

Effectiveness of Self-Care Intervention Program on Patients with Colostomy

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ABSTRACT

Background: The function of the colostomy nurse has advanced from that of a bedside caregiver to that of an enter-stomal therapist or a nurse scientific expert with ostomy care experience. Nurses play a critical role in health education, assisting and motivating patients to take care of themselves. They serve as health educators in practically all health-care settings, promoting patient health literacy and assisting them in managing and becoming acquainted with their situation. (1).

Methodology: In order to fulfill the study's aims, the researcher constructed a questionnaire format to evaluate the effectiveness of a self-care Intervention Program on patients with colostomies at Al Nasiriyah teaching hospital. The questionnaire is divided into three sections: Part I: Self-administered sheet relating to the patients' demographic characteristics, such as (age, gender, and Marital status, educational level, and occupation). Part II: Self-Administered Sheet Concerning Patients' Colostomy Knowledge There are twelve multiple choice questions in all. Part III: Ostomy Self-Care Observational Checklist has sixteen items.

The instrument's reliability was verified by using intra examiner (test and retest) and inter examiner (alpha Cronbach) tests, and the instrument's validity was assessed by a panel of (15) experts.

The data was analyzed using descriptive statistical data (frequency, percent, Mean of Score (MS), Variations among both pre / post Mean of Score, Standard Deviation (SD), and (RS percent) Relative Sufficiency) as well as inferential analysis (Chi-Square test, Contingency Coefficients (C.C.) test, t-test, and (ANOVA) Analysis of Covariance).

Results of the study: The study's findings revealed that the effectiveness of a self-care intervention program on patients' colostomy knowledge and practices significantly improved. It also demonstrates that there are very significantly different in the study group's overall primary domains connected to knowledge of patients' and their practices between pre and post-tests.

Conclusion: This study found that patients with colostomies had insufficient knowledge and suboptimal colostomy self-care practices prior to the adoption of the self-care intervention program. Their knowledge and practices improved following the introduction of the self-care intervention program.

Recommendations: The study recommended that patients with colostomies receive close care via consultations and telephone conversations to assist identify and resolve their difficulties. Develop instructional special units in surgical departments, particularly in colon operations, with experienced enterstomal caregivers and all essential reference resources, such as technical manuals and multimedia elements.

Keywords: Effectiveness, Self-Care, Intervention Program, Colostomy.

INTRODUCTION

A colostomy is an open surgical procedure or laparoscopic procedure that includes elevating a looping or ending of the colon to the skin's surface. A stoma is the externalization of a hollow viscus in the abdomen, either temporarily or permanently. The kind of stoma is given names like colostomy, ileo-stomy, and uro-stomy, according on the externalized portion. Colon cancer, severe diverticulitis, trauma, or inflammatory bowel illness might all trigger therapeutic treatment surgery (2).

A colo-stomy has been called for the part of the colon in which it is created. A stoma might be descending, transversal, ascending, or sigmoidal. Feces in a colostomy (ascending stoma) is watery to soft with a foul odour, whereas feces in a right horizontal stoma is mushy to semi-formed and feces in a left transversal stoma is semi-formed & softer, and feces in a descended or sigmoid stoma is smooth to firmly hard. Around 700,000 Europeans have had colon surgical removal diseased sections of the colon. Colorectal cancer is the most common reason for stoma surgery. Colorectal cancer is responsible for 4 percent of the total cancer mortality. (3).

The function of the colostomy nurse has advanced from that of a bedside caregiver to that of an enter-stomal therapist or a nurse scientific expert with ostomy care experience. Nurses play a critical role in health education, assisting and motivating patients to take care of themselves. They serve as health educators in practically all health-care settings, promoting patient health literacy and assisting them in managing and becoming acquainted with their situation (1).

Self-care is described as peoples views over themselves capacities for achieve specific performance levels that have an impact on life situations. Concepts influence how individuals feel, believe, motive ourselves, as well as act, resulting in a variety of

impacts via cognitively, motivational, emotional, and practice requires (4)

Self-care of colostomy entails teaching individuals how or when to maintain their stomas on their own. The learning which individuals with chronic medical problems need to deal with taking the medication as well as maintaining therapeutic regimes, maintaining daily lives like employment & relatives, as well as trying to deal with the coming years, including improving the life strategies and the distress, anxiety, and feelings of hopelessness that comes with a medical problem, according to the definition of self-care management preparation. Although a colostomy really isn't considered a chronic disease, it does necessitate the patient learning most of the same self-management abilities. Most caregivers, on the other hand, should supply colostomy information and abilities in order supply knowledge and training assistance to patients so they may make informed choices, reach their objectives, and eliminate barriers to achieving self-management. (5)

MATERIAL AND METHODS

A quasi-experimental method research was used before and after test technique to both study group and control group from 10. 28, 2021 to 5, 14, 2022 to meet the goals of the research.

The sample size is Sixty participants, split into 2 groups, each of which has 30 participants as the study and control groups. The study participants receive the self-care intervention programs, whereas the control subjects did not receive it.

In order to fulfill the study's aims, the researcher created a questionnaire format to evaluate the effectiveness of a self-care Intervention Program on patients with colostomies at Al Nasiriyah teaching hospital. The questionnaire is divided into three sections: Section I: Self-administered form relating towards the patients' sociodemographic variables, like (age, gender, and Marital status,

educational level, and occupation). Section 2: Self-Administered form Concerning Patients' Colostomy Knowledge There are twelve MCQs in all. Section 3: Ostomy Self-Care Observational Checklist has sixteen items.

The study group receives the same information as the control group; plus, a self-care Intervention Program to patients with colostomy. The program session is implemented in surgical ward. session includes is the following activities and topics were performed: Introduction about What is a colostomy surgery, Type of colostomy, Indications for Surgery, Etiology of colostomy, what is a pouching appliance, Self-care of colostomy, how to change the colostomy appliance, How do care for the skin around the stoma, Care of odor., Care of gas, Care of constipation and diarrhea, and Diet for colostomy patients. The duration of the course is sixty mins, and the learning resources utilized throughout these trainings included (notebooks and Brochures).

In order to fulfill research goals, a panel of (fifteen) experts with more than 5 years' experience in respective disciplines determines the validity of the program and study tools knowledge test and practice.

Since the findings demonstrate an excellent degree of stability and internally consistency for the studying concepts, the reliability of the questionnaire was being utilized to establish its reliability. At the level of items in the questionnaire, all of this was determined by calculating by using main statistical parameter: Alpha Cronbach.

Descriptive analysis was performed using the SPSS program versions (26.0): Mean of score (M.S) with Standard Deviation (S.D) and frequency analysis (f). Chi-Square test, Contingency Coefficients (C.C.) test, t-test, and Analysis of Covariance (ANCOVA) test are examples of inferential analysis of data.

RESULTS

Table 1: Shows the distribution of the categories study by sociodemographic characteristics variables with significant comparison

(SDCv.)	Group	Control G.		Study G.		C S ^(*) P. value
		No.	%	No.	%	
Gender	Male	11	36.7	9	30.0	C.C.=0.033 P=0.795 (NS)
	Female	19	63.3	21	70.0	
	Total	30	100	30	100	
Age	30-40	3	10	1	3.3	C.C.=0.143 P=0.739 (NS)
	40-50	6	20	4	13.3	
	50-60	12	40	10	33.3	
	60-70	9	30	15	50.0	
	Total	30	100	30	100	
Educational achievement	Uneducated	10	33.3	11	36.7	C C = 0.277 P. = 0.083 (N S)
	Reading and writing	8	26.7	9	30.0	
	Primary &secondary education	8	26.7	7	23.3	
	University	4	13.3	3	10.0	
	Total	30	100	30	100	
marital status	Unmarried	2	6.7	5	16.7	C.C.=0.246 P=0.276 (NS)
	Married	20	66.7	16	53.3	
	Divorced	2	6.7	3	10.0	
	Widow	6	20.0	6	20.0	
	Total	30	100	30	100	
Current Occupation	Not work	7	23.3	6	20.0	C C = 0.250 P. = 0.135 (N S)
	Housewife	11	36.7	5	16.7	
	Free work	5	16.7	12	40.0	
	Employee	5	16.7	5	16.7	
	Retired	2	6.7	2	6.7	
After operation, their job-related lifestyle	There will be no employment changes.	11	36.7	11	36.7	C.C.=0.034 P=0.793 (NS)
	Part-time employment	1	3.3	1	3.3	
	Lose your job	4	13.3	6	20.0	
	Get a new work	1	3.3	3	10.0	
	No have job	13	43.3	9	30.0	
	Total	30	100	30	100	
Residence	Urban	9	30.0	13	43.3	C.C.=0.314 P=0.162 (NS)
	Rural	21	70.0	17	56.7	
	Total	30	100	30	100	

(*) NS: Non Sig. at P>0.05; Testing based on a contingency coefficient (C.C.) test.

Table 2: Descriptive analysis and significance tests knowledge of the participant's and there practices in relation to the key topics in the before and after times
Statistic Groups (Pre-X-Pre) .. (Post-X-Post)

Main-Domains	Groups	No	G.M.S	S.D	S.E	t.test	P.value	
Pre	knowledge of patients` about colostomy	Control	30	46.57	5.08	0.93	0.421	0.675 NS
		Study	30	46.05	4.49	0.82		
	Care for the stoma, peri-stomal, and pouching systems	Control	30	63.79	5.40	0.99	1.813	0.075 NS
		Study	30	60.91	6.82	1.24		
	Assessing the stoma	Control	30	28.06	14.92	2.72	0.219	0.827 NS
		Study	30	27.22	14.50	2.65		
Post	Patients` knowledge about colostomy	Control	30	44.48	7.19	1.31	-9.19	0.000 HS
		Study	30	62.92	8.32	1.52		
	Care for the stoma, peri-stomal, and pouching systems	Control	30	64.85	5.59	1.02	-4.04	0.000 HS
		Study	30	73.33	10.04	1.83		
	Assessing the stoma	Control	30	39.17	16.25	2.97	-5.35	0.000 H.S
		Study	30	63.61	19.01	3.47		
	Study	30	88.33	8.70	1.59			

(*) HS: Highly Sig. at P<0.01; NS: Non Sig. at P>0.05; Testing based on two independent t test. GMS: Grand Mean of Score/ or Global Mean of Score

Table 1 presents the distribution of study categories on the basis of Sociodemographic Characteristics variables (SDCv.) for each category, like "Age Categories, Sex, & Education achievement," with significant comparisons to ensure that two separate groups are generated from same community.

In order to check participants, matching pair statistically hypothesis state that mean scoring variations among before and after periods should be ignored since no significant changes are expected if the suggested intervention program has no influence on the knowledge of the participant's and their practice. Table (4.2.3) demonstrates that in the study group, there are extremely significant differences at $P < 0.01$ in the before and after the times explored key areas, but no significant changes at $P > 0.05$ in the control group, except post operation.

Table 3: Overall Assessment of patients' knowledge about colostomy in the studied periods (pre, and post)

Score	Groups	N	Total Mean	SD	P-value
Pretest Knowledge	Study	30	0.27	0.43	0.711
	Control	30	0.50	0.61	
Posttest Knowledge	Study	30	1.17	0.57	0.001**
	Control	30	0.43	0.53	

n=number, m= mean, SD=standard deviation* P-value significant at < 0.05 , ** Highly significant at < 0.01

The overall assessment indicated highly significant differences at $P < 0.01$ with the substantial variations among replies two groups, regarding patients' knowledge about self-care of colostomy.

Table 4: Overall Assessment of patients' Practices about colostomy in the studied periods (pre, and post).

Score	Groups	N	Total Mean	SD	P-value
Pretest Practice	Study	30	0.53	0.48	0.833
	Control	30	0.30	0.61	
Posttest Practice	Study	30	1.73	0.41	0.012*
	Control	30	0.57	0.62	

n=number, m= mean, SD=standard deviation * P-value significant at < 0.05 , ** Highly significant at < 0.01

Table 5: Prediction Model for Posttest knowledge with the participants Sociodemographic characteristics

Variables	B*	S.E	B**	P=0.001
Intercept	1.218	0.286		0.001
Gender	-0.004	0.031	-0.052	0.893
Age	0.020	0.044	0.112	0.653
Educational achievement	0.057	0.031	0.375	0.080
Marital status	-0.001	0.034	-0.007	0.983
Current Occupation	0.052	0.032	0.287	0.116
Life style regarding their job post-surgery	0.026	0.016	0.357	0.126
Residency	0.510	0.137	0.623	0.092

B*=standard parameter estimate with intercept, SE=standard error B**=standard parameter estimate without intercept, P= P value.

Table 6: Prediction Model for Posttest Practice with the participants Sociodemographic characteristics

Variables	B*	S.E	B**	P=0.001
Intercept	25.12	0.52		0.001
Gender	-1.45	0.43	-0.27	.021*
Age	0.14	0.02	0.13	.091
Educational achievement	-0.52	0.56	-0.07	.080
Marital status	-0.14	0.28	-0.04	.623
Current Occupation	1.03	0.28	1.81	.089
Life style regarding their job post-surgery	.121	.046	.182	.069
Residency	.005	.039	.014	.892

B*=standard parameter estimate with intercept, SE=standard error B**=standard parameter estimate without intercept, P= P value.

The overall assessment indicated highly significant differences at $P < 0.01$ with the substantial variations among

replies two groups, regarding patients' Practices about self-care of colostomy.

The findings among these table reveal there were no significant associations between sociodemographic variables like (age, sex, educational attainment) and client information via means' score, although no significant differences are accounting for at $P > 0.05$.

The findings among these table reveal there were no significant associations relationships are proved with Sociodemographic Characteristic's variables except (gender).

DISCUSSION

A Distribution of "demographical characteristics of patients:

Findings suggest that the researched groups registered no significant differences at $P > 0.05$, revealing accuracy of the participants selected attributable to their consistency situation of variations, and also prior findings proved that both studied groups have been gone from same community of (SDCv.), and are therefore more trustable for this research, although any purposeful variance among both the study subjects must be analyzed regarding the efficacy of implementing the proposed programme (Table 4-1).

Almost majority of participants in the (study) group was between ages of 60 and 70, with the percentage of 50 percent, whereas those in the (control) groups were between the ages of 50 and 60, with a percentage of 40 percent . This finding is consistent with Mohamed et al., (2017), who identified the largest percentage of people aged 46 to 60 in their research. This observation is also consistent with the findings of El-Rahman et al., (2020), who showed that the age ranged around 40 to 50 years with a mean SD of 47.11 ± 11.03 years. Similarly, Mohamed et al., (2018) discovered that the largest proportion of aged in both groups is (50 and up). This might be related to the fact that ages larger than 40 are possible causes for colorectal cancer. Whereas Abdelmohsen (2020) found the mean age SD of the analyzed sample to be 35.6 ± 14.4 years, this opposes the findings of Abdelmohsen (2020).

According to the findings, 63.3 percent of patients in the control group and 70.0 percent of patients in the study group are female. These are in accordance with Qalawa & Moussa (2019), which discovered that females had a greater rate of stoma (61.5 percent). As well concur to Kadam and Shinde (2014), who discovered that stoma was more common in females (66.66 percent); and refutes El-Rahman et al., (2020), who discovered that stoma was more common in men (63.3 percent); and also come in conflict with Mohamed et al., (2017), who reported that the majority of the sample (63.3 percent) were males. Abdelmohsen (2020) indicated that the most of the participants (61.6 percent) were men, which opposes the findings.

In relation to education, the majority of patients in both groups are illiterate, with 36.7 percent in the study group and 33.3 percent in the control group. This finding is in agreement by Qalawa & Moussa (2019), who revealed that 73.1 percent of the uneducated (illiterate) had a greater rate of stoma. As well, this research supports the findings of Safwat et al., (2018), which discovered that majority of participants (35.5%) were illiterate. El-Rahman et al., (2020), on the other hand, found that the majority of participants (40.0 percent) were Secondary. In addition, Abdelmohsen (2020) found that the majority of participants (63.4 percent) had just a basic education.

Regarding marriage status, the present research demonstrated that the majority of participants was marriage, 53.3percent in the study group as well as 66.7percent in the control group. The finding is consistent with El-Rahman et al., (2020), which found that 76.7percent of participants was married. Similarly agreement to Abdelmohsen (2020), which indicated that the most (73.4%) of participants was marriage. Additionally, Qalawa & Moussa (2019) discovered that the most of participants (69.2 percent) were married, which supports this conclusion.

Related to current Occupational, the research revealed that 36.7percent of control subjects are homemakers, whereas 40percent of participants in the study group are self-employed. These conclusion was reinforced by Abdelmohsen (2020), which demonstrated the 28.4percent of participants had self-employed. Contrary to El-Rahman et al(2020) 's findings that its most patients (60 percent) had Working. Likewise dispute to Safwat et.al. (2018), which discovered that most of participants (44.4%) had unemployed.

In relation to Lifestyle their job post-surgery, the finding of the present study showed that the majority of patients in control group were Not work (43.3%), while (36.7%) are No change in job in study group.

For Housing, this present research discovered that most of participants in study group (56.7%) as well as the control subjects (70%) lived in rural areas. this result is agreed with El-Rahman et al., (2020), who showed that the majority of patients (63.3 %) were Rural. Also, this result is supported by Qalawa & Moussa (2019) who found that the majority of patients (73.1%) were Rural. while disagree with Sabea, & Shaqueer (2021). who showed that the majority of patients (60.0 %) were urban.

Discussion of patients Knowledge and Practices about self-care of colostomy Questionnaires' items:

Part I: Discussion of patients Knowledge Related self-care of colostomy: The study results revealed that the summary statistics concerning of patient's knowledge questionnaire items toward self-care of colostomy, which using MCQ questionnaire's items technique, Because of the use of an intervention program for the study group, but also the control group, significant comparisons are made throughout the course of the examined (before and after) times. A finding of significant checking of relate to questionnaire items have been noted almost as strongly significant differences at P0.01, that also appointed efficacy toward the researched intervention program through elevating understanding rankings participants inside the study participants, as well as which be permitted to assure the significance or achievement of implementing the proposed program, respectively. Apart from that, instead of assessing for significance, we found that the results were too responsive to advancements which took place for multiple testing statistic. Nonetheless, most of the research team's objects showed excellent advancements like a result of major changes in assessment levels over pre - test to post durations.

Relating a topics with this section, result in table (4.2.1) displays descriptive statistical analysis of the study subjects through the before and after intervals, including the mean of score, standard-deviation, standard-error, and also comparative significant of checking the compound hypothesis of the study for checking constant variance have been supposed, and checking equal of arithmetic mean are supposed in order to make sure that the both groups must be coincided due to a researched questionnaire before staining.

According to the findings, both groups have greatly commensurable situation inside of low rates of evaluation with in er before period, with a major difference at $P < 0.01$ but no significant differences at $P < 0.05$ being taken into consideration. This indicates that participants knowledge throughout the both study & control groups is weak also with decrease rates of evaluation. Also computed were significant comparisons of testing a hypothesis at the after period for confirm that the both groups were correlated as a result of the researched questionnaire following fulfillment of the offered programme.

These findings demonstrated there are strongly significant in ($p < 0.01$) disparities among the responses of the both groups, as overall assessment, with the broad variations in answers among the both groups.

Throughout summary, as well as based on an overall assessment, it is possible to conclude that the application of the proposed intervention program has already had major impacts, as evidenced by make and implement in participants knowledge with respect to the items on the participants understanding

questionnaires pertaining to colostomy self-care and the application of the proposed intervention program.

The current research examined participants' information of stoma after a self-care program was applied, as well as the findings revealed that the most of the study samples had progressed through their information (knowledge) after the program was implemented. Prior to the program, the researcher observed a poor understanding about these issues, that enhanced after the program in the majority of the elements.

The sample characteristics of both control and study participants in this research may have contributed to their poor of knowledge prior to the program, which might explain their poor of knowledge. The large bulk among two groups was uneducated, and the vast majority did not get enough stoma teaching which would have increased their information of the situation (the researcher).

This finding is in accordance with those of Sabea and Shaqueer, (2021), Ran et al., (2016), and Mohamed et al., (2019), who discovered that participants' knowledge enhanced after completing the program, with statistically meaningful differences between the two groups. Following the training, patients' overall score knowledge improved, which was accompanied by statistically highly significant changes, according to Mohamed et al., (2017).

One explanation for knowledge development within the study participants might have been linked to the applied of an interventional program, as well as the supply of courses and booklets (Brochures) as support of the intervention program, among other factors (the researcher).

Part II: Discussion of patients Practices Related self-care of colostomy: A colostomy is a surgical procedure which connects the large bowel to an external of the adult abdomen. Waste material as well as gases may be expelled from the body without traveling via the rectum as a result of this. The feces being gathered inside a bag which was kept outside of the abdomen by the subject. Prior stoma operation, the physician as well as the nurses will be shown the optimal site for the ostomy, so that the individual could see it quickly and therefore can take better care of it themselves or herself after the procedure (Sabea & Shaqueer, 2021).

According to the research findings, participant practice observation checklist components to self-care of colostomy have been categorized into 2 axis (i.e. major aspect), like "Stomal, peristomal skin and pouching system care:, and Assessing the stoma:," utilizing participant observation checklist objects method that was categorized in to 3 main classify responses, forward with it researched (Before and After) durations resulting from the implemented of an intervention program for study gr. In all participant observation checklist items, significant differences in $P < 0.01$ were found throughout the findings of the testing, which delegated efficacy to the researched intervention program by increasing practice scores in the study participants, so this facilitated to establish the significance or achievement of implementing the proposed program. Furthermore, instead of assessing for significance, the findings from this research group's elements have shown high grades of advancement as a result of noteworthy changes in assessment levels throughout the course of the before/ after periods.

Results shown in table (4.2.2) demonstrates descriptive statistical analysis of a study subjects of before and after durations, including the mean of score, standard-deviation, standard-error, and also significant comparative of checking the compound hypothesis of the study for equality of variances have been supposed, and checking equal of arithmetic mean is presumed in order to make sure that the both groups must be correlates due to the researched observational checklist before staining.

According to the findings, the major Axis and sub-domains have strongly commensurable situation in poor evaluation inside the before duration, where it, noting significant difference at $P < 0.05$ instead of notify reduced evaluation among two groups,

and no significant differences at $P < 0.05$ are attributed for the residues sub main-domains as well as major Axis, where it indicates that practices of the participants in the both control & study groups were poor also with reduced levels of evaluation. Additionally, statistically meaningful comparisons of testing a hypothesis at the post-period were computed to confirm that the both groups were correlated as a result of the researched observational checklist after completing the proposed program is completed.

The findings demonstrated that there were extremely significant differences between the both groups inside the primary areas, and also in the overall assessment, including high significant differences at $P < 0.01$ and vast discrepancies in answers between the both groups.

It is possible to conclude, based on the summary of the prior findings and an overall assessment, that the application of the proposed interventional program has already had major impacts due to meaningful apply in participant's practice in relation to participant's practices observational checklist' components to self-care for colostomy patients.

In this research, it was discovered that the participants' practice regarding colostomy after the apply of the self-care programme was greater in the study group (post-program) than those in the control group (pre-program). Participants' total score practicing improved post-program, according to Culha, et al. (2016), also did Wang, et al. (2021) and Abd El-Rahman et al. (2020), all of whom noted an increase in participants' total score practicing combined of statistically highly significant changes.

One explanation for practice development within the study participants might have been linked to the applied of an interventional program, as well as the supply of courses and booklets (Brochures) as support of the intervention program, among other factors (the researcher).

Discussion of the Descriptive statistics and testing significant of studied Patient's Knowledge and Practices toward main domains in pre and post periods: The objective of this research was to investigate the effectiveness of a self-care intervention program on patients with colostomies. Among participants having colostomies (post-program) that obtained knowledge and training abilities via an applied self-care intervention program as well as those who did not, statistically significant variations in self-care educational and skill abilities were found. There were no statistically significant differences between both the study and control groups in relation of demographics, self-care knowledge and practice prior to implementing the self-care intervention program. Following the completion of the intervention, the study group showed significant improvements in ostomy self-care information & practicing abilities capacity prior to getting discharged from the hospital. The findings imply that education and participation in a self-care intervention program were an effective strategy of improving self-care abilities for participants having colostomies, according to the researchers. Patient participation in the implement self-care interventional program, according to the researcher, allowed them to frequently practice self-care, resulting in an improvement in their self-care knowledge and abilities. This discovery offered assistance for the researcher's hypothesis.

These findings were consistent with those obtained by Mohammed et al. (2018) in their research, which demonstrated a positive and statistical significance association among overall score of participants' knowledge and practices. Additionally, Pandey et al. (2015) discovered a good link among overall scores of patients' knowledge and practices after the training; these findings were in accordance with that of Abdelmohsen, (2020). A positive and statistical significance association was found between the overall scores of participants' knowledge and practices in this study. additionally, Participants' ostomy practice grew as a result of education and training, according to Wang et al. (2021), who have also said that education and training enhanced their practice.

Discussion of the Relationships due to patients Knowledge and Practices with Demographical Characteristics:

Part I: Discussion of the Relationships due to patients Knowledge with Demographical Characteristics: This relates towards the prediction/or discovery of associations between the overall assessments of suggested interventional-program of participant's knowledge regarding self-care of stoma through means' score in compressed manner by such an overall assessments via converting documented respond from every duration (i.e. before & after) throughout quantitative approaches scale was used to measure utilizing percentile transition method, as well as the participant's knowledge regarding self-care of stoma.

Analysis of covariance (ANCOVA) results regarding participant's knowledge gains which happened as a consequence of implementing the proposed intervention-program dispersed in regard to various (SDCv.) of examined participants within the study group are included in Tables (4.3).

As a result of the findings, this can be indicated that the study questionnaire of studying evaluations of participant's knowledge advancements via implementing proposed intervention-program through referring to self-care of stoma can be generalized to the study participants, despite the fact that variations inside of his\her (SDCv.) are not significant at $P > 0.05$, among participant's information through means' score.

The study was corroborated by the findings of Safwat et al (2018) and Sivakumar (2016), who found there is no statistically significant difference in participants' knowledge in both study & control groups when it refers to (SDCv.).

Part II: Discussion of the Relationships due to patients' Practices with Demographical Characteristics: This relates towards the prediction/or discovery of associations between the overall assessments of suggested interventional-program of participant's practices regarding self-care of stoma through means' score in compressed manner by such an overall assessments via converting documented respond from every duration (i.e. before & after) throughout quantitative approaches scale was used to measure utilizing percentile transition method, as well as the participant's practices regarding self-care of stoma.

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As shown by alwi (2017) and Qalawa and Moussa (2019) studies, as well as Culha et al (2016) research, it is proposed that there is no significant difference among participant's practices in both study & control) groups in relation to (SDCv.).

CONCLUSIONS

1. This study found that patients with colostomies had insufficient knowledge and suboptimal colostomy self-care practices prior to the adoption of the self-care intervention program. Their knowledge and practices improved following the introduction of the self-care intervention program.
2. This research shows that the learning and practical interventions was extremely successful.
3. The research findings imply that giving information plus focusing self-care prior hospitalization release might improve stoma patients' life quality.
4. based on the findings of this study, the self-care intervention program, and also the questionnaire and participant observation checklist utilize to increase the understanding and procedures of clients with colostomies in relation to stoma self-care, could well be generalizable to the study participants, despite the different in

sociodemographic characteristics variables like (age, sex, educational attainment, parental status, employment, and housing) of the stoma patients.

Recommendations

1. The study recommended that patients with colostomies receive close care via consultations and telephone conversations to assist identify and resolve their difficulties.
2. Develop instructional special units in surgical departments, particularly in colon operations, with experienced enterostomal caregivers and all essential reference resources, such as technical manuals and multimedia elements.
3. Create education courses for caregivers in colon surgery departments about how to use the Self-care intervention programme in place of in-service learning.

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