

**“THE EFFECTIVENESS OF NURSING INTERVENTIONS IN PREVENTING THE
COMPLICATIONS OF IMMOBILITY AMONG ORTHOPEDIC PATIENTS IN
SELECTED KRISHNA HOSPITAL, KARAD.”**

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ABSTRACT

BACKGROUND: Constipation is one of the most common gastro intestinal disorders that affects the quality of life of patients and well- being of patients as well as their activity of daily living. Orthopedic patients in acute hospital setting often suffer from constipation. Patients having undergone surgeries have higher risk, mainly due to side-effect of opioids and limited mobility.

OBJECTIVE:

1. To evaluate effectiveness of nursing intervention in preventing complication of immobility among orthopedic patients.

2. To determine association the nursing interventions in preventing complication of immobility among orthopedic patients with their demographic variables.

MATERIAL AND METHODS:

The research approach adopted for this study is a quantitative approach. The research design selected for this present study was quasi-experimental one group pre-test, post-test design. The study was conducted Krishna hospital Karad .The sample size consist of 30 immobilized among constipation with orthopedic patients. On probability purposive sampling technique was used to select responds. It shows that the effective nursing care in immobility among orthopedic patient .The data were analyzed by using the descriptive and inferential statistics.

RESULTS:

Results shows that prevalence of The mean and standard deviation of pre-test was 5.43 ± 0.9353 accordingly where as in posttest mean and standard deviation 5.89 ± 1.012 accordingly. After application of paired t test value was 2.581 and p value <0.001 . It reveals that nursing intervention are effective the constipation among orthopedics patient.

Socio demographic variable like Age, gender, religion, educational status, occupational status, monthly income, type of family, personal habit, source health information, habit of taking fiber diet, habit of doing exercise, intake of water per day, nutritional pattern. Maximum no (56.67%) of gender belongs female, minimum (43.33%) of gender belongs male. Maximum (73.33%) of religion belongs Hindu, 4(13.33%) of religion belongs to muslim3 (10.00%) of religion belongs to others, minimum1 (3.33%) of religion belongs to Christian Maximum no (50.00%) of education belongs to primary education8 (26.67%) of education belongs to secondary education, 5(16.67%) of education belongs to illiterate, minimum2 (6.67%) of education belongs to college Maximum (36.67%) of occupation belongs to coal 10(33.33%) of occupation belongs to unemployed, 6(20.00%) of occupation belongs to self-employed, minimum (10.00%) of occupation belongs to others .Maximum (33.33%) of income3000-4000, 9(30.00%) of income belongs to >4000 & (23.33%) of income belongs to2000-3000, minimum no 4(13.33%) of income <2000 . Maximum (63.33%) of family belongs to joint family, minimum (36.67%) belongs to nuclear family. Maximum (33.33%) belongs to none, 8(26.67%) belongs to smoking, 7(23.33%) belongs to tobacco chewing, minimum (16.67%) belongs to drinking alcohol. Immobility among constipation with orthopedic patient before and after nursing intervention of 30 observations. The computed "t" test statistics value is2.581. Since the p value for the test less than0.001

CONCLUSION: The study results show that nursing intervention is effective in the immobility among constipation with orthopedics patient.

KEY WORDS: Effectiveness, nursing intervention, prevention, orthopedics

Introduction:

Mobility refers to the person's ability to move about to freely and immobility refers to the inability to move about freely .Alteration in the level of physical mobility can result from prescribed restriction of movement in the form of bed rest, physical restriction of movement

because of external device, voluntary restriction of movement or impairment of motor skeletal function. In a classic study deistic and others (1948) found that even young healthy men put in bed rest had psychological problem. Periods of immobility or prolonged bed rest can cause major physiological psychological and social effects. These effects can be gradual or immediate.1

Orthopedic patients frequently have greatly decreased morbidity whether it be in their ability to walk and bear weight to move their arms to care for themselves or to have the spinal flexibility to work and earn a living. Preventing complications include averting problems due to surgery, trauma disease, or immobility because those potential problem involves not only the musculoskeletal system but all other systems of the body.2

“Use it or lose it hazards of bed rest and inactivity” “professionals experience and lay wisdom teach us the benefits of exercise and hazards of illness. Yet the myth persists that “bed rest is good for you” when ill or convalescing. Abundant scientific evidence in the past 50 years has demonstrated the specific damages done to each of the organ system by inactivity and immobility lead strikingly similar kinds of determination. Most people take for granted the assumption that rest is beneficial in restoring the health of an ill or injured persons. The bed is the control focus of hospital and the standard unit of size for health care facilities. Hospital procedures and expectations sharply curial mobility .Even ambulatory patient generally remain under the sheet .If only warmth and modesty.3

The prevalence of constipation in the population is comparatively high; around 15% with a higher prevalence in the female population and elderly people. In one study investigating almost 15000 women, 14% to 27% were found to be constipated ,highest prevalence in elderly people, but the role of exercise in the treatment has been challenged. There seems to be strong beliefs, within both medical professional and the general population that dietary fiber intake should be around 35g of fiber a day, and it has been documented, that this volume increases the frequency of defecation. Report are not unanimous In respect of preventing or changing the course of constipation with dietary fiber and beneficial effect in treatment in neurological disease are not evident.4

Materials and Methods: Study was quantitative approach and clinical trial was conducting this research. A quasi experimental design with control group will be used for conducting the research. The study was has conducted in selected area immobility patient with constipation in Krishna hospital Karad. In this study the population comprises all the immobility patient with constipation in orthopedics ward in the Krishna hospital, Karad. sample are immobility patient with constipation. sample size are 30. Non probability purposive technique was used to select. Demographic variable in immobility patient with constipation in orthopedics ward) The characteristics include age, gender, religion, educational status, occupational status, monthly income, type of family, personal habit, source of health information, habit of taking fiber diet, habit of doing exercise , intake of water per day , nutritional pattern. Data is organized and analyzed by using statistical methods. Demographic data is analysis the frequency and percentage. To

evaluate the effectiveness of nursing intervention on immobility with constipation in orthopedics in tested using chi- square test. Data analysis done by descriptive & inferential statistics.

Research tool:

The self-structured questionnaire consisted 2 parts.

Part I: Demographic variable in immobility patient with constipation in orthopedics ward) The characteristics include age, gender, religion, educational status, occupational status, monthly income, type of family, personal habit, source of health information, habit of taking fiber diet, habit of doing exercise , intake of water per day , nutritional pattern.

Part II:

- 1) Assess immobility patient with constipation in orthopedics ward.
- 2) Assess the constipation of patient after nursing intervention.

Sampling criteria:

INCLUSION CRITERIA

1. Patient who are immobilized in orthopedics ward
2. Both male and female

EXCLUSION CERITERIA

1. Orthopaedic patients who are not in restrains.
2. Patients whose mobility is contraindicated during nursing interventions.

Method of Data Collection:

The data collection process involve the precise systematic gathering of information .

Relevant to the research purpose questions or hypothesis of study. Formal permission was obtained from the ethical committee of KIMSDU. Formal permission was obtained from the principal of KINS Karad. Permission was obtained from the in charge in orthopedics ward Krishna hospital . The data collection is started with self - introduction of investigator with respondent. The immobility with constipation in orthopedics patient informed about purpose of Study and informed consent was obtained from the each client.

Data Analysis plan:

Collected data was analysed as following the steps mentioned below:

- o Data is organized and analysed by using statistical methods. Demographic data is analysis the frequency and percentage.
- o Numerical data obtained from the sample was organized and summarized with the help of descriptive statics like percentage, mean, median, SD
- o Analysis the constipation
- o Analysis the constipation after giving nursing intervention
- o To evaluate the effectiveness of nursing intervention on immobility with constipation in orthopedics in tested using chi- square test

Ethics: Institutional Ethics Committee approval was obtained for conduct of study.

Institutional Ethics Committee Approval Number: KIMSDU/IEC/01/2016.

RESULTS:

Part A: Distribution of sample according to variables.

Table 1: Description of demographic variables.

Sr.NO	Demographic Variable	Frequency	Percentage
1	Age		
	25-35	2	6.67
	36-45	6	20
	46-55	12	40
	56-65	10	33.33
2	Gender		
	male	13	43.33
	female	17	56.67
3	religion		
	Hindu	22	73.33%
	Muslim	4	13.33%
	Christian	1	3.33%
	Others	3	10.00%
4	Education		
	A. Illiterate	5	16.67%
	B. Primary education	15	50.00%
	C. Secondary education	8	26.67%
	D. Colligate	2	6.67%
5.	Occupation		
	A.Un employed	10	33.33%
	B.Coal	11	36.67%
	C.Self employed	6	20.00%
	D.Others	3	10.00%
6.	Monthly income		
	A.<2000	4	13.33%
	B. 2000-3000	7	23.33%
	C. 3000-4000	10	33.33%

	D. >4000	9	30.00%
7.	Type of family		
	A.Nuclear family	11	36.67%
	B. Joint family	19	63.33%
8.	Personal Habit		
	A. Tobacco chewing	7	23.33%
	B. Smoking	8	26.67%
	C. Drinking alcohol	5	16.67%
	D. None	10	33.33%
9.	Source of health information		
	A. Mass media	7	23.33%
	B. Health personal Relatives & neighbours.	13	43.33%
	C. Mass media	10	33.33%
10.	Habit of taking fibre diet		
	Rare	16	53.33%
	Frequently	9	26.67%
	Always	5	20.00%
11.	Habit of doing exercise		
	A.Yes	4	16.67%
	B. No	26	83.33%
12.	Intake of water per day		
	A. <2L	10	33.33%
	B. 2-3L	17	56.67%
	C. 4-6L	3	10.00%
13.	Nutritional status		
	A.Vegetarian	11	36.67%
	B.Non vegetarian	19	63.33%

Table 1: Distribution of demographic characteristics depicts frequency and distribution.

Table 2: Comparison between pretest and posttest knowledge No= 30

Mean, SD, t value and p value of pretest score and posttest knowledge
(n =30)

GROUP	TOTAL	MEAN±SD
PRE TEST	163	5.43±9353
POST TEST	176	5.89±1.012
GROUP	TOTAL	MEAN±SD

Table 2: The mean and standard deviation of pre-test was 5.43 ± 0.9353 accordingly where as in posttest mean and standard deviation 5.89 ± 1.012 accordingly. After application of paired t test value was 2.581 and p value <0.001 . It reveals that nursing intervention are effective the constipation among orthopedics patient.

SECTION C: ASSOCIATION BETWEEN SELECTED DEMOGRAPHIC VARIABLE WITH LEVEL OF KNOWLEDGE N=30

Association between knowledge score and selected demographic variables

Sr. no	characteristics	category	Respondents		Categorization of score			Chi square test	p-value
			F	P	Good	Average	Poor		
1	AGE	25-35	2	6.65	0	1	1	6.048	0.41
		36-45	6	20	3	2	1		
		46-55	12	40	8	4	0		
		56-65	10	33.33	4	4	2		
2	Gender	Male	13	43.33	6	4	3	1.919	0.38
		Female	17	56.67	9	7	1		
3	Religion	Hindu	22	73.33	10	9	3	2.333	0.86
		Muslim	4	13.33	2	1	1		
		Christian	1	3.33	1	0	0		
		others	3	10.00	2	1	0		
4	Education	Illiterate	5	16.67	2	1	2	9.020	0.17
		Primary education	15	50	7	8	0		

		Secondary education college	8	26	5	1	2		25 NS	
			2	6.67	1	1	0			
5.	Occupation	Un employed	10	33.33	6	3	1	3.671	0.72	
		Coal	11	36	5	5	1			11
		Self-employed	6	20	2	3	1			NS
		others	3	10	2	0	1			
6	Income	<2000	4	13.33	2	2	0	7.735	0.25	
		2000 – 3000	7	23.33	2	3	2			82
		3000 -4000	10	33.33	8	2	0			NS
		>4000	9	30	3	4	2			
7	Family	Nuclear family	11	36.67	7	2	2	2.571	0.27	
		Joint family	19	6.33	8	9	2			66 NS
8	Habit	Tobacco chewing	7	23.33	3	3	1	2.864	0.82	
		Smoking	8	26.67	3	4	1			57
		Drinking alcohol	5	16.67	3	2	0			NS
		None	10	33.33	6	2	2			
9	Source of health	Mass media	7	23.33	3	1	3	7.808	0.09	
		Health personal	13	43.33	7	6	0			89
		Relatives & neighbours	10	33.33	5	4	1			NS

10	Habit of taking fibre diet	Rare	16	53.33	11	4	1	12.069	0.01	
		Frequently	9	26.67	3	2	3			68
		Always	5	20.00	1	5	0			NS
11	Habit of doing exercise	Yes	4	16.67	2	1	2	2.400	0.30	
		No	26	83.33	13	9	3			12
12	Intake of waterPer day	<2 L	10	33.33	3	6	1	4.246	0.37	
		2 -3 L	17	56.67	10	4	3			37
		4-6L	3	10	2	1	0			NS
13	Nutritional pattern	Vegetarian	11	36.67	4	6	10	2.395	0.30	
		Non -	19	63.33	11	5	3			20
		vegetarian								NS

Discussion:

Present study conducted to assess effectiveness of nursing intervention on with constipation with immobility among orthopedics patients. It was aimed to prevent constipation with immobility among orthopedics patients by giving nursing interventions... The mean and standard deviation of pre-test was 5.43 ± 0.9353 accordingly where as in post – test mean and standard deviation 5.89 ± 1.012 accordingly. After application of paired t test “value was 2.581 and p value <0.001 . It reveals that nursing intervention are effective the constipation among orthopedics patient

QUELLET LL, TURNER TR, POND S MCLAUGHLIN H, KNORR S (2006) The quasi experimental study conducted on orthopedics patients. The addiction of wheat fiber in the diet of Post-surgical orthopedics patients as a means of preventing constipation was studied using a quasi-experimental design. It was hypothesized that a 20gm supplement of all bran & natural bran would promote spontaneous bowel movements, reduce the incidence of constipation, and thus decrease the need for elimination intervention. The result show that the study group had more spontaneous bowel movements & required fewer elimination interventions than did the control group.5

WILLIAM BART ON (2010) A study conducted to observe the effect of nursing intervention on constipation of the sick bed patients in departments of orthopedics N=80. Shown that the results 5 patients had constipation in observation group after nursing interventions while 27 patients in control group after routine nursing; the nursing effect of observation group was much superior to that of control ($p < 0.01$). The result showed that nursing interventions can reduce the incidence of constipation.6

JANICE P RICHMOND, MARION E WRIGHT. JOURNAL OF ORTHOPEDIC NURSING 10 (4) 2006 the purpose of this study is to report the development of a constipation. This works appears to be the first within health related literature that has extracted, organized and scored the risk factors for constipation in accordance with previous empirical research. Subsequent research is now required to assess reliability and further validity of this tool. Constipation is very common symptom for patient undergoing orthopedics surgery. These result indicate a need for improving patients ADL to prevent constipation.⁷

POUNGPAKA MONMAI, FONGCUM TILOSKULCHAI, PANWADEE PUTWATANA, VIRGINIA KAWINWONGGOWIT. NURSING SCIENCE JOURNAL OF THAILAND 29 (4) 2011 the result indicated that the constipation prevention program for hospitalized people with any surgery was effective in reducing the incidence and severity of constipation. The program should be recommended as a tool to improve quality of care for hospitalized people who are at risk of developing constipation.⁸

Conclusion

Based on the finding of the result this study after giving the nursing intervention the constipation in orthopedics patient is reduced. The study was more effective in the orthopedics patient having constipation in immobility orthopedics patient. Constipation in immobility orthopedics patient is a common problem in hospitals. Therefore, we suggest that health education regarding the use of aloe vera juice, also regarding fiber diet, rest, plenty of fluid through mouth should be given.

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