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"A STUDY TO ASSESS THE EFFECTIVENESS OF SELECTED NURSING INTERVENTION ON PREVENTION OF DUMPING SYNDROME AMONG CLIENT UNDERWENT GASTRIC SURGERY AT SMVMCH, PUDUCHERRY".

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ABSTRACT

Dumping syndrome is a condition that occurs in patients who underwent gastric surgery. Early Dumping Syndrome refers to dumping that usually happens within 10 to 30 minutes after eating. The main objective of the study was to assess the effectiveness of selected nursing intervention on prevention of dumping syndrome among client underwent gastric surgery. Quasi-experimental one group pre-test post-test design was adopted for the study. Among 42 gastric surgery clients were selected using non-probability purposive sampling technique. The patient was assessed with demographic variables and self- structured tool to identify the risk of dumping syndrome and selected nursing interventions such as Diet, frequency of meal, positioning, early ambulation and mobilization. The post assessment was carried out with self- structured tool to identify the risk of dumping syndrome to evaluate the effectiveness of selected nursing intervention on prevention of dumping syndrome. The study findings revealed that the before intervention, majority 23 (54.76%) of them had mild symptoms, 6 (14.4%) of them had a moderate symptom, 2 (4.8%) had severe symptoms and 11 (26.2%) of them had no symptoms. After intervention, majority 29 (69.2%) of them had no symptoms, 8 (19%) of them had a mild symptom, 2 (4.7%) of them had moderate symptoms and 3 (7.1%) of them had severe symptoms. The calculated 't' value was 2.638, and the p-value is 0.012. Hence it is highly significant. This clearly shows that there is a significant difference between pre and post existing symptoms of dumping syndrome among client underwent gastric surgery. Therefore, the study findings concluded that Selected nursing intervention was found to be very effective in preventing the dumping syndrome among clients underwent gastric surgery.

Key words: self- structured tool, dumping syndrome, gastric surgery.

INTRODUCTION:

Dumping syndrome (DS) occurs when the stomach empties food into the small bowel faster than normal. It is frequently related to the rapid emptying of hyperosmolar gastric content into the small bowel. Dumping syndrome (DS) can occur in post–gastric bypass patients when high levels of simple carbohydrates are ingested. The condition can also develop in people who have had esophageal surgery. This study revealed that the effective of selected nursing intervention in prevention of dumping syndrome among clients underwent gastric surgery.

STATEMENT OF THE PROBLEM:

A Study to Assess the Effectiveness of Selected Nursing Intervention on Prevention of Dumping Syndrome Among Client Underwent Gastric Surgery at SMVMCH, Puducherry.

OBJECTIVES:

1.   To assess the pre-existing symptoms of dumping syndrome among client underwent gastric surgery before intervention at SMVMCH.
2.   To evaluate the effectiveness of selected intervention on preventive measures regarding dumping syndrome among gastric surgery patients.
3.   To assess the post-existing symptoms of dumping syndrome among client underwent gastric surgery after intervention at SMVMCH.
4.   To associate the pre- existing symptoms among client underwent gastric surgery with their selected demographic variables and clinical variables.

HYPOTHESIS:

- H1- There is a significant difference between pre and post existing symptoms of dumping syndrome among client underwent gastric surgery.
- H2-There is a significant association between pre-existing symptoms of dumping syndrome among client underwent gastric surgery with their selected demographic variables and clinical variables.

MATERIALS AND METHOD:

The design adopted was quasi-experimental one group pre-test and post-test design. The setting of the study was in Sri Manakula Vinayagar Medical College and Hospital. The period of data collection was six weeks. Totally 42 clients underwent gastric surgery were selected by using purposive sampling technique. Pre - existing symptoms of dumping syndrome were assessed by self- structured tool to identify the risk of dumping syndrome and selected nursing interventions such as Diet, frequency of meal, positioning, early ambulation and mobilization and the post assessment was carried out with self- structured tool to identify the risk of dumping syndrome to evaluate the effectiveness of selected nursing intervention in prevention of dumping syndrome. The gathered data were analyzed using descriptive and inferential statistics and interpretations were made based on the objectives and hypothesis of the study.

Tool consists of Three Parts:

Section: A - Demographic Variables
This section consists of Demographic data such as Age, gender, religion, educational status, marital status, family income, marital status, occupational status, area of living, dietary pattern, tobacco use.

Section: B – Clinical Variables
Clinical variables consist of Body mass index, History of diabetes mellitus, Type of gastric surgery, type of food do you eat daily.

Section: C – **Assessing the Pre and Post-existing symptoms of dumping syndrome among client underwent gastric surgery by using self-structured tool.**

It consists of 12 questions related to the symptoms of dumping syndrome. The scale score represents No symptoms of dumping syndrome (<2), Mild symptoms (3-5), Moderate symptoms (6-9), Severe symptoms (10-13).

Setting of the study

The present study was conducted at Sri Manakula Vinayagar Medical College and Hospital. It is an ultra-modern, multi-specialty tertiary care hospital with medical research facilities. This study will be conducted at Sri Manakula Vinayagar Medical College and Hospital Puducherry. This hospital is 100 meters away from SMVNC. The hospital is a 1050-bedmulti-specialtyhospital. As a tertiary care hospital, the services are complemented by a day care center, outpatient facilities, and an exclusive center for health checkups. In-patient department of the intensive care unit, intensive critical care unit, respiratory intensive care unit, pediatric intensive care unit, neonatal intensive care unit, and surgical intensive care unit.

Inclusion criteria

- The patient age above 18 years.
- The patient who underwent gastric and esophageal surgery
- The patient BMI is 30-60 kg/m2
- Patient with bariatric surgery, vagotomy, Nissan fundoplication.
- Chronic illness such as diabetes mellitus, Zollinger Ellison syndrome.

Exclusion Criteria

- HIV and AIDS infection patients.
- Severe malnourished patient.
- Patient with malabsorption disorder.
- The patient with unconscious, coma, neurological disorder.
- Patient with previous bariatric surgery.

RESULTS:

The finding reveals that there was significance association of level of preexisting symptoms among client underwent gastric surgery with their selected demographic variables. Dietary pattern had significant association $p = 0.026$ with the pre- existing symptoms of dumping syndrome.

The finding reveals that there was significance association of level of preexisting symptoms among client underwent gastric surgery with their selected clinical variables. Type of surgical had significant association $p = 0.012$ with the pre- existing symptoms of dumping syndrome. Hence, Hypothesis **H₁ There is a significant difference between pre and post existing symptoms of dumping syndrome among client underwent gastric surgery**" was accepted.

Underwent Gastric Surgery

Table 4.1: Description of demographic variables among gastric surgery clients

N = 42

S. No	Demographic variables	Frequency	Percentage
1	**Age in years**		
	a) <40 years	8	19%
	b) 40-49 years	11	26.2%
	c) 50-59 years	13	31%
	d) > 60 years	10	23.8%

2.	Gender		
	a) Female	24	57.1%
	b) Male	18	42.9%
	c) Transgender	0	0
3.	R Religion		
	a) Hindu	19	45.2%
	b) Muslim	12	28.6%
	c) Christian	10	23.8%
	d) Others	1	2.4%

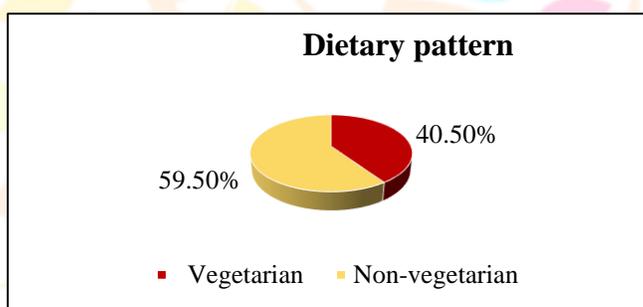**Figure. 5: Distribution of Dietary pattern of study subject**

Figure. 5 revealed that the distribution of Dietary pattern out of 42 samples majority 25 (59.50%) were non-vegetarian and 17 (40.5%) were Vegetarian.

Figure. 6 Distribution of Tobacco use of study subject
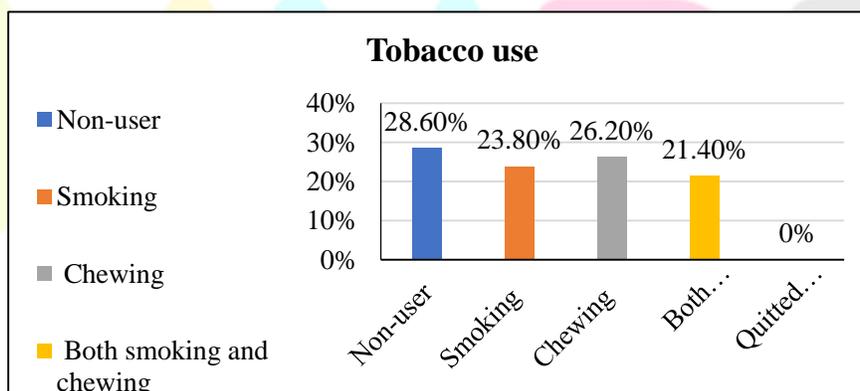

Figure. 6 revealed that the distribution of tobacco use out of 42 samples majority 12 (28.6 %) were Non-user and 10 (23.8%) were smoker, 9 (21.4%) were had both smoking and chewing, 11 (26.2%) were had chewing habits.

Table 4.3 Description of clinical variables among gastric surgery client

N = 42

S.No	Clinical variables	Frequency	Percentage
1.	**Body mass index**		
	a) Underweight (<18.5)	7	16.7%
	b) Normal weight (18.5-24.9)	13	31%
	c) Overweight (25.0-29.9)	12	28.6%
	d) Obese class I (30.0-34.9)	8	19%
	e) Obese class II (35.0-39.9)	2	4.8%
	f) Obese class III (>40.0)	0	0
2.	**History of diabetes mellitus**		
	a) Diabetic (specify)	23	54.8%
	b) Non diabetic	19	45.2%

Table 4.3 The result shows that out of 42 clients, the majority 13(31%) were normal weight, 12(28.6%) were overweight, 8 (19%) were obese class I, 2 (4.8%) were obese class II. With regards to history of diabetes mellitus,19 (45.2%) had non diabetic, 23 (54.8%) had diabetes mellitus.
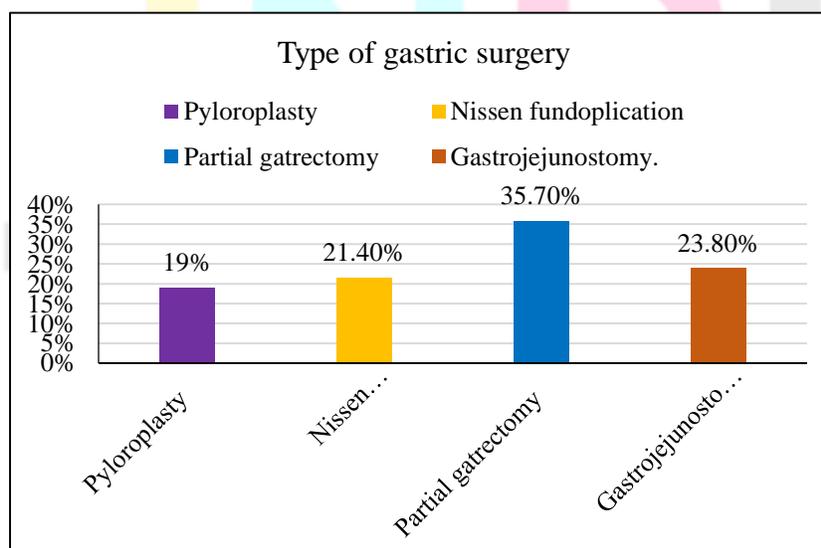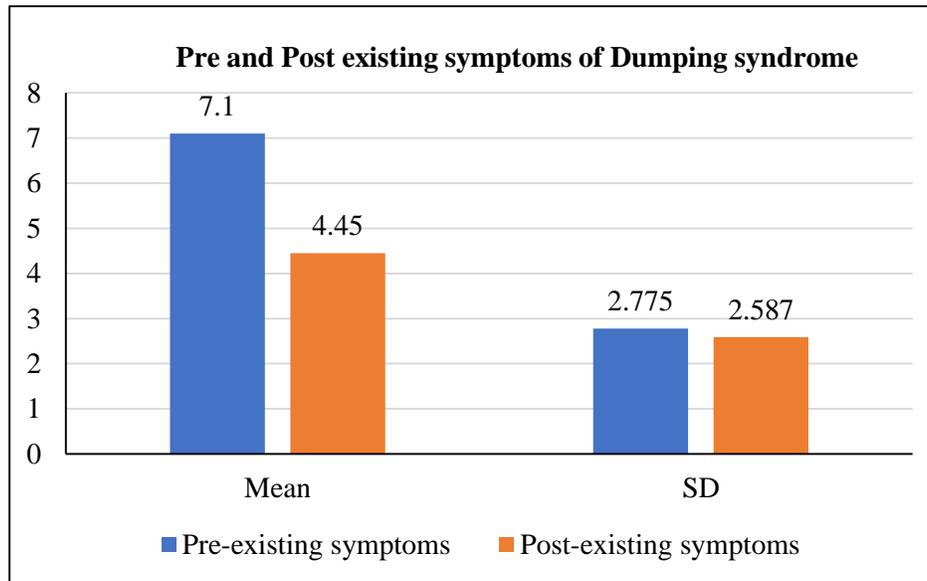
Figure. 8 Distribution of Type of gastric surgery for study subject

Figure.8 In the aspect of type of gastric surgery, majority 15 (35.7%%) were had partial gastrectomy, 10 (23.8%%) were had Gastrojejunostomy, 9 (21.4%) were had Nissen fundoplication, 8 (19%) were had pyloroplasty.

S.NO	Demographic variables	Level of symptoms							
		No symptoms		Mild		Moderate		Severe	
1	Age in years	N	%	N	%	N	%	N	%
	a) <40 years	4	9.5%	2	4.7%	0	0%	1	2.3%
	b) 40-49 years	3	7.1%	6	14.2%	1	2.3%	1	2.3%
	c) 50-59 years	5	11.9%	6	14.2%	2	4.7%	1	2.3%
	d) > 60 years	5	11.9%	5	11.9%	1	2.3%	0	0%
2.	Gender								
	a) Female	11	26.1%	10	23.8%	1	2.3%	2	4.7%
	b) Male	6	14.2%	10	23.8%	1	2.3%	1	2.3%
	c) Transgender	0	0	0	0	0	0	0	0
3.	Religion								
	a) Hindu	11	26.1%	4	9.5%	1	2.3%	3	7.1%
	b) Muslim	5	11.9%	6	14.2%	1	2.3%	0	0%
	c) Christian	1	2.3%	9	21.4	0	0%	0	0%
	d) Others	0	2.3%	1	2.3%	0	0%	0	0%

Figure:12 the bar diagram shows the pre and post existing symptoms of dumping syndrome among client underwent gastric surgery.

The pre-existing symptoms mean score for the level of symptoms was 4.07 with the SD 2.744 and the post-existing symptoms mean score for the level of symptoms was 2.93 with the SD 2.840.

MAJOR FINDINGS OF THE STUDY:

The study finding reveals that before intervention, majority 23 (54.76%) of them had mild symptoms**,** 6 (14.4%) of them had a moderate symptom, 2 (4.8%) had severe symptoms and 11 (26.2%) of them had no symptoms. After intervention, majority 29 (69.2%) of them had no symptoms**,** 8 (19%) of them had a mild symptom, 2 (4.7%) of them had moderate symptoms and 3 (7.1%) of them had severe symptoms.When comparing the mean score the study reveals that the pre-existing symptoms mean score for the level of symptoms was 4.07 with the SD 2.638 and the post-existing symptoms mean score for the level of symptoms was 2.93 with the SD 2.840. The calculated 't' value was 2.638, and the p-value is 0.012. Hence it is highly significant. This clearly shows that there is a significant difference between pre and post existing symptoms of dumping syndrome among client underwent gastric surgery.

CONCLUSION:
The present study assessed to assess the effectiveness of selected nursing intervention on prevention of dumping syndrome among client underwent gastric surgery at SMVMCH, Puducherry. There is a significant difference between pre and post existing symptoms of dumping syndrome among client underwent gastric surgery

NURSING IMPLICATIONS
The findings of the study have implications for various areas of nursing practice, nursing education, nursing administration and nursing research.

NURSING PRACTICE
- The study results will help the nursing personnel to understand the importance of nursing intervention on prevention of dumping syndrome among client underwent gastric surgery.
- Nurses can motivate the clients to follow the self-care management of specific nursing interventions and prevent complications.
- The findings of the study could be utilized as a basis for in-services education of nurses so that constant awareness and clear understanding may be created regarding   prevention of dumping syndrome among client underwent gastric surgery.

NURSING EDUCATION

Nurse educators should teach the students and include in the syllabus about

- Importance of global burden of dumping syndrome among client underwent gastric surgery.
- Develop different tools to assess the level of symptoms on dumping syndrome among client underwent gastric surgery.

NURSING ADMINISTRATION

- Organize Education programme for nursing personnel to update their knowledge regarding dumping syndrome among client underwent gastric surgery.
- Encourage research activities of nurses in these areas.

- Nurse administrator can make necessary policies to implement the nursing care services for client underwent gastric surgery.

NURSING RESEARCH

- The study may be valuable reference material for future researchers.
- The findings of the study may help professional nurses and nursing students to gain knowledge on dumping syndrome among client underwent gastric surgery.

RECOMMENDATIONS

- Similar studies with a large sample can be conducted in other parts of the country
- Study can be conducted on the physiological and psychological problems of client underwent gastric surgery.
- The study can be replicated with large sample size.

JOURNAL REFERENCE:

- A textbook of Potter and Perry's fundamentals of nursing written by Patricia A Potter and Anne Griffin Perry of first south Asian edition published by ELSEVIER in the page no: 146 – 165.
- A textbook of Medical Surgical Nursing – I written by Sharon L Lewis of second south Asian edition published by ELSEVIER in the page no: 1676-1689 ,1614.
- Joyce M. Black, A textbook of Medical Surgical Nursing volume II, First South Asian Edition, Elsevier publication. Page no: 1649 - 1650.
- Lakhwinderkaur and maninderkaur a text book of nursing foundations of 2015 edition published by s. Vikas medical publishers of page no: 822 – 93, 197.
- Kothari CR, Research methodology methods and techniques, 2nd edition, Elsevier publication 2018. Page no: 444-447.
- Nancy Burns, Practice of Nursing Research 5th edition, Philadelphia W B Sunders Company publications 2015. Page no: 72-75.
- Nisha Clement, Principle and practices of Nursing (Nursing art and procedure) volume I, Orem theory, Emmess publication. Page no: 575-576

NET REFERENCE:

- National Institute of Diabetes and Digestive and Kidney Diseases - Wikipedia." Wikipedia, the Free Encyclopedia, Wikimedia Foundation, Inc., 27 Dec. 2013, https://en.wikipedia.org/wiki/National_Institute_of_Diabetes_and_Digestive_and_Kidney_Diseases.
- Bhatia A et al.. Embryology, Gastrointestinal , Publishing; Treasure Island (FL): May 1, 2023.
- Liao TH, Hamosh P, Hamosh M. Fat digestion by lingual lipase: mechanism of lipolysis in the stomach and upper small intestine. Pediatr Res. 1984 May;18(5):402-9.
- Lopez PP, Gogna S et al. Anatomy, Abdomen and Pelvis: Duodenum StatPearls Publishing; Treasure Island (FL): Jul 25, 2022.
- National Institute of Diabetes and Digestive and Kidney Diseases. Dumping syndrome. www.niddk.nih.gov/health-information/digestive-diseases/dumping-syndrome/symptoms-causes. Accessed November 20, 2020
- Seidell JC, Halberstadt J. The global burden of obesity and the challenges of prevention. Ann Nutr Metab. 2015;66 (Suppl 2):7–12
- Makola D, Peura DA, Crowe SE. Helicobacter pylori infection and related gastrointestinal diseases. J Clin Gastroenterol. 2007 Jul;41(6):548-58.