Xi'an Shiyou Daxue Xuebao (Ziran Kexue Ban)/
Journal of Xi'an Shiyou University, Natural Sciences Edition
ISSN: 1673-064X
E-Publication: Online Open Access
Vol: 65 Issue 12 | 2022
DOI 10.17605/OSF.IO/DVQ79

EFFECT OF NURSING INSTRUCTIONS ON SELF-EFFICACY AMONG PATIENTS WITH ILEAL CONDUIT

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Abstract

Urinary diversion is considered a chronic condition, which affects the lives of patients both physically and psychologically, hence, it is critical to provide those patients with an individualized instruction on self-care, not merely to increase information but to help them adapt successfully to a new life. Self-efficacy is one of the most important known concepts that may help these patients to deal with this situation. Aim: To determine the effect of nursing instructions on self-efficacy among patients with ileal conduit. To fulfill this aim the following research hypothesis was formulated: stoma self-efficacy total scores of patients with ileal conduit who receive nursing instructions will be different from stoma self-efficacy total scores of a control group in the first as well as the second post intervention assessments. Methods: Consecutive non-equivalent pre-test- post-test control group design was utilized to achieve the aim of the study. The study was conducted at Al-kasr Al-Aini University Hospital, Cairo-Egypt. Data was collected using two tools: (a) Personal and Medical Background Information Form and (b) Adapted Stoma Self-Efficacy Scale -Chinese version. Results showed that the participants were predominantly males (78.1% & 87.5%) in both groups. There was a significant difference between the control and the study groups on the variable of overall stoma self-efficacy in the first and second post intervention assessments (P-value= .0001 and .0001, respectively). Most probably these differences are due to the increase in the first and second post intervention mean scores for stoma care self-efficacy (28.6± 0.68 and 31.1±0.69, respectively) and social self-efficacy (17.7± 0.7 and 19.7± 0.69, respectively) among the subjects of the study group than subjects in the control group. Conclusion: There were an improvement in stoma self-efficacy scores along four consecutive weeks for both groups, however, the obvious improvement was in favor of the subjects receiving nursing instructions. Recommendations: a longitudinal study should be designed over a longer period of time to determine the long term effect of nursing instructions on self-efficacy.

Keywords: Urinary diversions, Ileal conduit, Self-efficacy, Stoma care.

INTRODUCTION

Worldwide, bladder cancer is the 10th most common cancer with an incidence and mortality rates of 5.6 and 1.9 per 100,000, respectively. Moreover, it is the 13th leading cause of cancer death worldwide (World Health Organization [WHO], 2020a). According

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to the International Agency for Research on Cancer (2020), in Egypt, bladder cancer is the third most common malignancy in both genders and the second most common type of cancer among males with an incidence of 7.9 percent of all cancer cases and a mortality rate of 6.9 percent. Its distribution is 12.6 percent in upper Egypt, 14.2 percent in middle Egypt and 8.8 percent in lower Egypt (Wagih & Kamel, 2020).

Early diagnosis constitute the corner stone for effective treatment which may result in increasing probability of surviving, in addition to decreasing morbidity and mortality (WHO, 2020b). However, the selection of the proper treatment depends upon the size, stage, type and the grade of the tumor besides the patient's general health and preferences (American Cancer Society, 2019; Glatzer, Panje, Sirén, Cihoric & Putora, 2020). Bladder cancer can be classified according to its invasiveness of the bladder wall into Non-Muscle Invasive Bladder Cancer (NMIBC) and Muscle-Invasive Bladder Cancer (MIBC) (Saginala et al., 2020).

The gold standard treatment for MIBC is radical cystectomy followed by urinary diversion (Mushtaq et al., 2019). Actually, urostomy surgeries considered a chronic condition which affect patient's lives to great extent in numerous aspects leading to diverse physical, psychological and social complications (Thomas & Nirmal, 2019; Jensen, Lauridsen & Jensen, 2020). Moreover, urostomal management represent a major challenge for patients as well as for their care givers, families and health care providers. Existing evidence reveals that, up to 80 percent of patients with a new ostomy experience ostomy-related complications that can persist for a long period of time. Accordingly, urostomy surgery may interfere with adjustment to living which result in a serious threat to their well being (Jensen et al., 2020; Lopez et al., 2016; Wang et al., 2022).

On the other hand, self-efficacy defined as *'' people's beliefs about their capabilities to produce and regulate designated levels of performance that influence over events affecting their lives* (Bandura & Wessels, 1994; Klassen and Usher, 2010). Actually, people with a strong sense of personal competency have maximum intrinsic interest and deep involvement in activities; set challenging goals and keep strong commitment for achieving them, and improve as well sustain efforts in the face of failure (Ackerman, 2022). Therefore, it is credible to assume that by increasing self-efficacy abilities via preoperative and postoperative instructions, patients with urostomy may be more successful in providing self care before being discharged from the hospital (Pate, Powers, Coffman & Morton, 2022). Whereas the, patients with urostomy require life-time specific self management skills which includes or deals with nearly all aspects of life in the form of instructions, these urostomy care instructions could enable patients to understand changes that occur as a result of urostomy formation, enhance urostomy care self-efficacy, reduce uro-stomal complications, reduce the length of hospital stay, improve social activities, enables the patients to conform efficiently to having a urostomy and

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reduce the incidence of readmission (Merandy et al., 2017; Thomas & Nirmal, 2019; Jensen, Lauridsen & Jensen, 2020).

Few research has been conducted to assess the patient's ability to handle urostomies. Therefore, an investigation which provides nursing instruction about urostomy care and patient's self-efficacy might be useful to nursing as well as other health care professionals. It may be able to provide information about the contribution nursing instructions might offer to those patients with an ileal conduit. Professionals then, may find ways to stimulate and facilitate the use of these instructions as an evidence based data to professional services. Therefore, the present study was designed to determine the effect of nursing instructions on self-efficacy among patients with ileal conduit. This was achieved through; developing and implementing nursing instructions for the studied subjects and evaluating the effect of nursing instructions on self-efficacy.

To fulfill the aim of the current study the following research hypothesis was formulated: Stoma self-efficacy total scores of patients with ileal conduit who receive nursing instructions will be different from stoma self-efficacy total scores of a control group in the first as well as the second post intervention assessments.

Research design. Consecutive non-equivalent pre-test - post-test control group design was utilized in the current study.

Setting. The study was conducted at Al-kasr Al-Aini University Hospital, Urology Department, Urology Outpatient Clinic, King Fahd Unit and King Fahd Outpatient Clinic, all are affiliated with Cairo University Hospitals, Cairo-Egypt.

Sample. A consecutive convenience sample consisting of 64 adult male and female patients diagnosed with bladder cancer and undergoing radical cystectomy followed by ileal conduit as well as free from postoperative complications which may develop within the first forty eight hours after the surgery constituted the study sample. Sample size was calculated by power analysis of 95 ($\beta = 1-.95 = .5$) at alpha .05 (one-sided) with confident level 95%. The first 32 patients recruited constituted the control group who received the standardize hospital care, while, the subsequent 32 patients formed the study group who was exposed to the designed nursing instructions. On the other hand, patients were excluded from the study sample if they have any of the following conditions: (a) mental, cognitive, physical and sensory disorders that would prevent participation in self-care, (b) uncontrolled diabetes mellitus, (c) end stage diseases and (d) body mass index (BMI) ≥ 40 kg/m2. These criteria were established to increase homogeneity of the sample and exclude possible confounds.

Data collection tools. Data are collected using the following two tools: (a) Personal and Medical Background Information Form and (b) Adapted Stoma Self-Efficacy Scale-Chinese version (Xu et al., 2018). The first tool is developed by the research investigator

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to collect data pertinent to the study and it consisted of two parts. The first part included personal data such as patient's age, gender, marital status, level of education,…etc. While, the second part covered medical data including date of surgery, BMI, in addition to medical and family history.

The second tool is the Adapted Stoma Self-Efficacy Scale-Chinese version. The original version has 28 items encompassing two subscales as follows: (a) Stoma Care Self-efficacy which consists of 13 items to assess self-efficacy regarding patient capabilities to care for the stoma and (b) Social Self-efficacy which consists of nine items to assess patient's self-efficacy regarding social functioning with stoma, as well as six separate items. The original Likert scale scoring system ranges from one to five with one equal not being confident at all and five equal extremely confident.

The modifications included removing of seven items distributed as follows; three from social self-efficacy subscale which are confidence for making new friends, sleeping at friend's house who do not know about the stoma and sleeping at friend's house who know about the stoma as well as four items from the six separate items which are: efficacy of diet choice, confidence for sex life, confidence for satisfaction with sexuality, confidence for heavy physical labor. Then, the remaining items were redistributed among the two subscales inline with their content. Accordingly, the adapted scale had 21 items encompassing the two original subscales: (a) Stoma Care Self-efficacy which consists of 12 items and (b) Social Self-efficacy which consists of nine items. The scoring system after modifications ranges from one to three, given that one is not confident at all, two is fairly confident and three is highly confident. The minimum score is 21 while the maximum score is 63. These modifications have been made in order to make the scale compatible with the type of the study as well suitable for the study sample and more sensitive to Egyptian patients.

Content validity of the adapted tool was established by three panel of experts in the fields of urology, nephrology and medical surgical nursing. Reliability was confirmed using Cronbach's Alpha and it showed satisfactory level for the Adapted Stoma Self-Efficacy tool as a whole as well as for stoma care self-efficacy and social self-efficacy subscales (0.94, 0.95 and 0.97, respectively).

Ethical consideration: Primary as well as final approval for data collection were obtained from the Research Ethics Committees of the Faculty of Nursing, Cairo University. Also, an official permission was obtained from departments/clinics administrators where the study was carried out. Each participant was informed about the purpose of the study and its significance. They were informed also that participation in the study is completely voluntary as well as they have the right to withdraw from the study at any point without any penalty. Additionally, all participants were assured that their anonymity and confidentiality will be guaranteed through coding the data. Moreover, participants were

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informed that the data will not be reused for any other research purpose without their permission. Subjects who choose to participate in the study were asked to sign the informed consent form designed especially for this study.

Procedure. The assessment stage included thorough review of the literature. In addition to necessary steps for booklet and other teaching media preparation. Once official permission is granted to proceed with the proposed study, names of potential participants who met the inclusion criteria were obtained daily from the head nurses of the selected departments/clinics. At that time, subjects who choose to participate in the study were asked to sign the informed consent form.

Preoperatively, Personal and Medical Background Information Form was completed by the researcher for all patients. Regarding the study group, the research investigator provided four individualized consecutive instructional sessions to the patient and/or to the responsible caregiver during patient's hospitalization. The information was provided in the first and second session, while the practical aspect was given in the third and fourth session. The first two sessions covered among many other topics: purpose of urostomy, characteristics of normal stoma, complications warning signs, importance of adherence to medical regimen and follow up visits...etc. On the other hand, the third and fourth practical sessions covered the following items: evacuation and cleansing of the pouch, measuring of stoma size, changing the appliance and peristomal skin care. These instructional sessions further were supported by teaching media such as booklet, demonstration and redemonstration. While, patients in the control group received routine hospital care.

At the beginning of each session, the research investigator reinforce instructions that were given in the prior sessions to ensure that the previous instructions had been grasped. At the end of each instructional session a flyer containing what have been instructed was given to each patient in the study group and upon completion of all instructional sessions the researcher obtain patient's contact number in order to arrange for the follow up visit for the purpose of the second post intervention assessment. Nevertheless, forty eight hours postoperatively, the researcher collected baseline data pertinent to Stoma Self-efficacy Scale via a structured interview and before the patient is discharged from the hospital as well as one month postoperatively, the first and the second post intervention assessment were performed utilizing the same tool.

Data were tabulated, computed and analyzed using Statistical Package for the Social Science (SPSS) program version 28 (IBM, 2021).

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Results

Table (1) shows that the control and the study groups were comparable in relation to the personal background information, furthermore, the participants were predominantly males (78.1% & 87.5%) in both groups and about two thirds (62.5%) of the control and study groups were over sixty years old with a mean age of (62.8 ± 10.0). With reference to medical background information as shown in table (2), the control and the study groups were almost comparable in relation to body mass index, medical and family history.

As for the statistical analysis related to research hypothesis table (3) revealed a significant difference between the control and the study groups on the variable of mean stoma self-efficacy scores in the first post intervention assessment (T-test= 6.897, P value = .0001). Whereas, the mean scores for subjects in the study group were significantly higher than the mean scores for subjects in the control group (46.34±8.66 Vs. 33.50±6.00). It is interesting to note that, the first post intervention stoma self-efficacy mean scores for subjects in both groups were almost comparable (29.66**±** 6.48 and 27.75**±** 6.86, respectively), moreover, there is no statistical significant difference between the same two groups on the variable of pre intervention stoma self-efficacy (T-test= 1.142, P value = .258) respectively.

The same table delineated that, though, the pre intervention stoma care self-efficacy for both groups were almost comparable (18.8±0.4 and 16.8±0.39, respectively), the first post intervention stoma care self-efficacy of subjects in the study group increased and exceeded, significantly, the mean stoma care self-efficacy scores of subjects in the control group (28.6± 0.68 Vs. 19.0± 0.36).

Nevertheless, table (3) illustrated that the pre intervention mean social self-efficacy scores were lower for the subjects in the study group than for subjects in the control group (8.9±0.76 Vs. 12.8± 0.68), the first post intervention social self-efficacy of subjects in the study group increased and exceeded, significantly, the mean social self-efficacy scores of subjects in the control group in the first post intervention assessment (17.7± 0.7 Vs. 14.5± 0.65). Moreover, the first post intervention standard deviation for both groups are not comparable, that is, marked differences existed between the groups related to the variability of scores.

Statistical analysis and research hypothesis, revealed also a significant difference between the control and study groups on the variable of mean stoma self-efficacy scores in the second post intervention assessment (T-test=7.819, P-value= .0001), where, the mean scores for subjects in the study group were significantly higher than those for the control group (50.88± 9.36 Vs. 35.19± 6.42) as shown in table (3). It is worth noticing that, the second post intervention stoma care self-efficacy mean scores for subjects in the

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study group were significantly higher than the post-test mean scores for subjects in the control group (31.1±0.69 Vs. 19.1±0.47).

The same table additionally delineated that, the second post intervention social self-efficacy of subjects in the study group increased and exceeded, significantly, the second post intervention social self-efficacy scores of subjects in the control group (19.7± 0.69 Vs. 16± 0.77). Moreover, the second post intervention standard deviation for both groups are not comparable, that is, marked differences existed between the groups related to the variability of scores. It is apparent from the figure (1) that, there were an improvement in stoma self-efficacy scores in the control and study groups along four consecutive weeks of intervention, however, the obvious improvement was in favor of the subjects receiving nursing instructions.

DISCUSSION

The current study highlighted that, the overwhelming majority of the studied subjects are males, and about two thirds are over sixty years old. These findings were supported with a study conducted by Wulff-Burchfield et al., (2021) as they denoted that, the majority of their studied subjects were predominantly males. It is congruent also with Zhou et al., (2019) study titled the ''effect of ostomy care team intervention on patients with ileal conduit'' they reported that, the vast majority of the control and study groups were males, as well.

Pointing to marital status in the current study, the majority of the studied subjects are married. These results are congruent with studies conducted by Mossanen et al., (2018), Jung et al., (2020) and Wulff-Burchfield et al., (2021) all these studies reported that the number of married couples was overwhelming. Concerning employment status, less than half of the sample are retired. This result is consistent with Jung et al., (2020) who noticed that, more than two-thirds of their studied subjects were retired. Regarding the place of residence, the majority of the studied subjects predominantly came from rural areas. These results are similar to the findings of Mahdy et al., (2018) who showed that, about two-thirds of the study participants came from rural areas, this is confirmed with the fact that Egypt has many rural areas which were considered an endemic areas of Schistosomal infection before the Schistosomiasis eradication programs in Egypt (Amin, Kobaisi and Samir, 2019). Additionally, Cairo University Hospital is considered one of the largest hospitals and are close to most of rural areas in Giza and its suburbs.

The above mentioned findings could be linked to what was mentioned in the literature which showed that, more than seventy percent of people with bladder cancer are older than sixty-five years which is the time of being retired, moreover, males are four times more likely to develop bladder cancer than females (Doherty, 2021). Subsequentially, it could be explained partially in light of the fact that, male hormones make men more

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susceptible to develop bladder cancer than women (Gil et al., 2019). In addition, smoking which is more prevalent among men than women in Egypt and it is considered the most common risk factor for developing bladder cancer among Egyptian males (Mounir, 2021).

Regarding educational level, about two-thirds of the sample can't read and write. As it is expected this result differs from the results of many other studies that were conducted in other countries and places which mentioned that almost half of the sample have middle and high education Zhou et al., (2019) and Jung et al., (2020). The finding could be interpreted in light of the fact that the majority the studied subjects came from rural areas which doesn't consider education a top priority. Indeed, the Central Agency for Public Mobilization and Statistics in Egypt issued a report in 2021 indicating that, "illiteracy rates in rural areas stood at thirty-two percent compared to urban areas, which accounted for seventeen percent of illiteracy rates.

Referring to BMI it was clear that, about half of the control group and half of the study group are overweight. This finding is supported by Cliford et al., (2018) who documented that, median BMI of their studied subjects was 26.6. However, this finding is inconsistent with Zhou et al., (2019), as they denoted that the mean BMI for the control and study groups fall within normal weight. This finding is compatible likewise, with the initiative “100 Million Health” survey in Egypt in (2019) which reported that almost half of the Egyptian population suffer from obesity that resulted from an unhealthy lifestyle (Aboulghate et al., 2021). On the other hand, inconsistency between the current study finding and the previously mention study could be interpreted in light of the fact that the other study was conducted on different samples and other countries.

The findings of the current study revealed that, about one-third of both groups had controlled hypertension as well as controlled diabetes. These results are congruent with previous studies which confirmed the existence of a positive relationship between high blood pressure and BMI and the risk of bladder cancer Teleka et al., (2021). The factor that may be responsible for this finding is that the majority of the subjects in this study are over sixty years and it is known fact that as people age, the incidence of chronic diseases increases (Aliouche, 2022).

This finding could be explained well in light of the fact that most of the participants in this study receive treatment to control their blood glucose level. Numerous research studies have found a relationship between taking oral anti-diabetic medications and the risk of bladder cancer (Yan et al., 2018; Teleka et al., (2021). Another plausible factor that might contributed to increased risk of bladder cancer among participants is the fact that diabetes is renowned as a risk factor for the progression of bladder cancer and the risk increases when doses of oral anti-diabetic medication increases (United States Food and Drug Administration, 2016).

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The current study findings empirically reported that, there was a significant differences between the control and the study group on the variable of total stoma self-efficacy mean scores in the first and second post intervention assessments which supports the research hypothesis. Several factors may have relevance to this observed improvement in self-efficacy. The main and the most important factor belongs to the four sources of self-efficacy as cited by Bandura, (1997) which are; mastery experiences, vicarious experiences, verbal persuasion and emotional as well as physiological states. These four sources are operationalized in the current study as follows, having a success, for example, in mastering stoma care self-efficacy surely build patient's self belief in the area of managing his ileal conduit. Beside, observing the researcher which is consider a role model in this situation raises the patient's belief that he too possess the capabilities to master the activities needed for success in that area. Verbal encouragement by the researcher definitely strengthen the patient's belief that he have what it takes to succeed. All these activities on the part of the patient and researcher led to increased positive emotions that boasted patient confidence in his own skills.

Another explicable factor that might partially account for this finding is the contents of the instructional sessions, methods of implementing them and factors related to the patient himself. Certainly, the time and attention that the patient received - even in an indirect way - from participation in the research as well as the researcher spending some time with him during the instructional sessions kept the patient encouraged and had some enthusiasm in getting better might partially account for this finding. Adding to this is the individuality of the instructional sessions which translated the researcher's interest in the patient, as well as reflected on maintaining confidentiality for the patient, consequentially, the patient has the opportunity to express freely own needs, rights and responsibilities which assisted the researcher to achieve patients' unique necessity.

A third possible factor that might provide explanation for this finding is the simplified and concise information, which was given in plain and simple language and supported by many pictures, in addition to, handing each participant in the study group a copy of the instruction booklet. Moreover, strategies used in the instructions that centered on enhancing patient's skills such as demonstration and redemonstration might also account for this finding. All of these factors together may have contributed to higher scores of self-efficacy among the study group.

The findings of the current study are in line with other studies conducted by Krouse, et al., (2016) and Seo, (2019) who sketched that, there was a statistical significant differences in post intervention self-efficacy mean scores among the control and the study group. The consistency between the findings can be traced back to self-efficacy resources suggested by Bandura, as self-efficacy can improve over time by increasing patients information and skills that help patients to experience stoma care independently. In fact, some psychologists rate self-efficacy above talent in the recipe for success.

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Coming up to mean stoma care self-efficacy, the current study reported that, the first and the second post intervention mean scores for subjects in the study group were significantly higher than the first and the second post intervention mean scores for the subjects in the control group. These findings were agreeable with the study conducted by Zhou et al., (2019) who reported almost the same results. Additionally it was harmonic with Pate, Powers, Coffman and Morton, study in (2022) titled "improving self-efficacy of patients with a new ostomy with written education materials" who mentioned that, there was a significant increase in mean post-education stoma care self-efficacy and the increment continue until the patient discharged from the hospital. This could be interpreted in light of the fact that, initiating health education preoperatively and supplementing it with standardized, health literate written materials improved patients' stoma self-efficacy.

With regard to social self-efficacy, surprisingly, though the pre intervention mean social self-efficacy scores for the subjects in the study group were lower than those for subjects in the control group, the post-test mean social self-efficacy scores of subjects in the study group increased and exceeded, significantly, the mean social self-efficacy scores of subjects in the control group in the first and second post interventions respectively. This finding can be attributed to the simple explanation provided - by the researcher - within the context of the instructional sessions about the nature of the disease, how to prevent leakage, how to deal with the urostomy outside home, in addition to, how it could be hidden under clothes which consequentially doesn't affect the nature of the preferable clothes. All this information hopefully contributed to higher social self-efficacy scores between the study groups. Furthermore, patient's expression of how to deal with social problems that may occur as a result of the urostomy while giving instructional sessions, in addition to the involvement of those responsible for patient care in the instructional sessions, provided psychological support to the patient which prompted the increment in social self-efficacy scores for participants in the study group. This finding are consistent with the study conducted by Zhou et al., (2019) who noted that, the post-test social self-efficacy for subjects in the study group were significantly higher than the post-test social self-efficacy for subjects in the control group.

CONCLUSION

Based on the current study findings it can be concluded that providing nursing instructions in the form of information and practical sessions in the pre and immediate postoperative period by the nurse may put the patients in a position to understand future changes that might occur as a result of urostomy and be ready for it, improve stoma self-care capabilities, reduce anticipated uro-stomal complications and improve self-efficacy, which empower the patients to control their new lives. Indicating that improving self-efficacy,

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patients may be more effective in self-management of their ostomy and better prepared to care for themselves upon discharge from the hospital.

Recommendations

Replication of the study using a larger probability sample acquired from different geographical areas in Egypt.

A longitudinal study should be designed over a longer period of time to determine the long term effect of nursing instructions on self-efficacy.

Acknowledgments

We are grateful to God for the good health and wellbeing that were necessary to complete this work. Our deep appreciation and thanks also goes to all medical staff, nurses and patients in the Hospital of the study for their co-operation and positive response. Moreover, authors have no conflict of interest whatsoever related to the current study.

Table 1: Comparison of Frequency, Percentage Distribution among the Control and Study Groups in Relation to Personal Background Information (N= 64)

Values Variables	Control group (n=32)		Study group (n=32)		x^2	p-value
	No.	%	No.	%		
Age						
41-60	12	37.5	12	37.5	0	1
61-80	20	62.5	20	62.5		
$\bar{x} \pm SD$	62.8 ± 10.0		62.8 ± 10.0			
Gender						
Male	25	78.1	28	87.5	0.98	0.32
Female	7	21.9	4	12.5		
Marital status						
Married	27	84.4	28	87.5	1.6	0.64
Single	1	3.1	1	3.1		
Widow	4	12.5	2	6.3		
Divorced	0	0	1	3.1		
Level of education						
Can't read and write	22	68.8	20	62.5	3.2	0.51
Can read and write	10	31.3	12	37.5		
Employment status						
Housewife	7	21.9	3	9.4	1.8	0.38
Employed	12	37.5	14	43.8		
Retired	13	40.6	15	46.9		
Place of residency						
Urban	5	15.6	7	21.9	0.41	0.52
Rural	27	84.4	25	78.1		
Health insurance						
No	29	90.6	28	87.5	0.16	0.68
Yes	3	9.4	4	12.5		

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Table 2: Comparison of Frequency, Percentage Distribution among the Control and Study Groups in Relation to Medical Background Information (N= 64)

Values Variables	Control group (n=32)		Study group (n=32)		x^2	P value
	No.	%	No.	%		
Body Mass Index (BMI)						
Normal	8	25	9	28.1	2.3	0.5
Over weight	15	46.9	18	56.3		
Grade 1 obesity	6	18.8	2	6.3		
Grade 2 obesity	3	9.4	3	9.4		
x̄± SD	27.6 ± 4.4		26.8 ± 4.2			
Medical history*						
No	15	46.9	20	62.5	1.77	0.41
Controlled HTN	11	34.4	8	25		
Controlled D.M	9	28.1	6	18.8		
Family history						
No	24	75	26	81.3	0.36	0.54
Yes	8	25	6	18.8		

*The total number is different from the number of the subjects, as the same patient may have more than one co-morbidity at the same time.

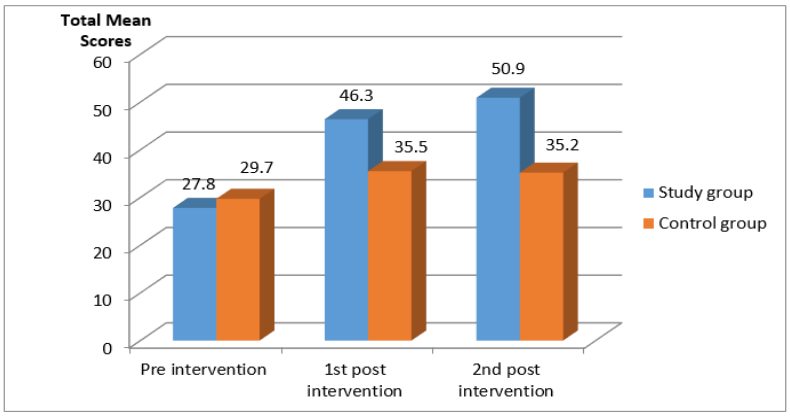
Table 3: Comparison of Mean Scores for Stoma Self-Efficacy among the Control and Study Group at Three Times of Observation (N=64)

Values / Variables	Pre intervention assessment		1st post intervention assessment		2nd post intervention assessment	
	Control x̄ ± SD	Study x̄ ± SD	Control x̄ ± SD	Study x̄ ± SD	Control x̄ ± SD	Study x̄ ± SD
A- Stoma Care Self-Efficacy Score= 36						
Not Confident	6.8±0.15	6.8±0.14	8.1±0.18	6.0±0.11	8.0±0.16	6.3±0.19
Fairly Confident	10.0± 0.13	12.0± 0.1	10.9± 0.06	10.1± 0.18	11.1±0.10	11.0±0.13
Highly confident	0.0±0.0	0.0±0.0	0.0±0.0	12.4± 0.15	0.0±0.0	13.6± 0.15
Mean Stoma Care Self-Efficacy	16.8± 0.39	18.8± 0.4	19.0± 0.36	28.6± 0.68	19.1±0.47	31.1±0.69
T-test	20.2		70.5		81.3	
p-value	0.0001*		0.0001*		0.00001*	
B- Social Self-Efficacy Score= 27						
Not Confident	2.7± 0.17	1.8± 0.23	3.4± 0.17	4.1± 0.17	3.7± 0.21	4.5± 0.21
Fairly Confident	4.3± 0.22	2.4± 0.17	4.7± 0.18	5.8± 0.21	5.5± 0.24	6.5± 0.18
Highly confident	5.7± 0.08	4.1± 0.25	6.3± 0.12	7.7± 0.13	6.6± 0.17	8.6± 0.18
Mean Social Self-Efficacy	12.8± 0.68	8.9± 0.76	14.5± 0.65	17.7± 0.7	16± 0.77	19.7± 0.69
T-test	21.6		18.9		20.2	
P value	0.0001*		0.0001*		0.0001*	
Total mean scores for Stoma Self-Efficacy Total Score= 63	29.66 ± 6.48	27.75± 6.86	33.50± 6.00	46.34± 8.66	35.19± 6.42	50.88± 9.36
T-test	1.142		6.897		7.819	
p-value	.258		.0001*		.0001*	

*Significant at p-value<0.05.

Xi'an Shiyou Daxue Xuebao (Ziran Kexue Ban)/
Journal of Xi'an Shiyou University, Natural Sciences Edition
ISSN: 1673-064X
E-Publication: Online Open Access
Vol: 65 Issue 12 | 2022
DOI 10.17605/OSF.IO/DVQ79

Figure 1: Stoma Self Efficacy Total Mean Scores of the Study and Control Groups at Three Times of Observations (N=64)



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ISSN: 1673-064X
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Vol: 65 Issue 12 | 2022
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