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EFFECTIVENESS OF SCHEDULED AMBULATION ON PHYSICAL MOBILITY AND PSYCHOLOGICAL WELL-BEING AMONG PATIENTS UNDERGONE ABDOMINAL SURGERY

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Abstract

Postoperative complications following abdominal surgery are frequent despite progress in surgical technique and perioperative care. A quasi-experimental research design with quantitative approach was adopted for this study. 60 clients selected by purposive random sampling method, 30 clients each in control group and experimental group. Pre-test was taken 24 hours after the surgery and Clients in the experimental group received intervention, schedule ambulation after the pre-test every 8 hours for 72 hrs after surgery. Post-test was taken after 72 hours to evaluate the effectiveness on physical mobility & psychological well-being. Data was collected by self-structured observational scale for physical mobility & Interview guide questions for psychological well-being. Results; In the pretest level of control group & experimental group value of physical mobility in experimental group mean score was 6.17, mean difference & in control group mean score was 5.63. The mean difference of experimental group & control group was 0.54 & computed t test value was 1.052 which was less than the table value of t = 2.043 at the level of p ≤ 0.05. In the pretest level of control group & experimental group value of psychological well-being in experimental group value of mean score was 6.46 & in control group mean score was 5.8 & mean difference was 0.66. It can be depicted from the table that the computed table of t = 1.523 which was less than the table value of t = 2.043 at the level of p ≤ 0.05. In the post-test level of experimental group & control group value of physical mobility in experimental group value of physical mobility in experimental group mean score was 12.73 & in control group mean score was 10.53 , mean difference score of experimental group & control group in post-test of physical mobility was 2.2 and the computed value of 't' test was 3.680 (2.043, p ≤ 0.05). In the post-test level of experimental group & control group value of psychological well-being in experimental group value of psychological well-being in experimental group mean score was 15.33 & in control group mean score was 11.23 , mean difference score of experimental group & control group in post-test of psychological well-being was 4.1 and the computed value of 't' test was 6.97 (2.043, p ≤ 0.05) Interpretation and conclusion; Analysis data shows that In the experimental group the mean pretest (24 hrs) score of physical mobility and psychological well-being was 6.17 and 6.46 respectively which is significantly changed to 12.73 and 15.33 after the interventions and the t test score shows that, there is a significant effectiveness of scheduled ambulation on phy sical mobility and psychological well-being among patient undergone abdominal surgery.

***Keywords**: Scheduled ambulation; Physical mobility; Psychological well-being, Abdominal surgery.*

INTRODUCTION

Abdominal surgery is a very common operative procedure. A national survey in the United States reported that operation on the digestive system is one of the three most frequent surgical

procedures. Indeed, digestive system problems are one of many reasons for surgeons to enter the abdominal cavity. Studies show that the prevalence of intra-abdominal surgery among those in the age of 60 is 43.8 %. Notably, the rate of abdominal operation increases with age, and females found to have a significantly higher rate than men. 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.

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.

Early ambulation plays an important role in the prevention of such postoperative complications after abdominal surgery and improves the physical, physiological and psychological wellbeing of the clients. It also reduces the length of stay in hospital and avoids unnecessary stress due to hospital.

OBJECTIVES OF THE STUDY

- To assess the level of physical mobility and psychological well-being among the patients undergone abdominal surgery.
- To evaluate the effectiveness of scheduled ambulation on physical mobility and psychological well-being among the patients undergone abdominal surgery.
- To find the association between the physical mobility and psychological well-being among patients who undergone abdominal surgery with selected demographical variables.

METHODOLOGY

Research approach: Quantitative (Quasi Experimental) Research approach.
Research Design: Quasi Experimental Research Design.
Research Setting: Patients undergone abdominal surgery of Haria L.G. Rotary hospital and 21st century hospital, Vapi.
Population: In the present study it includes patient who undergone abdominal surgery.
Sample and Sample Size: The study includes patients who undergone abdominal surgery; 60 patients (30 in control group and 30 in experimental group) in Haria L.G. Rotary hospital and 21st century hospital, Vapi.
Sampling Technique: Samples were obtained through non-Probability purposive sampling techniques.
Sampling Criteria: Criteria for sample selection were based on cost, practical concern, design, and the people's ability to participate in the study.
Description of Tool:
1. Section A:
(a) Demographic variables
(b) Clinical data

2.Section B:
Self-Structured questionnaire for psychological wellbeing.

3.Section C:

Self-Structured checklist for assessment of physical mobility.

Ethical Considerations: Permission was obtained from the college and higher authorities. The researcher informed all of the participants, about the course of the study, drawbacks of the study, its benefits and being free to participate or withdraw from the study. Also, a written informed consent was obtained from each subject.

RESULTS

Section-I Frequency and percentage distribution of subjects based on demographic variables. N=60

Sr. No.	Variable	Demographic data	Experimental Group		Control Group	
			Frequency	Percentage(%)	Frequency	Percentage(%)
1.	Age	11-25 Years	6	20%	5	16.66%
		26-40 Years	13	43.33%	11	36.67%
		41-55 Years	9	30%	9	30%
		56-70 Years	2	6.67%	5	16.66%
2.	Gender	Male	15	50.00%	15	50%
		Female	15	50.00%	15	50%
		Other	0	0%	0	0%
3.	Religion	Hindu	13	43.33%	17	56.67%
		Muslim	7	23.34%	4	13.33%
		Christian	5	16.66%	3	10%
		Other	5	16.67%	6	20%
4.	Educational Status	Illiterate	3	10%	4	13.33%
		Primary	10	33.33%	9	30.00%
		Secondary	7	23.34%	8	26.67%
		Higher secondary	6	20%	5	16.67%
		Graduate and above	4	13.33%	4	13.33%
5.	Socio-Economy Status	Upper class	3	10%	4	13.33%
		Upper middle	6	20%	7	23.33%
		Lower middle	17	56.67%	15	50%
		Upper lower	4	13.33%	4	13.33%
		Lower	0	0%	0	0%
6	Occupation	Professional	2	6.67%	3	10%
		Semi professional	4	13.33%	3	10%
		Clerical/shop/farm	7	23.33%	8	26.66%
		Skilled worker	3	10%	2	6.66%
		Semi-Skilled worker	9	30%	7	23.33%
		Unemployed	5	16.67%	7	23.33%
7.	Type of Family	Nuclear	16	53.33%	13	43.33%
		Joint	14	46.66%	17	56.67%
8.	Type of Surgery	Major surgery	13	43.33%	9	30%
		Minor surgery	17	56.66%	21	70%
9.	Region of Surgery	Right upper quadrant	8	26.67%	10	33%
		Right lower quadrant	5	16.67%	4	13.33%
		Left upper quadrant	4	13.33%	5	16.67%

		Left lower quadrant	10	33.33%	9	30%
		Umbilical reg.	3	10%	3	7%
10.	Type of Incision	Transverse	8	26.67%	9	30%
		Midline	7	23.33%	4	13.33%
		Pfannenstiel	0	0%	1	3.33%
		Subcostal	6	20%	4	13.33%
		McBurney	5	16.67%	7	23.33%
		Other	4	13.33%	5	16.66%
11.	Side effect of anaesthesia	Yes	29	96.67%	29	96.66%
		No	1	3.33%	1	3.33%
12.	Type of anaesthesia	General anaesthesia	28	93.33%	29	96.66%
		Regional anaesthesia	0	0%	0	0.00%
		Other	2	6.67%	1	3.33%
13.	Presence of Drain	Yes	21	70%	20	66.66%
		No	9	30%	10	33.33%
14.	BMI	>18.5	0	0%	0	0.00%
		18.5-24.9	24	80%%	22	73.33%
		25-29.9	6	20%	8	26.66%
		30 0R <	0	0.00%	0	0.00%

Section II : Comparison on the level of experimental and control value in pre-test of physical mobility using percentage, standard deviation, mean, mean difference and 't' test.

Pretest (Physical Mobility)	Percentage	S.D.	Mean	Mean Difference	Computed value of 't'	Table value of 't'	Significance
Experimental group	30.83%	1.96	6.17	0.54	1.052	2.043	NS
Control group	28.16%	1.75	5.63				

The table shows the comparison on the level of experimental and control value in pre-test of physical mobility using percentage, standard deviation, mean, mean difference and 't' test. With regard to percentage of the score physical mobility in experimental group, it can be noticed that the pre-test score was 30.83% and there was no significant change in the control group which is 28.16%. The standard deviation of the pre-test in experimental group was 1.96 and in control group was 1.75. Mean score distribution of physical mobility in experimental group was 6.17 and in control group 5.63 with a mean difference of 0.54. The computed value of t = 1.052 which was less than the table value of t = 2.043 at the level of $p \leq 0.05$.Hence, it can be conclude that there is no significant difference in physical mobility among experimental and control group before administering scheduled ambulation.

Section III: Comparison of overall pre-test level of psychological well-being among patient undergone abdominal surgery in experimental group and control group using percentage, standard deviation, mean, mean difference and 't' test.

Pretest (Psychological Well-being)	Percentage	S.D.	Mean	Mean Difference	Computed value of 't'	Table value of 't'	Significance

Experimental group	32.33%	1.50	6.46	0.66	1.523	2.043	NS
Control group	29%	1.62	5.8				

The table shows the comparison on the level of experimental and control value in pre-test of psychological well-being using percentage, standard deviation, mean, mean difference and 't' test. With regard to percentage of the psychological well-being in experimental group, it can be noticed that the pre-test score was 32.33% and there was no significant change in the control group which is 29%. The standard deviation of the pretest in experimental group was 1.50and in control group was 1.62. Mean score distribution of psychological well-being in experimental group was 6.46 and in control group 5.8 with a mean difference of 0.66. The computed value of t = 1.523 which was less than the table value of t = 2.043 at the level of $p \leq 0.05$. Hence, it can be conclude that there is no significant difference in psychological well-being before the scheduled ambulation.

Section IV: Comparison of overall post-test level of physical mobility among patient undergone abdominal surgery in experimental group and control group using percentage, standard deviation, mean, mean difference and 't' test.

Post-test (Physical Mobility)	Percentage(%)	S.D.	Mean	Mean Difference	Computed value of 't'	Table value of 't'	Significance
Experimental group	63.66%	2.21	12.73	2.2	3.680	2.043	S
Control group	52.66%	2.04	10.53				

The table shows the comparison on the level of experimental and control value in post-test of physical mobility using percentage, standard deviation, mean, mean difference and 't' test. With regard to percentage of the physical mobility in experimental group, it can be noticed that the post-test score was 63.66% and there was no significant change in the control group which is 52.66%. The standard deviation of the post-test in experimental group was 2.21 and in control group was 2.04. Mean score distribution of physical mobility in experimental group was 12.73 and in control group 10.53 with a mean difference of 2.2. The computed value of t = 3.680which was more than the table value of t = 2.043 at the level of $p \leq 0.05$. Hence**, hypothesis H1 is accepted.** Hence, it can be conclude that there is a significant difference in physical mobility who are exposed to scheduled ambulation.

Section V: Comparison of overall post-test level of psychological well-being among patient undergone abdominal surgery in experimental group and control group using percentage, standard deviation, mean, mean difference and 't' test.

Post-test (Psychological Well-being)	Percentage	S.D.	Mean	Mean Difference	Computed value of 't'	Table value of 't'	Significance
Experimental group	76.66%	2.78	15.33	4.1	6.97	2.043	S
Control group	56.16%	2.51	11.23				

The table shows the comparison on the level of experimental and control value in post-test of psychological well-being using percentage, standard deviation, mean, mean difference and 't' test. With regard to percentage of the psychological well-being in experimental group, it can be noticed

that the post-test score was 76.66 % and there was a significant change in the control group which is 56.16%. The standard deviation of the post-test in experimental group was 2.78 and in control group was 2.51. Mean score distribution of psychological well-being in experimental group was 15.33 and in control group 11.23 with a mean difference of 4.1. The table that the computed value of t = 6.97 which was more than the table value of t = 2.043 at the level of $p \leq 0.05$. Hence, it can be concluded that there is a significant change in psychological well-being who are exposed to scheduled ambulation.

Section IV: Association between post-test level of physical mobility among patient undergone abdominal surgery in experimental group.

Sr.No.	Demographic Variable	Chi Square Value	df	Critical Value	Inference
1	Age	13.97	3	3.182	S
2	Gender	22.64	2	4.3	S
3	Religion	9.14	3	3.182	S
4	Educational Status	2.17	4	2.77	NS
5	Socio-Economy Class	2.75	4	2.77	NS
6	Occupation	3.085	5	2.57	S
7	Type of family	1.47	1	12.7	NS
8	Type of surgery	5.48	1	12.7	NS
9	Region of surgery	2.79	4	2.77	S
10	Type of incision	5.71	5	2.57	S
11	Type of anesthesia	0.430	2	4.3	NS
12	Side effect of anesthesia	11.87	1	12.7	NS
13	Presence of drain	0.322	1	12.7	NS
14	BMI	0.503	3	3.182	NS

The table shows that there was no association between post-test level of physical mobility among patient undergone abdominal surgery with educational status, socio-economy class, type of family, type of surgery, type of anaesthesia, side effect of anaesthesia, Presence of drain& BMI and there was an association between post-test level of physical mobility among patient undergone abdominal surgery with age, gender, religion, occupation, region of surgery & type of incision.

Section VII: Association between post-test level of psychological well-being among patient undergone abdominal surgery in experimental group.

Sr.No.	Demographic Variable	Chi Square Value	df	Critical Value	Inference
1	Age	7.35	3	3.183	S
2	Gender	14.79	2	4.3	S
3	Religion	3.29	3	3.183	S
4	Educational Status	4.66	4	2.77	S
5	Socio-Economy Class	2.78	4	2.77	S

6	Occupation	17.52	5	2.57	S
7	Type of family	0.067	1	12.7	NS
8	Type of surgery	0.714	1	12.7	NS
9	Region of surgery	11.05	4	2.77	S
10	Type of incision	6.28	5	2.57	S
11	Type of anesthesia	0.517	2	4.3	NS
12	Side effect of anesthesia	2.06	1	12.07	NS
13	Presence of drain	14.7	1	12.07	S
14	BMI	0.312	4	2.77	NS

INTERPRETATION AND CONCLUSION

In this study overall interpretation & conclusion shows that in the experimental group the mean pretest (24 hrs) score of physical mobility and psychological well-being was 6.17 and 6.46 respectively which is significantly changed to 12.73 and 15.33 after the interventions and the t test score shows that, there is a significant effectiveness of scheduled ambulation on physical mobility and psychological well-being among patient undergone abdominal surgery.

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