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Effectiveness of Early Ambulation on Post Operative Recovery Among Patients Who Have Undergone Abdominal Surgery at Selected Hospital, Lucknow

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Abstract

Background: Early mobility is one of the vital to improve patient outcome and benefits of early ambulation after surgery will promotes blood flow of oxygen throughout the body while maintaining normal breathing functions and it stimulates circulation where walking improves blood flow which aids in quicker wound healing and infection and it increases muscle tone and strength, especially those of the abdomen and ankles promoting early.

Objectives: To evaluate the post operative recovery among patients who have undergone abdominal surgery. To compare the effectiveness of early ambulation on post operative recovery among patients between experimental and control group. To find out the association between post operative recovery among patients in experimental and control group with selected sociodemographic variables.

Methodology: A Quantitative research approach and 'Quasiexperimental design' [non equivalent control group posttest only design] was used,70 abdominal surgical patient were selected by Non Probability Sampling [purposive Sampling]

Results: The study reveals that the mean Modified Constipation Assessment score of experimental group was 0.26±0.44, while in control group score was 2.74±0.51. The significant difference was found in mean Modified Constipation Assessment score between the study groups ($p<0.001$).

Conclusion: Early ambulation is effective for post operative recovery among patients who have undergone abdominal surgery.

Keywords: Early ambulation, Wound healing, Constipation

INTRODUCTION

The ambulation of patients soon after surgery, became a fundamental part of nursing care, it is a central concept in fast-track surgery. Early ambulation is the most vital intervention to prevent post operative complications; it provides not only physical function but also improves emotional and social wellbeing and alleviates the hospital stay. As we know immobility in hospitalized patients is known to cause functional decline and affecting the respiratory, cardiovascular, gastrointestinal, integumentary, musculoskeletal, and renal complications for surgical patients, and also has its effect on patient

metabolism. In order to reach a patient's goal of ambulation, post operative patients may require assistance before they are able to walk around on their own.

Problem Statement

''Effectiveness of early ambulation on post operative recovery among patients who have undergone abdominal surgery at selected hospital, Lucknow.''

Objective of the study

1. To evaluate the post operative recovery among patients who have undergone abdominal surgery.
2. To compare the effectiveness of early ambulation on post operative recovery among patients between experimental and control group.
3. To find out the association between post operative recovery among patients in experimental and control group with selected socio-demographic variables.

Operational definition

Effectiveness

In this study it refers to significant changes in post operative recovery of abdominal surgery patients which is measured by observation checklist.

Early ambulation

In this study it is a technique in which patient gets out of bed and engages in mild activities such as sitting over bed, and light walking with or without assistance for 30min.It is to be done 2 times a day,6 hourly for 4 consecutive days from day (1) to day (3) of post operative.

Patient

In this study patient refers to who undergone abdominal surgery.

Abdominal surgery

In this study a surgical procedure is done in a person's to diagnose or treat a medical condition. Abdominal surgery can relieve the symptoms of various abdominal conditions. Abdominal Surgeries for pathologies of Gallbladder (Minimally Invasive), Spleen, Stomach, Pancreas, Liver, Small Intestines, Large Intestines, Appendix (Appendectomy).

Post operative recovery

In this study it refers to the restoration of patients who have undergone abdominal surgery, to their normal or to near to normal condition. The post operative recovery has to be measured in terms of wound healing, constipation.

Hypothesis

H_1: There is a significant effectiveness of early ambulation on post-operative recovery among patients who have undergone abdominal surgery.

H_2: There is significant association between the post operative recovery among patients who have undergone abdominal surgery with their selected socio demographic variables.

Delimitations

1. The study was delimited to abdominal surgery patient admitted at Dr. Shyama Prasad Mukherjee Civil Hospital, Lucknow.
2. The duration of the study period was limited 6 weeks.

RESEARCH METHODOLOGY

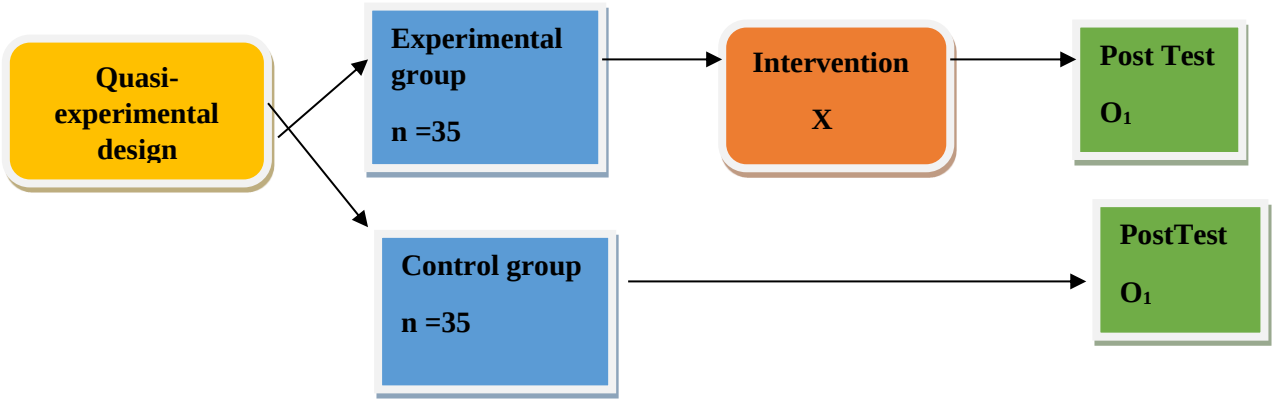
Research approach

The **Quantitative Research Approach** was opted for the study.

Research design

Quasi-experimental design [Non equivalent control group post-test only design] was used for the present study.

Figure-2 Schematic representation of research design



X= Early ambulation given two times per day for three consecutive days for experimental group**.**

O_1= Post test of post operative recovery among abdominal surgery patients by using modified wound healing and constipation assessment scale for experimental and control group.

Variables

Demographic variables

Demographic variables were Age, Sex, Monthly income, Education status, Occupation, Dietary pattern.

Clinical variables

Clinical variables were Height, Weight, BMI, Vitals and History of diabetes mellitus, History of hypertension, Types of Surgery.

Independent variables

Independent variable was "Early ambulation".

Dependent variables

Dependent variable was "Post operative recovery".

Research setting:

The present study was conducted in Dr**. Shyama Prasad Mukharjee Civil Hospital**, Lucknow.

Experimental group- Dr. Shyama Prasad Mukharjee Civil Hospital, Lucknow.

Control group- Dr. Shyama Prasad Mukharjee Civil Hospital, Lucknow.

Population

The population for the present study comprises patient admitted in Surgery patient.

Target population

In this study target population was the patients who have undergone abdominal surgery.

Accessible population

In this study accessible population was the abdominal surgery patients admitted in surgery ward of Dr. Shyama Prasad Mukharjee Civil Hospital, Lucknow.

Sample

The sample for the present study comprises abdominal surgery patients who met inclusion criteria admitted in surgery ward of Dr. Shyama Prasad Mukharjee Civil Hospital, Lucknow.

Sample technique

The sample was selected through Non**- Probability Sampling [Purposive sampling] technique.**

Criteria for sample selection

The Sampling frame structured by the investigator included the following criteria:

Inclusion criteria

1. Patients underwent abdominal surgeries.
2. Patient who are conscious and follow the oral command.
3. Postoperative patients who are admitted for 5days in surgical units.
4. Patients who give consent for the study.

Exclusion criteria

1. Any surgery other than abdominal surgery.
2. Seriously ill after or during surgery.
3. Patient who is having shock and cardiac problem.
4. Patient associated with altered sensorium.
5. Patient associated with postural hypotension.
6. Patient with spinal anesthesia.
7. Patient with musculoskeletal deformity.

Sample size

The sample size for the present study is **70**. **Comprising of 35 patients in experimental group and 35 patients in control group**

Tool for data collection

In this study 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: Clinical variables.

Section C: Standardized tool of Modified constipation assessment scale, Modified Wound Healing assessment scale.

Description of the tool

The tool consists of three sections:

Section A

Socio demographic tool was developed by researcher which consists Age, Sex, Monthly income, Education status, Occupation, Dietary pattern.

Section B

Clinical tool was developed by researcher which consists Height, Weight, BMI, Temperature, Pulse, Respiration, Blood Pressure, History of diabetes mellitus and hypertension, types of Surgery.

Section C

It is a tool developed by researcher Modified constipation assessment scale consists of 4 Questionnaires; Modified wound healing assessment scale consists of 5 Questionnaire.

Scoring interpretation

SECTION C-I

Modified constipation assessment scale was used for assessing the level of constipation. The tool consists of 4 Questionnaires. The total score is 4, which were given by 0-No problem, 1-2 Mild problem,3-4 Moderate problem.

TABLE-1: Score interpretation of the level of constipation

Score	Level of problem
0	**No problem**
1-2	**Mild problem**
3-4	**Moderate problem**

SECTION-C-II

Modified wound healing assessment scale was used for assessing the level of Wound Healing. The tool consists 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.

TABLE-2: score interpretation of the level of wound healing

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

Reliability

The tool was established by using inter-rater reliability technique on 8 patients in Vivekananda Polyclinic and Institute of Medical Sciences, Lucknow from 27/02/2022 to 02/03/2022 and its correlation coefficient r–value was 0.875 for constipation and 92.5 for wound healing. These correlation coefficient show that the tool is reliable to evaluate the effectiveness of early ambulation on post operative recovery among patients who have undergone abdominal surgery at selected Hospital, Lucknow."

Pilot study

After validation of the tool the researcher had started the pilot study from 03/03/2022 to 09/03/2022 in Vivekananda polyclinic and institute of medical sciences Lucknow with 10% of total sample size that is 8 patient. Prior to the study, formal permission was taken from the director of Vivekananda polyclinic and institute of medical sciences Lucknow.

The investigator had selected the patients with the help of purposive sampling technique. After taking consent from the patients, investigator collected socio-demographic and clinical data from the patients and then ambulate the patient from day 1 to day 3 and on the day 4 constipation and wound healing was assessed through modified constipation assessment scale and modified wound healing assessment scale.

Findings of pilot study –

According to table in the experimental group mean Modified Constipation Assessment score was (0.50±0.58 while in the control group (2.50±0.58),which signifies that there is significant difference was found between the study groups ($p<0.001$).

While in the experimental group the mean Modified wound healing assessment score was (1.50±1.00), in the control group (6.50±0.58), and study signifies that there was significant difference between the study groups ($p<0.001$).

A concise analysis was done using statistics. During the pilot study the investigator did not face any problem and found that the study to be feasible and no changes or modification were made and the concerned authority and the sample were found to be cooperative, modified constipation assessment scale

and modified wound healing assessment scale were relevant and the time and cost of the study was within the limit.

The pilot study also helped the investigator to estimate the total time required to conduct main study including the budget.

RESULTS

Organization of the findings of the final study

The findings were presented under the following sections-

SECTION I:-Distribution of samples according to socio-demographic variable.

SECTION II: the post operative recovery among patients who have undergone abdominal surgery.

SECTION III: - Compare the effectiveness of early ambulation on post operative recovery among patients between experimental and control group.

SECTION IV: - The association between post operative recovery among patients in experimental and control group with selected socio-demographic

SECTION –I: Distribution of sample of socio-demographic variable.

Table – 3: Distribution of the sample according to socio-demographic variables

Variable	Category	Experimental Group	Control group
		f (%)	f (%)
Age	20 - 29 yr	6(17.1%)	6(17.1%)
	30 - 39 yr	10(28.6%)	9(25.7%)
	40 - 49 yr	13(37.1%)	13(37.1%)
	50 - 59 yr	2(5.7%)	5(14.3%)
	60 - 69 yr	2(5.7%)	1(2.9%)
	≥70 yr	2(5.7%)	1(2.9%)
Gender	Male	15(42.9%)	13(37.1%)
	Female	20(57.1%)	22(62.9%)
Monthly Income	< Rs. 2000/ Month	4(11.4%)	1(2.9%)
	Rs.2001-Rs.3000/ Month	2(5.7%)	0(0.0%)
	>Rs.4000	29(82.9%)	34(97.1%)
Education Status	Illiterate	12(34.3%)	20(57.1%)
	Primary Education	9(25.7%)	6(17.1%)
	Secondary Education	3(8.6%)	1(2.9%)
	Graduate and above	11(31.4%)	8(22.9%)
Occupation	Home maker	18(51.4%)	21(60.0%)
	Farmer	6(17.1%)	7(20.0%)
	Unemployed	1(2.9%)	0(0.0%)
	Others	10(.6%)	7(20.0%)

Dietary Pattern	Vegetarian	17(48.6%)	18(51.4%)
	Non vegetarian	18(51.4%)	17(48.6%)
BMI	Underweight	1(2.9%)	2(5.7%)
	Normal weight	25(71.4%)	21(60.0%)
	Overweight	9(25.7%)	12(34.3%)

The above table-3 shows that Distribution of the sample according to Demographic Variables-

- When comparing the experimental and control groups, maximum sample belong to the age range 40-49 yr (37.1%).
- Regarding the gender in the experimental group the male – female proportion was (42.9%: 57.1%) while in the control group, this proportion was (37.1%: 62.9%).
- Regarding monthly income in the experimental group, the proportion of sample with income < Rs 2000/month, Rs 2001-Rs 3000/-/month and >Rs 4000 was (11.4%: 5.7% and 82.9%) while in control group was (2.9%: 0.0%: 97.1%).
- In the experimental group, the proportion of sample with educational status illiterate, primary, secondary and graduate/above (34.3 %: 25.7% : 8.6% : 31.4%)while in control group these were in proportion was (57.1% : 17.1% : 2.9% : 22.9%).
- In the experimental group, the proportion of sample with occupations home maker, farmer, unemployed and others was 51.4%: 17.1%: 2.9%: 28.6% while in control group these were in proportion (60.0%: 20.0%: 0.0%: 20.0%).
- In the experimental group the proportion of vegetarian and non-vegetarian (48.6%: 51.4%) while in control group this proportion was (51.4%: 48.6%)
- In the experimental group, majority 25(71.4%) and in the control group, majority 21(60.0%) had a normal weight.

SECTION II: The post operative recovery among patients who have undergone abdominal surgery.

Table – 18: intergroup comparison of modified constipation assessment

Constipation Assessment	**Experimental Group**		**Control Group**		**chi-value**	**p-value**
	No	**%**	**No**	**%**		
No Problem	26	74.3%	0	0.0%	51.053	**<0.001**
Mild Problem	9	25.7%	10	28.6%		
Moderate Problem	0	0.0%	25	71.4%		

Above table-18 shows intergroup comparison of modified constipation Assessment- In the experimental group, majority of sample 26(74%) were had no problem, remaining 9(25.7%) were had mild problem and none of them had moderate problem. where in the control group majority 25(71.4%) were had moderate problem, remaing 10(28.6%) were had mild problem and none of the them were had no problem. Which signifies that there is significant difference was found between the control and experimental groups ($p<0.001$).Thus result reveals that early ambulation was effective to reduce constipation.

Figure-11 Bar graph showing intergroup comparison of modified constipation assessment

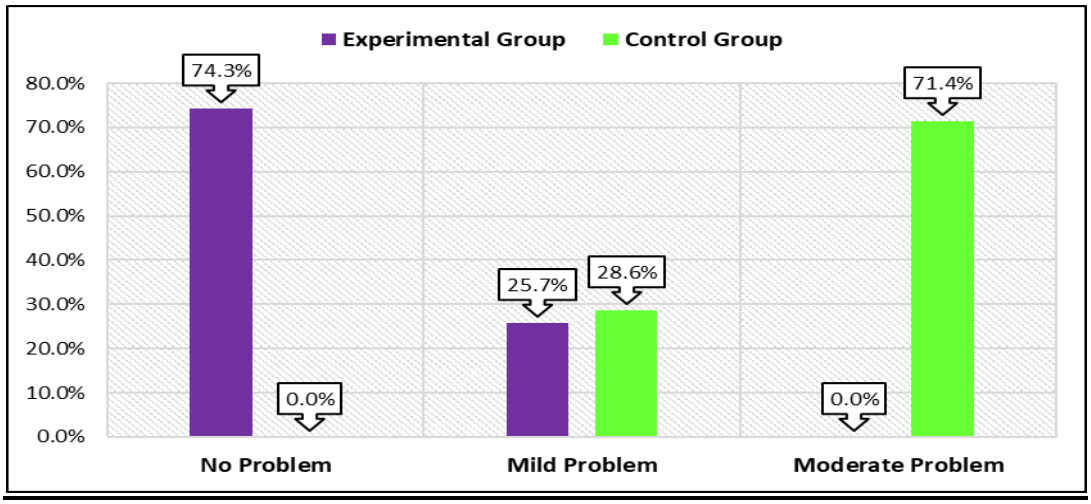
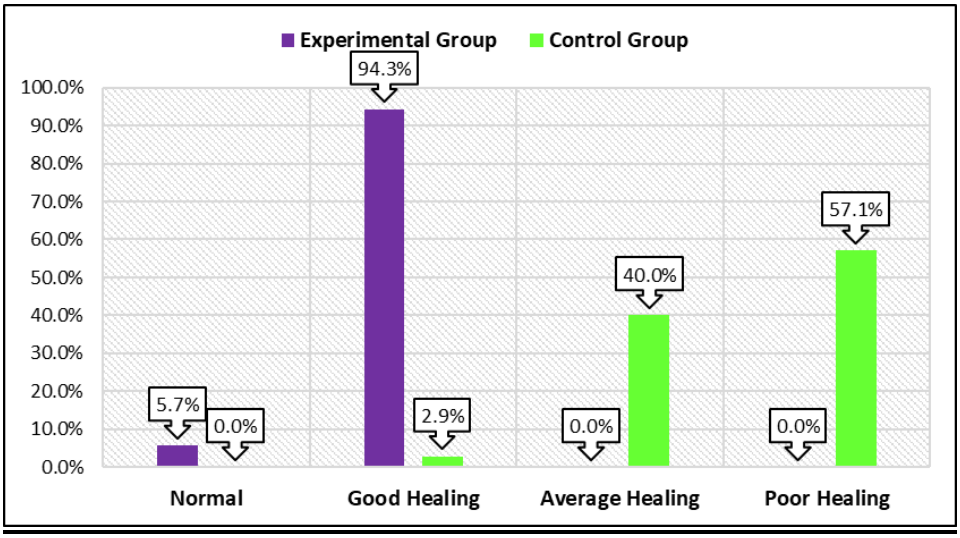


Table – 19: Intergroup Comparison of Modified Wound Healing Assessment

Wound Healing Assessment	Experimental Group		Control Group		chi-value	p-value
	No	%	No	%		
Normal	2	5.7%	0	0.0%	66.118	**<0.001**
Good Healing	33	94.3%	1	2.9%		
Average Healing	0	0.0%	14	40.0%		
Poor Healing	0	0.0%	20	57.1%		

Above table-19 portrays the Intergroup Comparison of Modified Wound Healing Assessment.-In the experimental group majority 33(94.3%) were had good healing, remaining 2(5.7%) were had normal healing where as in the control group 20(57.1%) were had poor healing, 14(40.0%) were had average healing and remaining 1(2.9%) were had good healing. Which signifies that there is significant difference was found between the control and experimental groups ($p<0.001$). Thus result reveals that early ambulation was effective to improve wound healing.

Fig -12 Bar graph showing Intergroup Comparison of Modified Wound Healing Assessment



Above bar graph depicts that in the experimental group majority 33(94.3%) had good healing, remaining 2(5.7%) had normal healing where as in the control group 20(57.1%) had poor healing, 14(40.0%) had average healing and remaining 1(2.9%) had good healing, thus the finding reveals that early ambulation is effective for wound healing in post abdominal surgery patient.

SECTION- III: Compare the effectiveness of early ambulation on post operative recovery among patients between experimental and control group.

Table –20: Intergroup Comparison of Modified Constipation Assessment Scale and Modified Would Healing Assessment Scale

n= 70

Variable	Control Group	Experimental Group	Mann Whitney test	
	Mean±SD	Mean±SD	z-value	p-value
Modified Constipation Assessment Scale	2.74±0.51	0.26±0.44	7.57	**<0.001**
Modified Wound Healing Assessment Scale	10.23±1.96	1.83±1.01	7.26	**<0.001**

According to table in the experimental group mean modified constipation assessment score was (0.26±0.44),while in the control group (2.74±0.51),which signifies that there is significant difference was found between the study groups (p<0.001).

While in the experimental group the mean modified wound healing assessment score was (1.83±1.01), in the control group (10.23±1.96), and signifies that there is significant difference was found between the study groups (p<0.001).

SECTION IV: The association between post operative recovery among patients in experimental and control group with selected socio-demographic.

Table – 21: Association between post operative recovery in experimental group with Demographic variable.

Demographic/clinical variables		Modified Constipation Assessment Scale				Modified Wound Healing Assessment Scale			
		Mean	SD	statistic	p-value	Mean	SD	statistic	p-value
Age	20 - 29 yr	0.33	0.52	8.36^{1}	0.137	2.00	1.10	5.04^{1}	0.412
	30 - 39 yr	0.10	0.32			1.80	1.23		
	40 - 49 yr	0.23	0.44			1.77	0.93		
	50 - 59 yr	0.00	0.00			1.00	0.00		
	60 - 69 yr	1.00	0.00			3.00	0.00		
	≥70 yr	0.50	0.71			1.50	0.71		
Gender	Male	0.40	0.51	1.65^{2}	0.214	1.73	0.88	0.26^{2}	0.793
	Female	0.15	0.37			1.90	1.12		

Income	< Rs. 2000/ Month	0.50	0.58	2.17[1]	0.338	1.50	0.58	0.45[1]	0.797
	Rs.2001-Rs.3000/ Month	0.50	0.71			2.00	1.41		
	>Rs.4000	0.21	0.41			1.86	1.06		
Education	Illiterate	0.25	0.45	8.69[1]	**0.034**	2.00	0.85	1.74[1]	0.628
	Primary Education	0.00	0.00			1.44	0.88		
	Secondary Education	0.00	0.00			2.00	1.73		
	Graduate and above	0.55	0.52			1.91	1.14		
Occupation	Home maker	0.17	0.38	2.30[1]	0.512	1.83	1.04	1.11[1]	0.775
	Farmer	0.33	0.52			2.00	0.89		
	Unemployed	0.00				1.00			
	Others	0.40	0.52			1.80	1.14		
Diet	Vegetarian	0.24	0.44	0.28[2]	0.832	1.88	1.05	0.31[2]	0.756
	Non vegetarian	0.28	0.46			1.78	1.00		
BMI	Underweight	0.00		0.46[1]	0.795	1.00		2.53[1]	0.282
	Normal weight	0.28	0.46			1.96	0.93		
	Overweight	0.22	0.44			1.56	1.24		
DM	DM	0.40	0.52	1.21[2]	0.228	2.10	1.20	1.03[2]	0.301
	No DM	0.20	0.41			1.72	0.94		
Hypertension	Hypertension	0.46	0.52	2.10[2]	**0.036**	2.00	1.08	0.86[2]	0.390
	No Hypertension	0.14	0.35			1.73	0.98		

[1]Kruskal Walli chi sq value, [2]Mann Whitney z value

Table no-19 shows the association of demographic variable with post operative recovery in experimental group in which the demographic variables, education and hypertension showed significant association with modified constipation assessment score ($p<0.05$) **like education (χ2-8.69, p -0.034) and hypertension (z=2.10, p-0.036)** ,while modified wound healing assessment was not significantly associated with any demographic variable. Here the p-value in above cases is <0.05(level of significance).

Table – 22: Association between post operative recovery in control group with Demographic variable.

Demographic/clinical variables		**Modified Constipation Assessment Scale**				**Modified Wound Healing Assessment Scale**			
		Mean	SD	statistic	p-value	Mean	SD	statistic	p-value
Age	20 - 29 yr	2.83	0.41	2.59[1]	0.764	11.00	1.55	4.36[1]	0.499

	30 - 39 yr	2.89	0.60			10.11	1.96		
	40 - 49 yr	2.62	0.51			9.85	2.23		
	50 - 59 yr	2.60	0.55			10.60	1.82		
	60 - 69 yr	3.00				12.00			
	≥70 yr	3.00				8.00			
Gender	Male	2.77	0.60	0.13^2	0.899	11.23	1.17	2.50^2	**0.013**
	Female	2.73	0.46			9.64	2.11		
Income	< Rs. 2000/ Month	3.00		0.55^2	0.582	12.00		1.17^2	0.243
	>Rs.4000	2.74	0.51			10.18	1.96		
Education	Illiterate	2.70	0.47	0.90^1	0.825	10.60	1.67	10.03^1	**0.018**
	Primary Education	2.67	0.52			7.83	2.04		
	Secondary Education	3.00				12.00			
	Graduate and above	2.88	0.64			10.88	1.36		
Occupation	Home maker	2.71	0.46	2.34^1	0.310	9.57	2.13	6.45^1	**0.040**
	Farmer	2.57	0.53			11.29	0.76		
	Others	3.00	0.58			11.14	1.46		
Diet	Vegetarian	2.61	0.50	1.55^2	0.121	11.00	1.33	2.24^2	**0.025**
	Non vegetarian	2.88	0.49			9.41	2.21		
BMI	Underweight	2.50	0.71	0.49^1	0.781	10.50	0.71	0.07^1	0.966
	Normal weight	2.76	0.54			10.14	2.17		
	Overweight	2.75	0.45			10.33	1.78		
DM	DM	2.67	0.49	0.60^2	0.548	11.25	1.60	2.80^2	**0.005**
	No DM	2.78	0.52			9.70	1.94		
Hypertension	Hypertension	2.69	0.48	0.40^2	0.689	10.92	1.93	2.22^2	**0.026**
	No Hypertension	2.77	0.53			9.82	1.89		

[1]Kruskal Walli chi sq value, [2]Mann Whitney z value

Table no-20 shows association of demographic variables with post operative recovery in control group in which the demographic variables such as gender, education, occupation, diet, DM and hypertension showed significant association with modified wound healing assessment score which were less than ($p<0.05$) like **gender (z=2.50, p-0.013), education ($\chi 2$=10.03, p-0.018), occupation ($\chi 2$=6.45, p-0.040), diet (z=2.24, p-0.025) diabetes mellitus (z=-2.80, p- 0.005), hypertension (z=-2.22,p- 0.026)** while modified constipation assessment was not significantly associated with any demographic variable. Here the p-value in above cases is <0.05(level of significance).

The study concluded that there was significant association between post operative recovery among patients in experimental and control group with selected socio-demographic variable **.Hence, research hypothesis**

H_2 was partially accepted.

Summary

Early mobility is one of the vital to improve patient outcome and **benefits of early ambulation after surgery will** promotes blood flow of oxygen throughout the body while maintaining normal breathing functions and it stimulates circulation which can help to stop the development of stroke-causing blood clots and where walking improves blood flow which aids in quicker wound healing and infection will be improved by walking and it increases muscle tone and strength, especially those of the abdomen and ankles promoting early. Hence, the present study was aimed to evaluate the effectiveness of early ambulation on post operative recovery among patients who have undergone abdominal surgery at selected Hospital, Lucknow.

Conclusion:

Conclusion of the study is the brief paragraph that summarizes what the researcher did and found. The study aimed to determine the ‘‘Effectiveness of early ambulation on post operative recovery among patients who have undergone abdominal surgery at selected hospital, Lucknow.’’ The study result reveals that the mean modified constipation assessment score of experimental group was (0.26±0.44), while in control group the mean Modified Constipation Assessment score was (2.74±0.51). The significant difference was found in mean modified constipation assessment score between the study groups ($p<0.001$).The mean modified wound healing assessment score of experimental group was(1.83±1.01), while in control group the mean modified wound healing assessment score was (10.23±1.96). The significant difference was found in mean modified wound healing assessment score between the study groups ($p<0.001$).

Hence the Statistical evidence proved that early ambulation is an effective intervention to enhance the post operative recovery which increases the confident and motivate the patient to do their daily activities and functional activities independently.

Nursing implications

The findings of the study have implications in the following areas: nursing administration, nursing education, nursing practice, Nursing Research.

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 surgery.
- The nurse administrator enables the nurses to update their knowledge in the latest innovations on postoperative recovery for abdominal surgical patients.

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 surgical patient.
- Nurse educator should orient the students towards various complimentary therapy forms of interventions for post operative recovery in the surgical post operative ward.
- Nurse educator motivates student nurses to use modified wound healing scale among the abdominal surgical patient to identify the wound healing status.

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 patients 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 patients who have undergone abdominal surgery by using modified constipation scale.

Nursing Research:

- It is necessary to undertake more research in the field of early ambulation and post operative recovery among patients underwent abdominal surgery to achieve holistic care to clients in the post operative period.
- Finding of the study will provide baseline data regarding early ambulation and post operative recovery. Hence it can be used for further studies .
- Nurse researcher should challenged to perform scientific work and take part in the assessment of wound healing ,and functional ability and evaluation of post operative recovery for clients with abdominal surgery**.**

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.
- Similar study can be done for other post operative patient.
- True experimental research design can be use for the same study.

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