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ORIGINAL ARTICLE

Effectiveness of an Interventional Program on Nurses Practices for Patient's Undergoing Bariatric Surgery in Al-Sulaymaniyah Teaching Hospital

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ABSTRACT

Background: Bariatric surgery (BS) is the most effective treatment for severe obesity, generally resulting in clinically significant weight loss, as well as improvement or resolution of related comorbidities, such as type 2 diabetes, and enhanced physical functioning and quality of life**.**

Objectives: To determine the effectiveness of intervention program on nurses' practices

Methodology: A quasi-experimental study with quantitative design was carried out at the Surgical Teaching Hospital in Al-Sulaymaniyah City from the period of February of 2021 up to the end of march of 2022.

Results: The findings of the study revealed that the intervention program was effective in the improvement in the modifying of practices about the preparation patients for bariatric surgery among nurses enrolled in the case group the study confirmed that there was no significant relationship between the effectiveness of intervention program on nurses knowledge & practices; and socio-demographic, and the Mean of square for practices study group pretest is125.92 and posttest is 145.88,for control group pretest is82.44,for posttest is 82.20.

Conclusions: The study concludes that there is inadequate nurses practices in the (surgical ward) toward preparation of patients with bariatric surgery, and the effectiveness of the study sample after implementation intervention program.

Recommendations: The study recommends to including the nurses for training courses to enhance their knowledge and practices. studies in this filed and increased the awareness about BS ,conducting further for large numbers of nurses to increase the awareness about BS.

INTRODUCTION

The global obesity epidemic continues unabated, wreaking havoc on global health and the economy. People with significant obesity have the worst health implications, including a shorter life expectancy. Bariatric surgery BS. is now the most effective treatment for extreme obesity, resulting in significant long-term weight loss, better obesity-related comorbidities, and lower mortality [1]

Obesity is becoming a major public health issue, and it is now regarded one of the leading causes of death worldwide. Obesity or over weight and low physical activity are the causes of high blood pressure[2]

Obese people are at a higher risk of recurrent (chronic disease such as heart disease) events such as heart attack and repeated hospitalization, hence secondary prevention treatments are recommended for those patients to reduce morbidity, reduce heart attack, and enhance quality of life. Despite the fact that bariatric surgery is the most effective treatment for obesity, some people do not respond well to it, especially over time. Identifying the predictors of correct weight maintenance in the medium (from 1 to 3 years after surgery) and long term (from 3 years and above) is critical to reducing failure after bariatric surgery; as a result, we summarize the evidence about a number of factors, including surgical technique, psychological factors, physical activity, diet adherence, gastrointestinal hormones, and neurological factors related to appetite control[3].

METHODOLOGY

Design of the Study: A quasi-experimental design of study has been used in the present study to examine the Effectiveness of an Interventional Program on Practices Concerning Nursing preparation for Patients with Bariatric surgery at Surgical Teaching Hospital of Al- Sulaymaniyah City for the period of February 2nd 2021up to the end of March 2022.

Administrative Arrangements all nurses, who have participated in the study, have signed consent form for their agreements for the participation in the study. All participants are introduced with the study objectives and they are presented with the opportunity of being aware of the study affairs. All respondents are informed that participation in the present study is voluntary and they may withdraw at any time, as well as their responses are confidential (Appendix A5).

Settings of the Study: The study was conducted in the Surgical Teaching Hospital, second floor of surgical ward at Al-Sulaymaniyah Health Directorate in Al- Sulaymaniyah City. Because the researcher needs to meet the participate at the same time, environments and place, and to use the same teaching methods to perform the Intervention program,

RESULTS

The descriptive data in this table shows that the highest percentage of nurses in the study and control groups are associated with age group 45≤ year (study group= 48% and control group= 44%). The gender variable refers that 52% of nurses in the study group are female and 56% of nurses in the control group are female also. Regarding years of employment, the highest percentages in the study and control groups are associated with 21≤ years of employment as seen in the study group (44%) and control group (52%).Concerning the nursing qualification, 56% of nurses in the study group and 52% of them in the control group are graduated from nursing institute with diploma degree. Related to participation in training sessions about bariatric surgery, only 16% of nurses in the study group and only 20% of nurses in the control group are participated in training session.

The table 4-2presents the item related to nurses' preoperative practices for patient with bariatric surgery in the control group; the total percentage of nurses' observation refer to sometimes apply with 42.5% during the pre-test time. During the post-test time, they show no differences in their practices in which the first and second observations show 40% of sometimes apply, while the third observation show 38% of sometimes apply.

The table 4-7 presents the item related to nurses' preoperative practices for teaching the patient with bariatric surgery in the study group; the total percentage of nurses' observation during the pre-test time refer to 70.5% of sometimes apply, while their practices are increased during post-test time in which the first observation show 68.9% always applying; second observation show 72.5% always applying; and third observation show 73.5% always applying. The total percentages of nurses' practices during the post-test indicate the improvement in their practices post application of interventional program.

Table 4-1: Distribution of the Sample According to their Socio-demographic Characteristics

List	Characteristics	Study Group		Control Group		Comparison significance
		f	%	f	%	
1	Age group					
	20- less than 25 year	2	8	3	12	X^2= 17.954 p-value= .327 Sig= N.S
	25-less than 30 year	0	0	1	4	
	30-less than 35 year	1	4	1	4	
	35-less than 40 year	3	12	2	8	
	40-less than 45 year	7	28	7	28	
	45 and more	12	48	11	44	
	Total	25	100	25	100	
2	Gender					
	Male	12	48	11	44	X^2= 19.200 p-value= .258 Sig= N.S
	Female	13	52	14	56	
	Total	25	100	25	100	
3	Years of employment					
	1-less than 6	3	12	2	8	X^2= 13.959 p-value= .561 Sig= N.S
	6-less than 11	2	8	2	8	
	11-less than 16	4	16	4	16	
	16-less than 21	5	20	4	16	
	21and more	11	44	13	52	
	Total	25	100	25	100	
4	Nursing qualifications					
	Nursing School	4	16	3	12	X^2= 5.804 p-value= .759 Sig= N.S
	Nsg High School	6	24	7	28	
	Nursing Institute	14	56	13	52	
	Nursing College	1	4	2	8	
	Total	25	100	25	100	
5	Participation in training session					
	Yes	4	16	5	20	X^2= 3.741 p-value= .053 Sig= N.S
	No	21	84	20	80	
	Total	25	100	25	100	

f: Frequency, %: Percentage, X^2: Chi-square, df: degree of freedom, p: Probability, Sig: Significance, S: Significant, N.S: Not significant, Nsg: Nursing

Table 4-2: Assessment of Preoperative Nurses' Practices for Patient with Bariatric Surgery among Control Group (N=25)

List	Items	Percentages											
		Pre-test observation			Post-test observation 1			Post-test observation 2			Post-test observation 3		
		Always apply	Sometimes apply	Never Apply	Always apply	Sometimes apply	Never Apply	Always apply	Sometimes apply	Never Apply	Always apply	Sometimes apply	Never Apply
1	Writing a pre-approval for the operation) Informed consent).	0	20	80	60	36	4	0	36	64	72	28	0
2	Prepare Ward administration chart.	0	16	84	48	52	0	0	24	76	52	48	0
3	Give the patient nick name or code.	0	100	0	0	84	16	0	48	52	0	92	8
4	Checking Vital Signs (V.S).	0	32	68	76	24	0	0	96	4	72	28	0
5	Check patient drugs allergy.	0	100	0	0	92	8	0	32	68	16	76	8
6	Check patient food allergy.	0	96	4	4	92	4	0	40	60	4	88	8
7	Check laboratory test.	0	36	64	64	36	0	0	20	80	0	92	8
8	Check Blood group and Rh. Factor.	0	24	76	72	28	0	0	16	84	60	36	4
9	Check the x- ray report.	0	48	52	52	48	0	0	100	0	48	52	0
10	Checking for dental status.	0	96	4	0	92	8	0	32	68	0	84	16
11	Withhold food and fluids at night of surgery.8 h. preparation.	0	32	68	72	28	0	0	100	0	76	24	0
12	Give the patient bowel prep for clean the bowel.	0	40	60	16	76	8	0	96	4	0	92	8
13	Withhold drugs as doctor order.	0	36	64	4	88	8	0	36	64	4	92	4
14	Empty bowel and bladder immediately before going to theater.	0	8	92	0	92	8	0	8	92	64	36	0
15	Hand washing.	0	8	92	68	32	0	0	8	92	68	32	0
16	Gowning.	0	40	60	68	32	0	0	40	60	68	32	0
17	Gloving.	0	12	88	68	32	0	0	12	88	68	32	0
18	Masking.	0	16	84	60	40	0	0	16	84	60	40	0
19	Shaving the area of operation immediately pre-operative.	0	56	44	36	64	0	0	56	44	36	64	0
20	Bathing the patient before surgery with antiseptic solution.	0	44	56	40	56	4	0	44	56	40	56	4
21	Administration pre anesthetic medication as; Medazolam, Diazepam.(Anesthesia evaluation.)	0	36	64	20	80	0	0	36	64	20	80	0
22	Inform family to prepare blood if need.	0	40	60	24	72	4	0	40	60	24	72	4
Total percentage		0%	42.5%	57.5%	0%	40%	60%	0%	40%	60%	0%	38%	62%

Table 4-3: Assessment of Nurses' Practices about Preoperative Teaching for Patient with Bariatric Surgery among Study Group (N=25)

List	Items	Percentages											
		Pre-test observation			Post-test observation 1			Post-test observation 2			Post-test observation 3		
		Always apply	Sometimes apply	Never Apply	Always apply	Sometimes apply	Never Apply	Always apply	Sometimes apply	Never Apply	Always apply	Sometimes apply	Never Apply
1	Explain to the patient about intensive care unit {lines, drains, electro cardiograph cables, (E.C.G)}.	0	92	8	92	8	0	94	6	0	94	6	0
2	Teach patient how to take breathing exercises at post-operative.	0	92	8	84	16	0	88	12	0	88	12	0
3	Teach patient how to relax upper and lower extremity to avoid complication.	36	60	4	88	12	0	88	12	0	88	12	0
4	Instruct the patient to hold her/his breath for three seconds.	0	92	8	88	12	0	90	10	0	92	8	0
5	Sign out slowly through her/his mouth.	56	44	0	88	12	0	88	12	0	88	12	0

6	Teach the patient how to make effective cough.	40	56	4	88	12	0	90	10	0	90	10	0
7	Make the patient bend her/his knees up if lying or lean forwards if sitting.	44	56	0	88	12	0	91	9	0	92	8	0
8	Told the patient to Support her/his wound firmly with her/his hands, pillow or rolled up towel and cough strongly to clear any sputum or secretion.	76	24	0	96	4	0	96	4	0	96	4	0
9	Educate patient about early ambulation.	48	48	4	96	4	0	96	4	0	96	4	0
10	Instruct patient to avoid sexual activities 1weeks usually.	0	92	8	0	100	0	10	90	0	15	85	0
11	Instruct the patient to be aware of the quantity and quality of food after the procedure.	0	100	0	0	100	0	8	92	0	10	90	0
12	Instruct the patient to pout exercise plan for improve out come after surgery.	0	88	12	0	96	4	12	88	0	13	87	0
13	Teach the patient not to lift heavy objects for (3) three months.	28	72	0	88	8	4	92	8	0	93	7	0
Total percentage		25.2%	70.5%	4.3%	68.9%	30.5%	0.6%	72.5%	27.5%	0%	73.5%	26.5%	0%

DISCUSSION

The highest percentage of nurses in the study and control groups are associated with age group 45≤ year .These results agreed with the study which find the majority of the nurses' age was between (35-55) years old and represent (40.8%) and 59.2% respectively[4].

The result shows the gender variable refers that 52% of nurses in the study group are female and 56% of nurses in the control group are female also. This result is agree with study which reveals that the majority of respondents were female and represent 61 % are female and 39% from them are male[5].

Regarding years of employment, the highest percentages in the study and control groups are associated with 21≤ years of employment as seen in the study group (44%) and control group (52%). Explanation of this result refers to most of the nurses works in bariatric surgery need for good experience there for we find most of them have 21 years of employment.

Concerning the nursing qualification, 56% of nurses in the study group and 52% of them in the control group are graduated from nursing institute with diploma degree. The result is agreement with the result which show most of participant were nurses had a bachelor and associate degree, 19.6% , 13.5% respectively[5]. Related to participation in training sessions about bariatric surgery, only 16% of nurses in the study group and only 20% of nurses in the control group are participated in one national training session.

The table (2) presents the item related to nurses' preoperative practices for patient with bariatric surgery in the study group; the total percentage of nurses' observation related to always applying refer to 38.7% during the pre-test time, while their practices are increased during post-test time in which the first observation show 86.6% always applying; second observation show 87.7% always applying; and third observation show 89.4% always applying. The total percentages of nurses' practices during the post-test indicate the improvement in their practices post application of interventional program.

The results of this study agreed with study which showed that more than two-thirds of studied nurses (73.3%) had poor knowledge and practice[6].

The results of this study also agreed with study "Assessing the Nurses' Knowledge of Bariatric surgery: A Performance Improvement Project" his results showed that 66.7% had no previous experience of caring for bariatric surgical patients mention the number of obese patients admitted at the hospital is steadily increasing with an observed rise in the rate of readmissions. The main challenge at the hospital in regard to caring for morbidly obese patients is lack of knowledge regarding bariatric care among nurses[7].

The table (3) presents the item related to nurses' preoperative practices for teaching the patient with bariatric surgery in the study group; the total percentage of nurses' observation during the pre-test time refer to 70.5% of sometimes apply, while their practices are increased during post-test time in which the first observation show 68.9% always applying; second observation show 72.5% always applying; and third observation show 73.5% always applying. The total percentages of nurses' practices during the post-test indicate the improvement in their practices post application of interventional program.

Interpret of this result refers to effect of education program in improve o nurses practice toward bariatric surgery there for we find in the first observation 68.9% always applying; second observation show 72.5% always applying; and third observation show 73.5% always applying

Improved knowledge and training about bariatric care contributes to positive social change by enhancing nurses and caregivers' self-efficacy in addressing the challenges of caring for morbidly obese patients. Bariatric surgery is costly, and education on how to use bariatric equipment may save money.

CONCLUSION

The study concluded that nurses face challenges to deliver care and work effectively at ICU in Baquba during the pandemic of COVID-19 due to nursing shortage, taking responsibilities, in appropriate supportive materials, psychological stress and load, and conflict in ICU

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