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"A Study To Assess The Effectiveness Of Early Ambulation On Post-Operative Recovery Among Post Caesarean Mothers Admitted In Maternity Ward At Shri Lal Bahadur Shastri Government Medical College And Hospital Nerchowk, Mandi (H.P.) 2023 With A View To Develop An Informational Booklet On Effectiveness Of Early Ambulation".

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ABSTRACT:- Introduction: Early ambulation is a powerful catalyst for enhanced postoperative recovery, particularly for post-Caesarean mothers. According to National Family Health Survey 2019-2020, there has been an increase in the number of Caesarean section deliveries in a majority of states. This proactive approach significantly reduces pain, shortens hospital stays, and lowers the risk of complications.

Aim: To determine the effectiveness of early ambulation among post caesarean mothers in experimental group.

Methodology: A quasi-experimental study was conducted in the Maternity Ward of SLBSGMC&H, Nerchowk, Mandi (H.P), using a post-test-only design. 40 post-natal mothers (20 in the experimental group and 20 in the control group) who underwent LSCS were selected through purposive sampling technique. Data were collected using a socio-demographic data sheet (9 items), a postoperative recovery assessment scale (9items), and a subjective checklist (15 items) to evaluate the effectiveness of early ambulation. Ethical approval was obtained from the ethical committee and the Medical Superintendent of SLBSGMC&H. Data were analyzed using descriptive and inferential statistics.

Results: Majority of the participants in both groups were aged 19-24 years (50% experimental, 45% control) and had education levels above graduation (60% in both groups). The majority were homemakers (70% experimental, 60% control). The experimental group had a mean score was 36.25 with SD 2.807, while

the control group had a mean score was 12.25 with SD = 2.633 and the p value is <0.001 at p<0.05.

Conclusion: Findings of the study revealed that the early ambulation group experienced significantly improved bowel and bladder function, shorter hospital stays, and fewer postoperative complications compared to the control group. An informational booklet was developed to promote the benefits and best practices of early ambulation for mothers undergoing LSCS, highlighting its role in improving postoperative maternal health outcomes.

Key Words: Early Ambulation, post-operative mothers, LSCS, post-operative recovery.

BACKGROUND OF STUDY

THE TIE WHICH LINK MOTHER AND CHILD IS OF SUCH PURE AND IMMACULATE STRENGTH AS TO BE NEVER VIOLATED

INTRODUCTION

Washington Irving

The well-being of societies related to the health and survival of mothers and children. When mothers survive and thrive, their children survive and thrive and as well the societies in which they live prosper. Health of a women is not a merely a state of physical well-being but also an expression of many roles they play as wives, mothers and health care providers in the family. (1)

In modern healthcare systems, the well-being of maternal and child health is of utmost importance. Currently, caesarean section has emerged as the prevailing intervention in both developed and developing nations. (2)

According to National Family Health Survey 2019-2020, there has been an increase in the number of Caesarean section deliveries in a majority of states such as Telangana, West Bengal, Himachal Pradesh or some in the northeast especially at private healthcare facilities in last five years." In the National Family Health Survey 4, the proportion of C-sections was 40.9% in private sector against 11.9% in the government sector." In Himachal Pradesh, at least 88% deliveries were institutionalized, as against 76.5% in 2015-16. Private healthcare facilities saw a rise in C-section births from 44.5% in 2015-16 to 51.4% births via C-section in 2019-20. (3)

The practice of early mobilization is highly prevalent and holds significant value in postoperative care. Its advantages were initially documented in the 1940s, showing that early mobilization accelerates recovery and lowers the occurrence of complications after surgery. Following open upper abdominal surgery, early mobilization is a crucial element of postoperative care. It encompasses activities such as adjusting position in bed, sitting up, standing, engaging in on-the-spot walking, walking in the hallway, and performing low-intensity exercises. Furthermore, early mobilization in postoperative period is the key to achieving rapid and maximum muscle function and restoring maternal health. Ambulation helps reduce most of the complications by ensuring good blood circulation, promoting gastric motility, enhancing

respiration, reducing the risk of thrombophlebitis, preventing orthostatic hypotension, improving the physical strength etc. (4)

Early mobilization is widely practiced and important component of post operative care. Early mobilization was observed to hasten recovery and reduce the incidence of post operative complications. Early mobilization is a widely practiced and important component of postoperative care following open upper abdominal surgery. Early mobilization include: moving in bed, sitting out of bed, and standing, ambulating on the spot, hallway ambulation, and low intensity exercise. (5)

In addition, early movement helps caesarean section women participate in restoring their health and improving muscle tone so that women can perform daily life activities effectively. Through prevention and promotional nursing care, women can be helped to prevent postoperative problems and complications. Early movement can be one of the most important parts of comprehensive postoperative care. The patient can get out of bed as soon as possible depending on the type of surgery and the exercises described. In a caesarean section, this period may be less than 6-8 hours after surgery. (6)

Early mobilization was a rehabilitative action that is carried out after the patient was awake from anaesthesia and after surgery. Mobilization was useful to assist in the course of wound healing. Mobilization or movement is a person's ability to move freely by using the coordination of the nervous and musculoskeletal systems. Early mobilization carried out in stages will help improve blood flow thereby speeding up the wound healing process, especially in the inflammatory phase so that the mother can return to normal daily activities. Delay in early mobilization can worsen the mother's condition and hinder the wound healing process caesarean section (7)

The factors associated with caesarean section are age, parity, multiple pregnancy, maternal weight gain, and birth weight. Including these factors, the caesarean section is justified under certain circumstances such as cephalo pelvic disproportion and contracted pelvis, dystocia due to soft parts, inadequate uterine forces, ante partum haemorrhage, preeclampsia toxaemia, eclampsia, Fetal distress and prolapse of the cord, malpresentation, maternal distresses such as heart problems, bad obstetric history, habitual intrauterine death of the fetus and elderly primigravida. In India giving birth in an auspicious day are driving the women to go for a caesarean section. (8)

Early mobilization include: Moving in bed, sitting out of bed, and standing, ambulating on the spot, hallway ambulation, and low-intensity progressive exercise. Immobility after caesarean section has a different effect on the women physically and mentally, the physical effect may include urinary tract infection, deep vein thrombosis, bowel obstruction, increased pain intensity, and pressure ulcer. Mental effect appears in the presence of different levels of depression. Caesarean section is a life-saving procedure firmly ensconced in obstetric practice. It poses a barrier to breast-feeding initiation related to delay in maternal-infant contact, maternal pain, and exhaustion. Early ambulation reduces the post-operative complications such as atelectasis, GI discomfort, and circulatory problems. (9)

Mothers with caesarean section need more care and attention than the vaginal delivery. The role of midwife is to provide excellence service for the well-being of the mother as well as baby and enable the mother to execute the activities of daily living independently as soon as possible. This helps the mother to reduce the surgical complications. Additionally, midwives collaborate with other healthcare professionals to develop personalized care plans that address the unique needs of each mother. This may involve coordinating follow-up appointments, providing education on postpartum exercises and nutrition, and offering emotional support to help mothers navigate the physical and psychological challenges associated with caesarean birth. (10)

Additionally, walking and physical activity after a C-section can contribute to the restoration of muscle tone, increased strength, and improved psychological well-being. It may also facilitate bonding between the mother and her newborn by enabling her to participate more actively in caring for the baby. It is believed to have several potential benefits, including faster recovery, reduced postoperative complications, improved lung function, and prevention of blood clots. Moreover, walking and physical activity can have positive effects on mental health by reducing stress, anxiety, and symptoms of postpartum depression. The endorphins released during exercise contribute to a sense of well-being and can help mothers cope with the emotional challenges of childbirth and early motherhood. (11)

The faster the move the better, but early mobilization must be carried out carefully as well. So, by preventive and promotive post operative care the women can be helped to avoid the post operative problems and complications, which can help in early recovery. One of the important aspects of comprehensive post operative care can be planned by early ambulation. Planned early ambulation means that patients can be out of bed as early as possible based on type of surgery. Additionally, planned early ambulation fosters a sense of empowerment and independence among patients, empowering them to take ownership of their health and well-being. By gradually increasing mobility and activity levels under the guidance of healthcare professionals, patients can build confidence in their ability to resume daily activities and transition back to their normal routines. (12)

Protecting a women health as these changes occur is important for preserving her future childbearing function and for ensuring that she is physically fit to incorporate her new child in to her family. Early ambulation does not mean return to normal activities, she should avoid strenuous work like lifting, staning and pushing heavy things and this should be restricted at least 6 weeks. The mother is encouraging to be out of her bed as soon as possible following delivery unless there are contra indications. In addition to physical precautions, women are encouraged to prioritize self-care and rest during the postpartum period. Adequate rest, proper nutrition, and hydration are essential for supporting the body's healing process and replenishing energy stores depleted during childbirth. Healthcare providers play a critical role in educating women about postpartum recovery and empowering them to prioritize their health and well-being amidst the demands of caring for a newborn. (13)

NEED OF THE STUDY

Women and children are our nation's greatest assets. Health of the women is the basis for the better health of family as well as of the nation. It is therefore expedient that a women should possess optimum health. In order to achieve it every, women should receive the required health care and attention. A woman during her life cycle she pass through different phase like childhood, puberty, womanhood, motherhood & old age. The birth of baby is delightful experience for mother and whole family. The birth of baby can occur either by normal vaginal delivery or by caesarean section. (14)

Helping posts operative patient move as soon as possible should be a clinical priority than seeing the patient sitting in wheel chair. Evidence from the review indicates that early ambulation may improves patient care outcome. Studies recommend the optimum time to ambulate post operative patient in first 24hrs reports reduced incidence of phlebothrombosis and a definite reduction of all postoperative complications, less medication, less nursing car, no delay in wound-healing and for more rapid return to normal of the bodily function. Early ambulation carries benefit such as decreased pain, swelling and post thrombotic syndrome symptoms. (15)

Current research demonstrates a decrease in complication rates, reported pain and length of stay when early ambulation is initiated. The postnatal caesarean mothers are in need of rehabilitation for pain relief of good quality after caesarean section which results in early mobilization and good early mother–child interaction. The research studies and working experience created an insight that there is lack of practice regarding early ambulation among mothers after caesarean section. there is a need to study the effect of early ambulation among post caesarean mother.

Women and children are our nation's greatest assets. Health of the women is the basis for the better health of family as well as of the nation. It is therefore expedient that a women should possess optimum health. In order to achieve it every, women should receive the required health care and attention. A woman during her life cycle has to pass through different phase like childhood, puberty, womanhood, motherhood & old age. The birth of baby is delightful experience for mother and whole family. Since the 1970s, many developed countries have experienced substantial growth in the rates of caesarean section. Some mothers and physicians opt for C-sections just so the timing of the birth is convenient for one or both. (16)

A study recommends the optimum time to ambulate post operative patient in first 24hrs reports reduced incidence of phlebothrombosis and a definite reduction of all postoperative complications, less medication, less nursing car, no delay in wound-healing and for more rapid return to normal of the bodily function. Most studies report that early ambulation carries benefit such as decreased pain, swelling and post thrombotic syndrome symptoms. Mobilization plays an important role in the outcomes of postoperative patients. (17)

The postnatal caesarean mothers are in need of rehabilitation for pain relief of good quality after caesarean section which results in early mobilization and good early mother–child interaction. The research studies and working experience created an insight that there is lack of practice regarding early ambulation among mothers after caesarean section. So, there is a need to study the effect of early ambulation among post caesarean mother. In 2023, early ambulation is still considered beneficial for post-caesarean mothers. The rationale behind early ambulation after a caesarean section remains consistent with the current understanding of postoperative recovery and maternal well-being. Here are some reasons why early ambulation is recommended for post-caesarean mothers: Faster Recovery, Decreased Risk of Blood Clots, Enhanced Pain Management, Prevention of Postoperative Complications, Psychological Well-being etc.

STATEMENT OF THE PROBLEM:

A Quasi-Experimental study to assess the effectiveness of early ambulation on post operative recovery among post caesarean mothers admitted in maternity ward at Shri Lal Bahadur Shastri Government Medical College and Hospital Nerchowk, Mandi (H.P) 2023 with a view to develop an informational booklet on effectiveness of early ambulation.

OBJECTIVES OF THE STUDY:

1. To prepare and deliver booklet to pre operative mothers (LSCS) on effectiveness of early ambulation for post caesarean recovery in experimental group.
2. To prepare and encourage the post caesarean mothers of experimental group for early ambulation.
3. To determine the effectiveness of early ambulation among post caesarean mothers in experimental group.
4. To Compare the Post Operative Recovery among Post Caesarean Mothers between Experimental group and Control group.
5. To determine the association between postoperative recovery of post-caesarean mothers with selected socio-demographic variables.

OPERATIONAL DEFINITIONS:

1. **Early Ambulation:** Early ambulation refers to the initiation of walking and movement in the bed/ off the bed after the caesarean section surgery, as determined by the hospital protocol or intervention being implemented.
2. **Effectiveness of early ambulation:** The effectiveness of early ambulation refers to the impact or outcome of implementing early ambulation protocols or interventions on postoperative recovery outcomes among post-caesarean mothers.
3. **Informational booklet:** The informational booklet is a written educational resource that provides information on the effectiveness of early ambulation in postoperative recovery for post-caesarean mothers.
4. **Post-natal Mother:** In this study, it refers to the mother after the delivery and after the childbirth.

5. **Postoperative recovery:** Postoperative recovery refers to the overall healing process and restoration of health and well-being following the caesarean section surgery. In this study, it encompasses various aspects, including physical recovery, pain levels, wound healing, restoration of bowel function, psychological well-being, and overall functional ability.

HYPOTHESIS:

H_{01}: There is no significant difference between the functional activity of post caesarean mothers in the study group and control group**.**

H_1: There is significant difference between the activities of daily living of post caesarean mothers in the study group and control group**.**

H_{02}: There is no significant association between the post operative recovery of post caesarean mothers with their selected socio demographic variables**.**

H_2: There is significant association between the post operative recovery of post caesarean mothers with their selected socio demographic variables**.**

ASSUMPTION:

1. The participants are post caesarean mothers who are directly involved in the study.
2. The participants are post caesarean mothers do not have the baseline knowledge regarding effectiveness of the early ambulation.
3. Early ambulation may make difference among patient recovery.
4. Early ambulation may prevent complications.

DELIMITATIONS:

1. The study is limited to 40 post caesarean mothers for each group.
2. The study is limited to the post- caesarean mothers of Shri Lal Bahadur Shastri Government medical College and Hospital Nerchowk Mandi, (Himachal Pradesh).

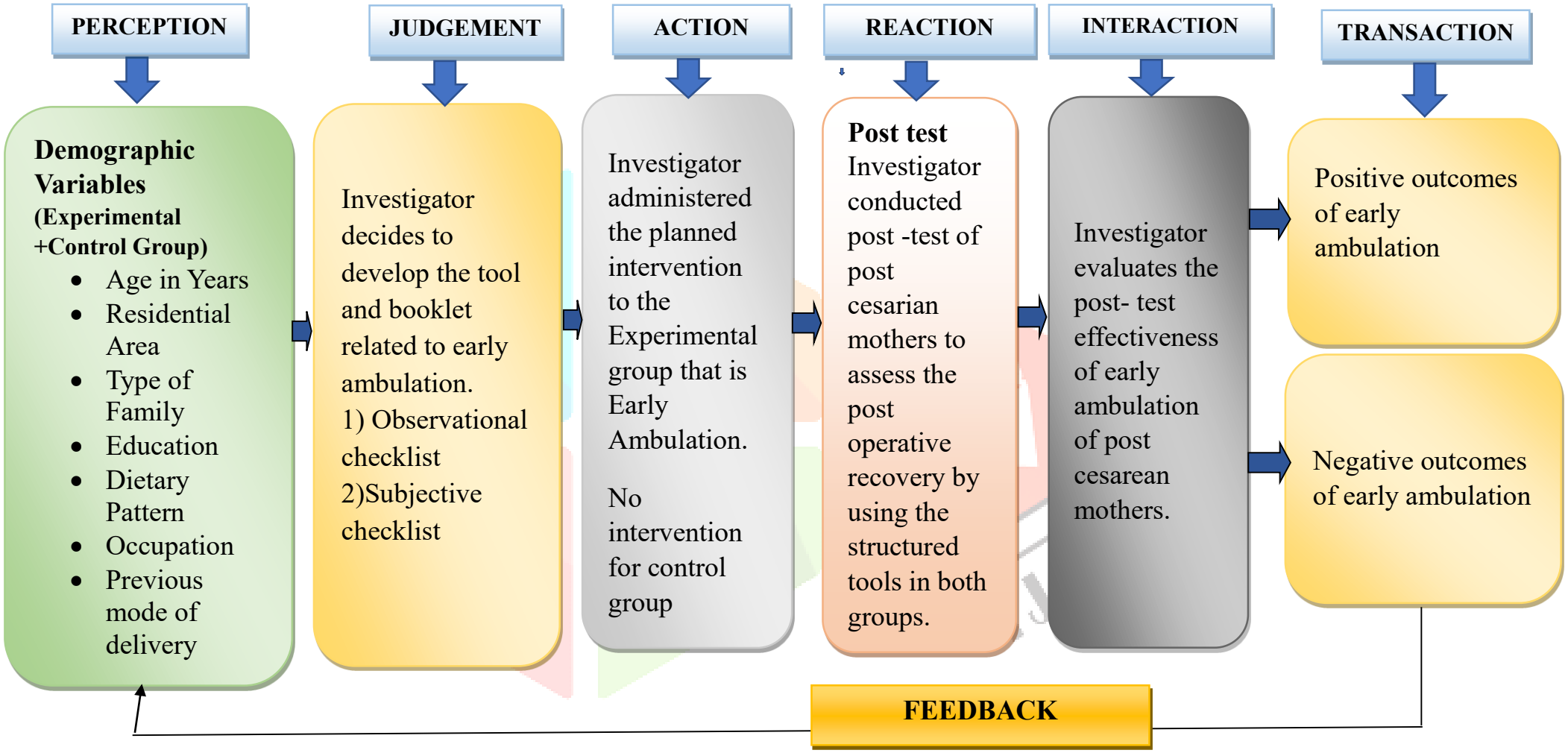

Fig. 1 CONCEPTUAL FRAMEWORK BASED ON MODIFIED "KING'S GOAL ATTAINMENT MODEL"

REVIEW OF LITERATURE

"Success is the sum of small efforts, repeated day in and day out."

– Robert Collier

"A literature review is a comprehensive summary of previous research on a topic. The literature review surveys scholarly articles, books and other sources relevant to a particular area of research [18]."

This chapter deals with the related literature review which aids to generate a picture of what is known about a particular situation.

Suvarna V.M. and Jyoti A. Salunkhe (2022) A quasi-Experimental study conducted at Krishna Hospital, Karad, to assess the effects of early ambulation on postoperative recovery in post-LSCS (Lower Segment Caesarean Section) women. Using random sampling, they selected 30 participants each for the experimental and control groups. The study found that 36.66% of the experimental group and 53.33% of the control group were primipara, while 63.33% of the experimental group and 46.66% of the control group had a history of previous labour. The results indicated that early ambulation significantly improved postoperative recovery for women who had undergone Caesarean delivery. Starting from the postoperative day, ambulation was given till 4th day and it was found that mean scores of experimental groups were more when compared with control group, where, at 25-48 hours, the difference in mean scores of activities of daily living and sense of well-being was 8.83 and 3.84 respectively. Thus, it indicates that early ambulation improves the activities of daily living and sense of well-being. [19]

MS Chaudhary (2022) A quasi-Experimental study conducted to evaluate the effectiveness of a structured teaching program on mothers' knowledge of early ambulation and its impact on recovery post-Caesarean section. The study included mothers who underwent Caesarean delivery, divided into control and experimental groups. Most participants were aged 21-25, with 15 in the control group and 12 in the experimental group. Mass media was the primary source of information on early ambulation and postoperative care. Additionally, 60% in the control group and 70% in the experimental group received spinal anaesthesia during the Caesarean section. The mean recovery score of control group was higher 29.4 than experimental group 14.9 the mean suture pain and bowel function score of caesarean section mothers in control group was higher than 5 and 2.7 where as it was 1.56 and 1.56 in experimental group. Hence it shows that control group mothers feel more pain than experimental group. [20]

JV Dube, NS Kshirsagar (2021) A quasi-Experimental study conducted by JV Dube and NS Kshirsagar in 2014, the objective was to evaluate the effect of planned early ambulation on selected biophysiological health parameters of post-caesarean patients. A quasi-experimental approach with a multiple time series design was adopted for the study. The experimental group received early planned recommended ambulation techniques starting from the day of surgery, which included deep breathing exercises, cough exercises, leg exercises, and early mobilization. The results of the study demonstrated that scheduled ambulation was effective in reducing the severity of selected post-operative outcomes. The post-

test mean score of the parameters in the experimental group was 44.9%, while it was 59.6% in the control group, indicating a lower severity of parameters in the experimental group at a significance level of 0.05.[21]

JV Dube and NS Kshirsagar (2021) A quasi-Experimental study conducted a study to assess the effect of planned early ambulation on selected biophysiological health parameters in post-Caesarean patients. Using a quasi-experimental, multiple time series design, the experimental group performed early ambulation techniques, including deep breathing, cough, leg exercises, and mobilization starting from the day of surgery. The study found that early ambulation significantly reduced the severity of postoperative outcomes, with a lower mean score in the experimental group (44.9%) compared to the control group (59.6%) at a significance level of 0.05. [22]

S Maesaroh, U Sulasih (2021) A quasi-Experimental study conducted a study to evaluate the impact of early mobilization on wound healing in post-Caesarean section patients. The quasi-experimental study, conducted in a hospital setting using purposive sampling, noted that in 2020, 67% of post-Caesarean patients experienced delayed wound healing, increasing the risk of infection. The study suggests that early mobilization aids in the wound healing process. A review of related literature further indicated a positive relationship between early mobilization and improved wound healing in post-Caesarean patients. [23]

A Mathew, S Nayak, K Vandana -(2020) A randomized controlled study conducted to assess the effects of ambulation and birthing ball use on maternal and newborn outcomes. The study involved 60 primigravida mothers, who were selected using purposive sampling and randomly allocated into three groups of 20 each: ambulation, birthing ball, and control. The results showed significant improvements in maternal outcomes with both birthing ball therapy and early ambulation. Notable differences were observed in the duration of the second stage of labour and type of delivery between the groups. The study concluded that both interventions effectively improved maternal outcomes without any harm to the newborns. Comparison of ambulation and birthing ball therapy on maternal outcome showed that, there is significant difference in second stage duration (t tab 2.031(df=36) < t cal 2.231= S) and type of delivery. In this study ambulation and birthing ball were found to be effective to improve maternal outcome and there was no harm to the baby. Both the experimental group mothers expressed that they were satisfied and comfortable. [24]

RESEARCH METHODOLOGY

The research methodology is a systematic plan to conducting the research. Methodology of the research study demonstrates the general patterns of organizing the procedure for gathering the valid and reliable data for the problem under investigation. The methodology is the most important part of research as it is a frame work for conducting the study.

It is a science of studying how research is done scientifically. Methodology is a significant part of research under which the researcher is able to project a blue print of research undertaken. It comprises the theoretical analysis of body of methods and principles associated with a branch of knowledge. Research methodology is the general that outline the way in which research is to be undertaken.

The total aim of the study is to assess the Effectiveness of Early Ambulation on Post-Operative Recovery among Post Caesarean mothers admitted in Maternity Ward, Shri Lal Bahadur Shastri Government Medical College and Hospital Nerchowk, Mandi. This chapter comprises of:

The research design for the study is quasi experimental non- equivalent control group post- test only design to accomplish the main objective i.e. to the Effectiveness of Early Ambulation on Post-Operative Recovery among Post Caesarean mothers admitted in Maternity Ward, Shri Lal Bahadur Shastri Government Medical College and Hospital Nerchowk, Mandi. The design can be presented as:

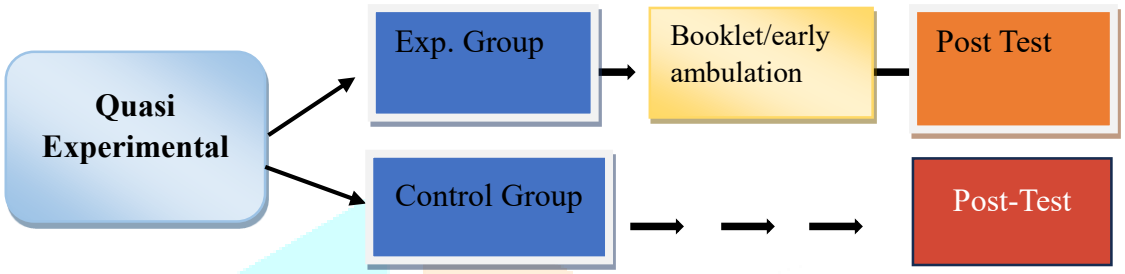

Fig. 2 Non- Equivalent Control Group Post- Test Only Design

RESEARCH APPROACH
Quantitative research approach

RESEARCH DESIGN
Quasi-experimental research design
(Post Test Only Design)

RESEARCH SETTING
SLBSGMC&H Nerchowk Mandi, (Himachal Pradesh).

TARGET POPULATION
Post caesarean mothers

SAMPLING TECHNIQUE
Non-probability Purposive Sampling Technique

SAMPLE SIZE
40 Post caesarean mothers

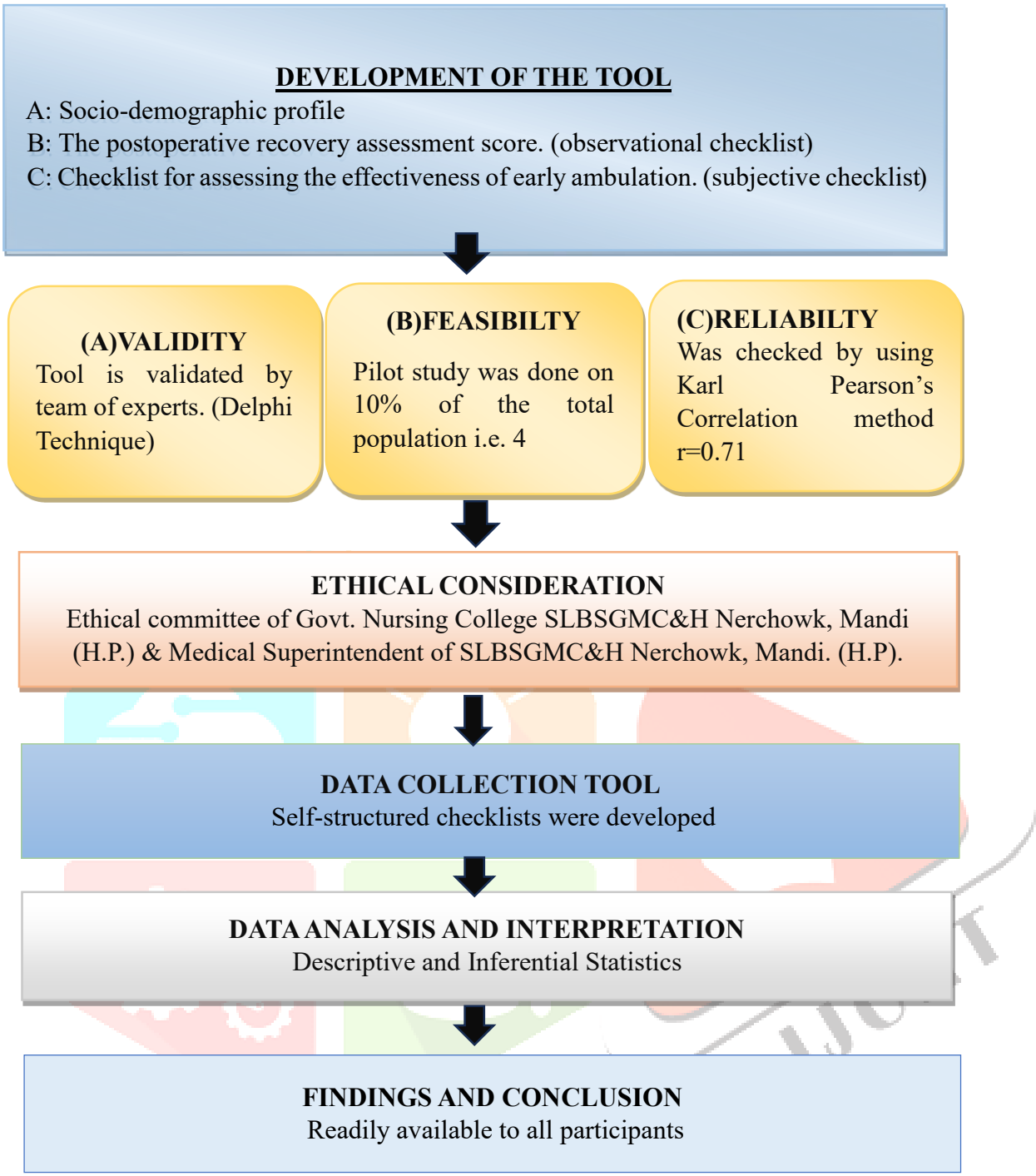

Fig. 3 SCHEMATIC REPRESENTATION OF RESEARCH METHODOLOGY

DESCRIPTION OF THE TOOL

Description of the tool refers to the explanation of the content of the tool. The researcher listed the number of items and the scoring for each item in the tool.

The tool for data collection consists of following sections: -

Section-1: It consists of selected socio demographic variables such as Age, Residential area, Type of Family, Education, Dietary Pattern, Occupation, Annual Income of the Family, No. of living Children, Previous Mode of Delivery.

Section-2: Post Operative Recovery Assessment Scale**.** The tool has 9 parameters, each with 2 statements. Post-caesarean mothers are observed for 3 days, and they are given scores based on their activity performance:

If an activity is performed on the 1st day, the score is 3, if not performed then score is 0. Maximum score for day one is 3.

If an activity is performed on the 2nd day, the score is 2, if not performed then score is 0. Maximum score for day two is 2.

If an activity is performed on the 3rd day, the score is 1, if not performed then score is 0. Maximum score for day three is 1.

POST OPERATIVE RECOVERY SCORES (OBJECTIVE CHECKLIST)

SCORE	INTERPRETATION
0-18	Average
19-36	Good
37-54	Very Good

Range of Post-operative recovery scores

The checklist includes 15 statements on early ambulation effectiveness. Participants score 1 point for each "Yes" and 0 for each "No," with total scores ranging from 0 to 15.

CHECKLIST SCORES (SUBJECTIVE CHECKLIST)

SCORE	INTERPRETATION
11-15	Very Effective
6-10	Effective
0-5	Somewhat Effective

Range of checklist scores

ETHICAL CONSIDERATION

1. A written permission obtained from the Principal, Shri Lal Bahadur Shastri Government medical College and Hospital Nerchowk Mandi, (Himachal Pradesh).
2. Ethical clearance taken from ethical clearance committee of Shri Lal Bahadur Shastri Government medical College and Hospital Nerchowk Mandi, (Himachal Pradesh).
3. Written permission taken from the Medical Superintendent of Shri Lal Bahadur Shastri Government medical College and Hospital Nerchowk Mandi, (Himachal Pradesh).
4. Permission taken from the HOD (OBG) of SLBSGMC&H Nerchowk Mandi, (Himachal Pradesh).
5. Written informed consent taken from each study sample assured and maintained throughout the study.

STEPS OF DATA COLLECTION

Phase I: Screening Phase

The main study was conducted in Shri Lal Bahadur Shastri Government medical College and Hospital Nerchowk Mandi, (Himachal Pradesh). Data was collected in month of May 2024. After obtaining official permission from the concerned authorities Pre-Procedural Preparation was done. 40 sample collected, 20 in Experimental group and 20 in Control Group were selected for this study.

Phase II: Data collection & Implementation Phase

Before collecting the data, informed consent was obtained and booklet given to the participants by considering the ethical aspect of the research. The samples were assured anonymity and confidentiality of information provided by them. In control group 20 sample has been taken. After that Experimental group was taken and procedure of Early Ambulation performed among them. After 9 hours the effectiveness of early ambulation was checked according to the plan of data collection.

Phase III: Termination Phase

The tool was verified for completion. The participants were assured about the confidentiality of the data. The participants were made comfortable. This phase lasted for a period of 2 minutes per participants.

DATA COLLECTION PROCEDURE

PROCEDURE	RATIONALE
1. Prepared and Delivered Booklet to Pre-Operative mothers (LSCS) on Effectiveness of Early Ambulation. 2. After 8 hours of C-section, Conduct a brief assessment of the mother's physical condition. 3. Assist the mother to change their position from a supine to sitting, on the edge of the bed. 4. Encourage the mothers for deep breathing exercises and hand movements. 5. Encourage the mother for stand up so that ambulation will be carried out and ensures she feels stable and secure. a) On first day, the duration of distance to walk 5 meters. or according to the mother's comfort. b) On second day, the duration of distance to walk 10 meters. or according to the mother's comfort. c) On third day, the duration of distance to walk 15 meters. or according to the mother's comfort. 6.Provide ongoing education and support to the mother regarding the benefits of early ambulation for promoting circulation, preventing complications, and expediting recovery. 7. Document the timing, duration, and distance of ambulation sessions in the mother's medical record.	1.Encouraged mothers for early ambulation. 2.This step ensures that the patient is stable and medically fit for ambulation 3.Ambulation promotes mobility, enhances circulation, and aids in the recovery process, reducing the risk of postoperative complications and promoting independence. 4.Patient education fosters self-management skills and promotes long-term adherence to ambulation recommendations, optimizing outcomes and reducing the risk of complications.

PLAN FOR DATA ANALYSIS

Data analysis is the systematic organization and synthesis of research data and testing of the research hypothesis using that data.

The data collected from the subjects were edited, coded and entered in excel sheet. The data were analysed and using descriptive and inferential statistics by manual. A probability of less than 0.05 was considered to be significant. The following plan of analysis was developed:

- Description of the subjects with respect to demographic variables was presented in terms of frequency and percentage.
- Mean, Standard Deviation, and Mean difference, Range was used to evaluate the Effectiveness of Early Ambulation.
- Statistical significance of the effectiveness of early ambulation by Un-Paired' t-test.

ANALYSIS AND INTERPRETATION OF DATA

This chapter dealt with the analysis and interpretation of the data obtained from mothers who had undergone caesarean section admitted in maternity ward at SLBSGMC&H Nerchowk Mandi (H.P).

The data collected from 40 post operative mothers (LSCS) and analyzed by using descriptive and inferential statistics by calculating the scores in terms of frequency, percentage, mean, standard deviation, chi-square and unpaired' test. The master data sheet was prepared and the collected information was organized, tabulated, analyzed and interpreted using descriptive and inferential statistics.

OBJECTIVES OF THE STUDY: -

1. To prepare and deliver booklet to pre operative mothers (LSCS) on effectiveness of early ambulation for post caesarean recovery in experimental group.
2. To prepare and encourage the post caesarean mothers of experimental group for early ambulation.
3. To determine the effectiveness of early ambulation among post caesarean mothers in experimental group.
4. To Compare the Post Operative Recovery among Post Caesarean Mothers between Experimental group and Control group.
5. To determine the association between postoperative recovery of post-caesarean mothers with selected socio-demographic variables.

PLAN FOR DATA ANALYSIS

Analysis and interpretation were done in accordance with the objectives of the study by using descriptive and inferential statistics. The level of significance chosen was p was at $p \leq 0.05$.

ORGANIZATION OF DATA FOR ANALYSIS

Raw data was collected and entered in a master data sheet for statistical analysis. The analysis and result of the data was organized and presented under the following section:

SECTION A

Findings related to Frequency(f) and percentage (%) distribution according to their sociodemographic variables.

SECTION B

Findings related to the effectiveness of early ambulation among post caesarean mothers.

SECTION C

Findings related to association with demographic variables.

SECTION-A

FINDINGS RELATED TO FREQUENCY AND PERCENTATION DISTRIBUTION OF SOCIO-DEMOGRAPHIC PROFILE OF THE SUBJECT.

TABLE: 4.1(A) FREQUENCY AND PERCENTATION DISTRIBUTION OF SOCIO-DEMOGRAPHIC PROFILE OF THE SUBJECT

N=40

Socio Demographic Proforma		**Experimental F (%)**	**Control F (%)**
Age in years	19 – 24 Years	10**(50%)**	9**(45%)**
	25 - 30 Years	7(35%)	9**(45%)**
	31 - 35 Years	3(15%)	2(10%)
	>35 Years	-	-
Residential Area	Rural Area	16**(80%)**	16**(80%)**
	Urban Area	4(20%)	4(20%)
Type of Family	Nuclear Family	14**(70%)**	9(45%)
	Joint Family	6(30%)	11**(55%)**
Education	No Formal Education	-	-
	Matriculation	-	-
	Senior Secondary Education	8(40%)	8(40%)
	> Graduate	12**(60%)**	12**(60%)**
Dietary Pattern	Vegetarian	14**(70%)**	13**(65%)**
	Non-Vegetarian	6(30%)	7(35%)
Occupation	House maker	14**(70%)**	12**(60%)**
	Govt. Service	2(10%)	2(10%)
	Private Service	4(20%)	6(30%)

TABLE: 4.1(B) FREQUENCY AND PERCENTATION DISTRIBUTION OF SOCIO-DEMOGRAPHIC PROFILE OF THE SUBJECT

N=40

Socio Demographic Proforma		**Experimental F (%)**	**Control F (%)**
Annual Income of Family	Below 40000/-	**10(50%)**	**11(55%)**
	Rs. 41000 to 70000/-	7(35%)	840%)
	Rs. 71000 to 100000/-	3(15%)	3(5%)
	Rs. >100000/-	-	-
No. of Living Children	One	**11(55%)**	**12(60%)**
	Two	9(45%)	7(35%)
	Three	-	1(5%)
	> Three	-	-
Previous Mode of Delivery	Caesarean Section	**20(100%)**	**18(90%)**
	Normal Vaginal Delivery	-	2(10%)
	Instrumental Delivery	-	-

Table: - summarizes the socio-demographic profiles of participants in both the experimental and control groups. Both groups had 80% living in rural areas and 20% in urban areas. In the experimental group, 50% were aged 19-24, 35% were 25-30, and 15% were 31-35. The control group had 45% aged 19-24, 45% aged 25-30, and 10% aged 31-35. Regarding family type, 70% of the experimental group were from nuclear families, compared to 45% in the control group. All participants had at least a senior secondary education; 40% in each group had completed senior secondary education, while 60% had higher education. Dietary habits showed 70% of the experimental group were vegetarians versus 65% in the control group. Occupation-wise, 70% of the experimental group were homemakers, compared to 60% in the control group. Family income was below Rs. 40,000 for 50% of the experimental group and 55% of the control group. Regarding children, 55% of the experimental group had one child, and 45% had two; the control group had 60% with one child, 35% with two, and 5% with three. All participants in the experimental group had previous Caesarean sections, compared to 90% in the control group.

GRAPHICAL REPRESENTATION OF FREQUENCY AND PERCENTAGE DISTRIBUTION OF DEMOGRAPHIC PROFILE OF THE SUBJECTS

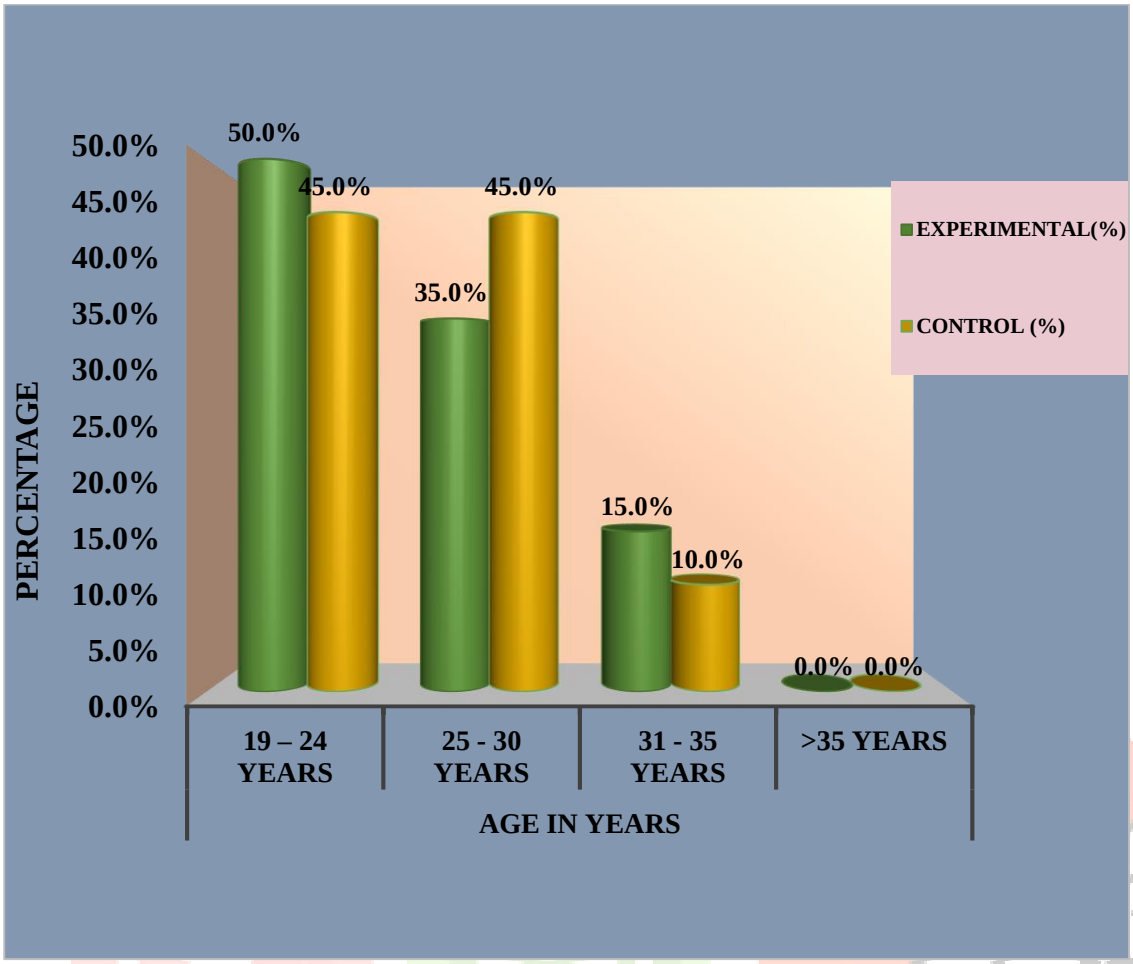

Fig. 4- Cylindrical Diagram showing the percentage distribution according to Age in years.

Table 4.1 and fig. 4 depicts that in experimental group, 50% of participants are aged 19-24, 35% are aged 25-30, and 15% are aged 31-35, while in the control group, 45% are aged 19-24, 45% are aged 25-30, and 10% are aged 31-35.

SECTION – B

FINDINGS RELATED TO THE EFFECTIVENESS OF EARLY AMBULATION AMONG POST CAESAREAN MOTHERS. (OBJECTIVE CHECKLIST)

TABLE 4.2- COMPARISON OF FREQUENCY & PERCENTAGE DISTRIBUTION OF BOTH GROUPS OF POST OPERATIVE RECOVERY SCORES. **N=40**

CATEGORY SCORE	EXPERIMENTAL f (%)	CONTROL f (%)
Very Good (37-54)	7(35%)	0(0%)
Good (19-36)	13(65%)	1(5%)
Average (0-18)	0(0%)	19(95%)
Maximum = 54		Minimum =0

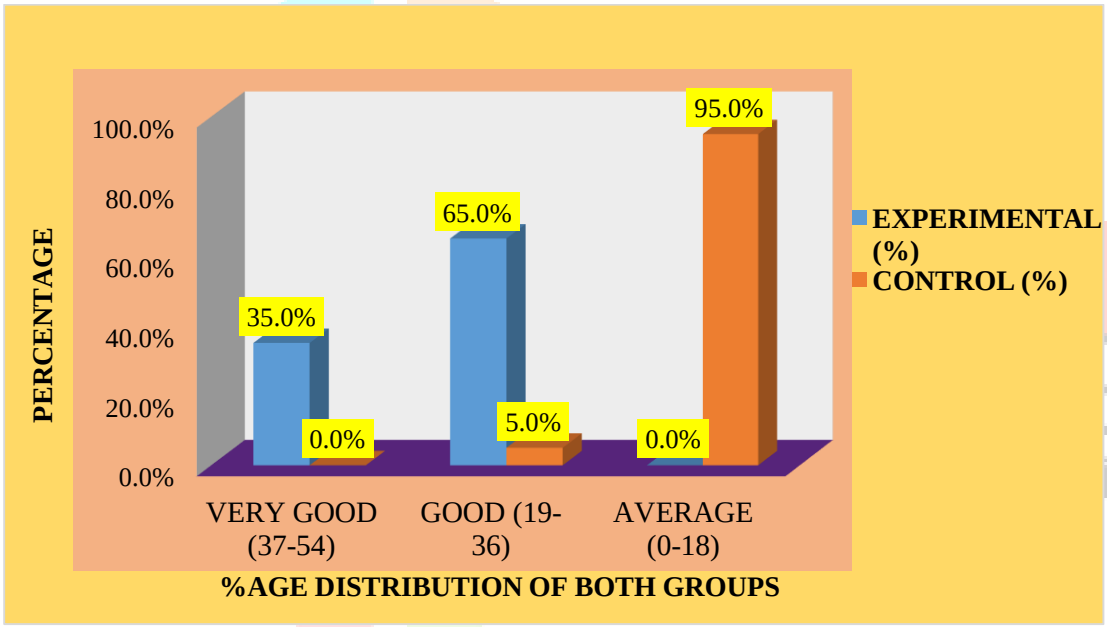

Fig. 5 -Bar Diagram representing comparison of percentage distribution of both groups of Post Operative Recovery.

Table 4.2 and Fig. 5 shows that 35% of the experimental group scored "Very Good" (37-54), while none of the control group did. In the "Good" range (19-36), 65% of the experimental group scored, compared to 5% of the control group. No participants from the experimental group were in the "Average" range (0-18), whereas 95% of the control group were, indicating better recovery outcomes for the experimental group.

TABLE 4.3- COMPARISON OF BOTH GROUPS OF POST OPERATIVE RECOVERY SCORES.

N=40

Unpaired T Test		**Mean**	**S.D.**	**Mean %**	**Unpaired t-Test**	**p value**	**Table Value at 0.05**
Post Operative Recovery Scores	Experimental	36.25	2.807	67.13	27.885	<0.001 ***	2.024
	Control	12.25	2.633	22.69			

*** Highly Significant

Table 4.3 depicts that the unpaired t-test results reveal a significant difference in post-operative recovery scores between the experimental and control groups. The experimental group exhibited a mean post-operative recovery score of 36.25, with a standard deviation of 2.807, while the control group had a lower mean score of 12.25, with a standard deviation of 2.633. The calculated p-value of 0.000, which is less than the significance level of 0.05, indicates a statistically significant difference between the two groups' mean scores. Consequently, we reject the null hypothesis, signifying that the intervention applied to the experimental group led to a significantly higher post-operative recovery compared to the control group. This suggests the potential effectiveness of the intervention in enhancing post-operative recovery outcomes, warranting further investigation and potential application in clinical practice.

Hence, it was concluded that there is significant difference between the functional activities of daily living of post caesarean mothers in the study group and control group at ≤ 0.05 level of significance. Hence, research hypothesis H_1, was accepted.

FINDINGS RELATED TO THE EFFECTIVENESS OF EARLY AMBULATION AMONG POST CAESAREAN MOTHERS. (SUBJECTIVE CHECKLIST)

TABLE 4.4- COMPARISON OF FREQUENCY & PERCENTAGE DISTRIBUTION OF BOTH GROUPS OF CHECKLISTS.

N=40

CATEGORY SCORE	**EXPERIMENTAL f (%)**	**CONTROL f (%)**
VERY EFFECTIVE (11-15)	19(95%)	7(35%)
EFFECTIVE (6-10)	1(5%)	13(65%)
SOMEWHAT EFFECTIVE (0-5)	0(0%)	0(0%)
Maximum = 15		Minimum = 0

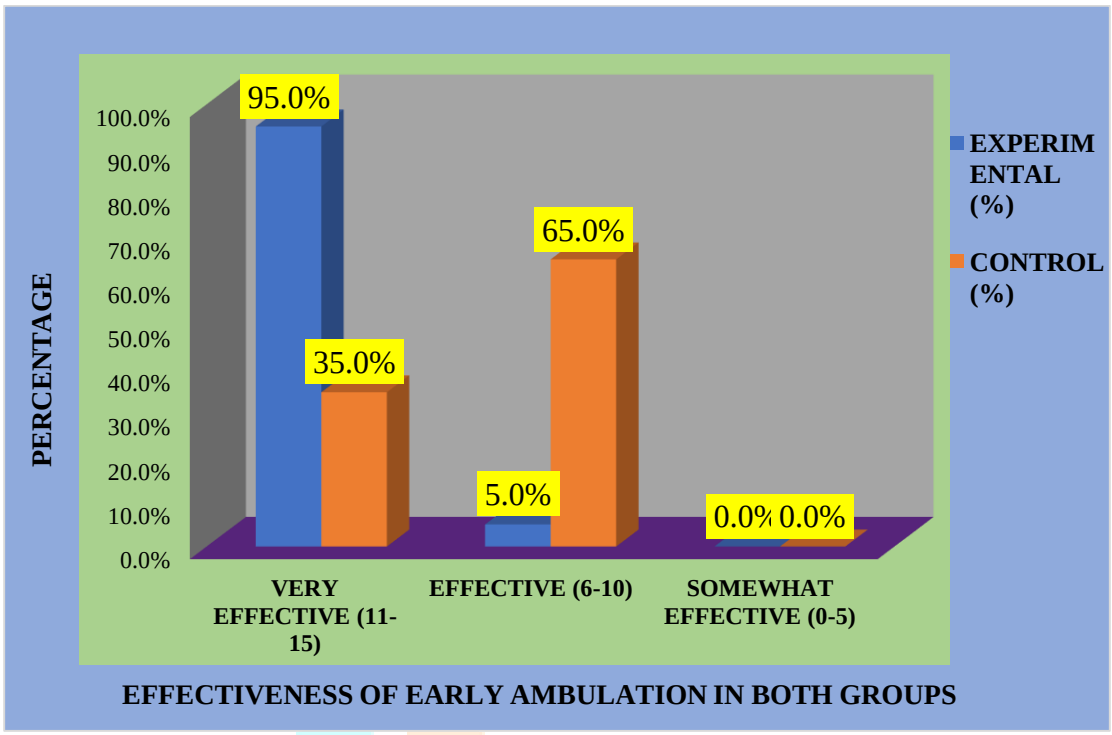

Fig. 6 - Bar Diagrams representing comparison of percentage distribution of both groups of Checklist.

Table 4.4 and Figure 6 show that early ambulation significantly improved recovery, with 95% of the experimental group scoring in the "Very Effective" range (11-15) compared to 35% of the control group, while 5% of the experimental group and 65% of the control group scored in the "Effective" range (6-10); no participants scored in the "Somewhat Effective" range (0-5).

TABLE 4.5- COMPARISON OF BOTH GROUPS OF CHECKLISTS.

N=40

Unpaired T Test		**Mean**	**S.D.**	**N**	**Mean %**	**Unpaired t - Test**	**Table Value at 0.05**	**p value**
Checklist Scores	Experimental	14.55	1.191	20	97.00	11.236	2.024	<0.001 ***
	Control	9.60	1.569	20	64.00			

** Highly Significant

Table 4.5 presents the results of an unpaired t-test comparing checklist scores between the experimental and control groups. The experimental group had a mean score of 14.55 with a standard deviation (S.D.) of 1.191 across 20 participants, resulting in a mean percentage score of 97.00%. In contrast, the control group had a mean score of 9.60 with an S.D. of 1.569 for the same number of participants (N = 20), leading to a mean percentage score of 64.00%. The unpaired t-test value was 11.236, which is greater than the critical value of 2.024 at the 0.05 significance level, indicating a statistically significant difference between the two groups. The p-value was less than 0.001 (**), confirming that the difference in checklist scores between the experimental and control groups is highly significant. This suggests that the experimental intervention had a significant positive effect on the checklist scores.

SECTION – C

FINDINGS RELATED TO ASSOCIATION WITH DEMOGRAPHIC VARIABLES

TABLE 4.6 (A)- SHOWING ASSOCIATION OF POST OPERATIVE RECOVERY SCORES WITH DEMOGRAPHIC VARIABLES OF BOTH GROUPS.

N=40

DEMOGRAPHIC DATA		EXPERIMENTAL SCORES				CONTROL SCORES			
Variables	**Opts**	**Chi Test**	**df**	**Table Value**	**P value**	**Chi Test**	**df**	**Table Value**	**P value**
Age in years	19 – 24 Years 25 - 30 Years 31 - 35 Years >35 Years	1.559	2	5.991	0.459	1.287	2	5.991	0.526
Residential Area	Rural Are Urban Area	0.495	1	3.841	0.482	0.263	1	3.841	0.608
Type of Family	Nuclear Family Joint Family	0.010	1	3.841	0.919	1.287	1	3.841	0.257
Education	No Formal Education Matriculation Senior Secondary Education > Graduate	4.432	1	3.841	0.035**	1.579	1	3.841	0.209
Dietary Pattern	Vegetarian Non-Vegetarian	0.848	1	3.841	0.357	1.955	1	3.841	0.162
Occupation	House maker Govt. Service Private Service	1.476	2	5.991	0.478	2.456	2	5.991	0.293
Annual Income of Family	Below 40000/- Rs. 41000 to 70000/-	12.276	2	5.991	0.002**	1.579	2	5.991	0.454

	Rs. 71000 to 100000/-								
	Rs. >100000/-								

TABLE 4.6 (B)- SHOWING ASSOCIATION OF POST OPERATIVE RECOVERY SCORES WITH DEMOGRAPHIC VARIABLES OF BOTH GROUPS.

DEMOGRAPHIC DATA		**EXPERIMENTAL SCORES**				**CONTROL SCORES**			
Variables	**Opts**	**Chi Test**	**df**	**Table Value**	**P value**	**Chi Test**	**df**	**Table Value**	**P value**
No. of Living Children	One Two Three > Three	0.020	1	0.888	3.841	1.955	1	5.991	0.376
Previous Mode of Delivery	Caesarean Section			N. A	N. A	9.474	1	3.841	0.002**

** Significant

Table 4.6 Analysis of demographic data showed that most factors, including age, residential area, type of family, dietary pattern, occupation, and number of living children, had no significant association with postoperative recovery scores in both experimental and control groups. However, in the experimental group, higher education ($p = 0.035$) and family income ($p = 0.002$) were significantly associated with better recovery. In the control group, the previous mode of delivery ($p = 0.002$) significantly affected recovery outcomes, with those having had a Caesarean section showing different results compared to those with a normal vaginal delivery. Thus, the hypothesis H2 was accepted.

CONCLUSION

Early ambulation is an effective intervention for improving postoperative recovery in post-Caesarean mothers, and its implementation should be considered a best practice in maternal care settings. The study's results advocate for policy changes and the adoption of early ambulation protocols to ensure better health outcomes for post-Caesarean mothers. The results demonstrated that early ambulation significantly enhances recovery outcomes in post-Caesarean mothers. Mothers in the experimental group, who received guidance and encouragement to ambulate early, showed improved recovery indicators such as reduced time to first bowel movement, lower pain levels, higher mobility scores, and fewer postoperative complications compared to the control group.

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