medical College, Madurai, who has undertaken the study field on dissertation titled **"A study to evaluate the effectiveness of early ambulation on post operative recovery among the women who has undergone abdominal hysterectomy at government rajaji hospital, MADURAI-20"**. has been validated by me.

SIGNATURE OF THE EXPERT :

DESIGNATION :

NAME :

DATE :

PROF. & HOD
DEPT. OF O &G
MADURAI MEDICAL COLLEGE
MADURAI

CERTIFICATE OF VALIDITATION

This is to certify that the tool,

Section A: Socio – demographic data

Section B : obstetrical Variable

Section C : Modified observation checklist for evaluation of post – operative recovery

Prepared by G.Meenakshi, II year M.Sc (N) College of Nursing, Madurai Medical College, Madurai, who has undertaken the study field on dissertation titled **"A study to evaluate the effectiveness of early ambulation on post operative recovery among the women who has undergone abdominal hysterectomy at government rajaji hospital, MADURAI-20"**. has been validated by me.

SIGNATURE OF THE EXPERT :

DESIGNATION :

NAME :

DATE :

PROF. & HOD
DEPT. OF O &G
MADURAI MEDICAL COLLEGE
MADURAI

APPENDIX - III

INFORMED CONSENT FORM

Name: Date:

Here I am acknowledge that information regarding the project study topic was explain to me and the positive reason was pointed out. I am voluntarily willing to participate in the study. At any time I am free to exclude from the study and promised that my all personal information should be kept in confidential.

Signature of the participants

ஆராய்ச்சி ஒப்புதல் படிவம்

பெயர் : **தேதி** :

வயது : **ஆராய்ச்சி சேர்க்கை எண்** :

இந்த ஆராய்ச்சியின் விவரங்களும் அதன் நோக்கங்களும் முழுமையாக எனக்கு தெளிவாக விளக்கப்பட்டது.

எனக்கு விளக்கப்பட்ட விஷயங்களை நான் புரிந்து கொண்டு நான் எனது சம்மதத்தை தெரிவிக்கிறேன்.

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

நான் என்னுடைய சுயநினைவுடன் மற்றும் முழு சுதந்திரத்துடன் இந்த மருத்துவ ஆராய்ச்சியில் என்னை சேர்த்து கொள்ள சம்மதிக்கிறேன்.

கையொப்பம்

APPENDIX – IV

LETTER SEEKING AND GRANTING PERMISSION TO CONDUCT THE STUDY

From

Meenakshi. G
II Year M.Sc(N),
College of nursing,
Madurai medical college,
Madurai.

To

Professor & Head of the Department
Obstetrics and Gynaecology
Government Rajaji Hospital.
Madurai

Through the proper channel ,

Respected Madam,

Sub: College of Nursing, Madurai medical College, Madurai II Year, M.Sc(N) Obstetrical and Gynaecological Nursing - Permission for conducting Pilot Study and Main Study from May 21st onwards at Government Rajaji Hospital, Madurai. Request – Regarding,

As per Indian Nursing Council and The Tamil Nadu Dr. M.G.R medical University curriculum requirement of M.Sc Nursing Candidates are required to conduct a dissertation study for the partial fulfillment of the course in their respective departments.

I wish to conduct a study topic on " **A Study to evaluate the effectiveness of early ambulation on post- operative recovery among women who has undergone abdominal hysterectomy at Government Rajaji Hospital, Madurai."** I assure you that I will not interfere with the routine activity in the Gynaecology ward.

Hence, I kindly request you to consider my requisition and permit me to conduct the study in the setting.

Thanking you

18/5/18

Place: Madurai
Date :

Forwarded
S.P
18/5/18

19/5/18

PROF. & HOD
DEPT. OF O &G
MADURAI MEDICAL COLLEGE
MADURAI

Your's Faithfully,

Meenakshi .G

18/05/18

APPENDIX – V

Socio Demographic Variables (English)

Name of the patients

1. Age

a) <50
b) 51-60
c) > 60years

2. Religion

a) Hindu
b) Christian
c) Muslim

3. Marital status

a) married
b) unmarried
c) others

4. Education

a) No formal education
b) Primary Education
c) Higher Education

5.Occupation

a) Home makers
b) Govt employee
c) Private employee
d) Farmer
e) Others

6. Monthly Income

a) Rs.1001 – 3000/ Month
b) Rs. 3001- 5000/ Month
c) More than Rs. 5000/ Month

7 .Place of residence

a) Urban
b) Rural

8. Dietary pattern

a) Vegetarian
b) Non vegetarian

APPENDIX VI

CLINICAL VARAIBLES

1.Weight

a) < 50 Kg
b) 51- 60 Kg
c) > 60Kg

2.parity

a) Nullipara
b) No of delivery <3
c) No of delivery>3

3. Type of anesthesia

a) Regional
b) General
c) Others

4 Indication

a) dysfunctional uterine bleeding
b) fibroids
c) carcinomauterus

APPENDIX VII

MODIFIED CONSTIPATION ASSESSMENT SCALE

ITEM	YES	NO
Abdominal distention (or) bloating		
Less frequent bowel movement		
Rectal pain with bowel movement		
Urge but inability to pass stool		

Scores:

No Problem : 0

Mild Problem : 1-2

Moderate Problem : 3-4

MODIFIED URINARY TRACT INFECTION SYMPTOMS ASSESSMENT

QUESTIONNSRIE

SYMPTOMS	YES	NO
Frequency of Urination		
Urgency of Urination		
Pain (or) burning when passing urine		
Not being able to empty your bladder completely / passing only small amounts of urine		

Scores:

No Problem : 0

Mild Problem : 1-2

Moderate Problem : 3-4

MODIFIED WOUND HEALING ASSESSMENT SCALE

S.NO	COMPONENTS	SCORE
1	0- No Redness 1- Redness over the one or two suture of surgical incision 2- Redness limited to the suture of surgical incision. 3- Redness extends beyond to the suture line of surgical incision	
2	0- No edema 1- Edema over one or two suture of surgical incision 2- Redness limited to the suture of surgical incision 3- Redness extends beyond to the suture line of surgical incision	
3	0- No ecchymosis 1- 0.25 -0.5 am in size. 2- 0.5 – 1cm in size 3- More than 1 cm	
4	0- No discharge 1- Serous discharge. 2- Serosanguinous discharge 3- Bloody purulent discharge.	
5	0- No gaping ends approximate. 1- Skin preparation 2- Skin & Subcutaneous fat separation. 3- Skin, Subcutaneous fat & facial layer separation	

Scores

0- Normal

1- 5 Good Healing

6- 10 Average Healing

11-15 Poor Healing

APPENDIX VIII

தன்னிலை விபரக்குறிப்பு

மாதிரி எண் ☐

1. வயது
   அ. 50 வயதுக்கு கீழ் ☐
   ஆ. 51-61 வயது
   இ. 60 வயதுக்கு மேல்
2. மதம்
   அ. இந்து ☐
   ஆ. கிறிஸ்தவம்
   இ. இஸ்லாமியர்கள்
3. திருமணத்தகுதி
   அ. திருமணமானவர்
   ஆ. திருமணமாகாதவர்
   இ. மற்றவர்
4. கல்வி தகுதி
   அ. படிக்கவில்லை ☐
   ஆ. தொடக்கக்கல்வி
   இ. மேல்நிலைக்கல்வி
5. பணியின் தன்மை
   அ. இல்லத்தரசி ☐
   ஆ.தனியார் வேலை
   இ. சுய வேலை
   ஈ.அரசு வேலை
6. மாத வருமானம்
   அ. ரூ. 3000 -1001 ரூ ☐
   ஆ. ரூ.3001 - ரூ. 5,000
   இ) ரூ.5,000 மேல்
7. உணவுமுறை
   அ. சைவ உணவு மட்டும் ☐
   ஆ. சைவ மற்றும் அசைவம்
8. குடியிருப்பு
   அ. கிராமப்புறம் ☐
   ஆ. நகர்ப்புறம்

APPENDIX IX

மருத்துவ மாதிரிகள

1. தாயின் எடை (கிலோ)

   அ. < 50 க்கு கீழ்

   ஆ. 51-60 வரை

   இ. > 60 க்கு மேல்

2. பிரசவத்தின் எண்ணிக்கை

   அ. குழந்தையின்மை

   ஆ. மூன்று பிரசவத்திற்குமேல்

   இ. மூன்று பிரசவத்திற்குகீழ்

3. எவ்வித மயக்க மருந்து

   அ. பிராந்திய மயக்க மருந்து

   ஆ. பொது மயக்க மருந்து

   இ. மற்றவை

4. காரணிகள்

   அ. முறையற்ற உதிரபோக்கு

   ஆ. கருப்பை கட்டிகள்

   இ. கருப்பை புற்றுநோய்

APPENDIX X

Research Tool - Tamil

மலச்சிக்கல் மதிப்பீடு அளவில்

உருப்படியை	ஆம்	இல்லை
வயிறு விரிவடைதல்		
குறைந்த குடல் இயக்கம்		
மலக்குடல் முற்றாக குருத்தைல்		
மலத்தை கழிக்க இயலாமை		

மதிப்பெண்கலை

எந்த பிரச்சனையும் இல்லை - 0
லேசான பிரச்சனை - 1-2
மிதமான பிரச்சனை - 3-4

சிறுநீர் பாதை நோய்த்தொற்று அறிகுறிகள்
மதிப்பீடு அளவில்

உருப்படியை	ஆம்	இல்லை
அடிக்கடி சிறுநீர் கழித்தல்		
சிறுநீரகத்தின் அவசரநிலை		
சிறுநீர் கடக்கும்போது வலி		

மதிப்பெண்கலை

எந்த பிரச்சனையும் இல்லை - 0
லேசான பிரச்சனை - 1-2
மிதமான பிரச்சனை - 3-4

அளவுகோல்

வரிசை எண்	கூறுகள்	மதிப்பெண்
1	சிவந்தத்தன்மை 0- சிவந்தத்தன்மை இல்லாதிருத்தல் 1- பிறப்புறுப்பில் இடப்பட்ட தையலில் ஒன்று 2- அனைத்து தையல்களும் சிவந்து காணப்படுதல் 3- பிறப்புறுப்பில் இடப்பட்ட தையல்களுக்கு அப்பால் சிவந்துக்காணப்படுதல்.	
2.	வீக்கம் 0- வீக்கம் இல்லாதிருத்தல் 1- பிறப்புறுப்பில் இடப்பட்ட தையலில் ஒன்று மற்றும் இரண்டில் வீக்கம் காணப்படுதல். 2- அனைத்து தையல்களிலும் வீக்கம் காணப்படுதல் 3- பிறப்புறுப்பில் இடப்பட்ட தையல்களுக்கு அப்பால் வீக்கம் காணப்படுதல்.	
3	தோலுக்கடியில் இரத்தக்கோர்வை 0- இரத்தக்கோர்வை இல்லாதிருத்தல் 1- 0.25 முதல் 0.5 செ. மீ அளவு இரத்தக்கோர்வை 2- 0.5 முதல் 1 செ.மீ அளவு இரத்தக்கோர்வை 3- 1செ.மீ மேல் அளவு இரத்தக்கோர்வை	
4	சீழ்வடிதல் 0- சீழ் இல்லாதிருத்தல் 1- பழுப்புநிற சீழ் வடிதல் 2- பழுப்பு மற்றும் இரத்தம் கலந்த சீழ்வடிதல் 3- இரத்தம் தோய்ந்த சீழ்வடிதல்	
5	தையல் இடைவெளியின் தன்மை 0- தையல்களுக்கு இடையே இடைவெளி இல்லாதிருத்தல்	

	1- தோல் பிரிந்து காணப்படுதல் 2- தோல் மற்றும் தோலடி கொழுப்பு பிரிந்து காணப்படுதல் 3- தோலடிகொழுப்பு மற்றும் சதை அடுக்குபிரிந்து காணப்படுதல்	

மதிப்பெண்கள்

0 நன்கு

0 - 5 வேகமாக காணம் ஆறுதல்

6 - 10 தாமதமாக காயம் ஆறுதல்

11 -15 மிகத்தாமதமாக காயம் ஆறுதல்

மொத்த மதிப்பெண்கள் 15

APPENDIX X1

CERTIFICATE OF ENGLISH EDITING

TO WHOM SO EVER IT MAY CONCERN

This is to certify that the dissertation by Meenakshi G , II year M.Sc (N) College of Nursing, Madurai Medical College, Madurai, who has undertaken the study field on dissertation entitled **"A STUDY TO ASSESS THE EFFECTIVENESS OF EARLY AMBULATION AND POST OPERATIVE RECOVERY AMONG THE WOMEN WHO HAS UNDERGONE ABDOMINAL HYSTERECTOMY AT GOVERNMENT RAJAJI HOSPITAL, MADURAI-20"**. Has been edited for English Language appropriateness.

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APPENDIX XI1

CERTIFICATE OF TAMIL EDITING

TO WHOM SO EVER IT MAY CONCERN

This is to certify that the dissertation by Meenakshi G , II year M.Sc (N) College of Nursing, Madurai Medical College, Madurai, who has undertaken the study field on dissertation entitled **"A STUDY TO ASSESS THE EFFECTIVENESS OF EARLY AMBULATION AND POST OPERATIVE RECOVERY AMONG THE WOMEN WHO HAS UNDERGONE ABDOMINAL HYSTERECTOMY AT GOVERNMENT RAJAJI HOSPITAL, MADURAI-20".** Has been edited for Tamil Language appropriateness.

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APPENDIX XII1

PHOTOGRAPHS