

Assessment of Embarrassments to Safety Aspects of Life of Patients after Performing Colostomy Operations, in Two Egyptian Societies

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Abstract:

Background: Stoma operations have been shown to be associated with a lot of body life style and emotional alterations which affect the safety aspects of life of patients after performing colostomy. Colostomies or ileostomies are performed to people of different ages ranging from infants to the elderly for different causes. Whether the stoma is permanent or temporary, it is difficult to adjust patients and their partners. This study is carried out among those who had stoma, and focused on their understanding the frustrations and fears of the patients. **Objectives:** The primary aim of this study was to study patients' perspective positive aspects of practicing colostomy. The study will also help to answer the stoma patients' worrying questions and identify the most frequent problems that affect their safety aspects of life negatively. **Methods:** The study enrolled 75 adults and old adult patients who performed colostomy operation. They included both sexes attending outpatient clinics of the two study settings. Patients were taken from two hospitals in Alexandria and one hospital in El-Menia. A structured questionnaire interview was done to obtain information on patients. Stoma examination was done to assess the lumen mucosa and its functions and the skin around the stoma. Altered sexual life and its psychological responses were assessed by asking the patients directly. **Results:** The results revealed that half of the patients (50.8%) were old adults (≥ 40 years) with mean score 37.81 ± 13.13 . Married patients constituted 54% while unmarried were 29 (46%) with mean score of 2.38 ± 0.02 . Illiterate and read and write patients collectively represented half of the patients (30.2% and 20.6% respectively). The relationship between diagnosis, types of colostomy and pouching system and gender was not statistically significant. Similarly, the relationship between diagnosis, types of colostomy pouching system, educational level and setting was not statistically significant. All aspects of sexual & psychological alteration and gender showed highly statistically significant difference. **Conclusion:** 53.3% of ostomy operations were done for male cancer and 46.7% for females. Postoperative sexual dysfunction was common in both sexes due to presence of stoma, stress, difficulty to reach orgasm, dryness, erectile dysfunction and infertility. These alterations lead to a negative impact on patients' safety and quality of life.

Keywords: Assessment, colostomy, operations, old adults, safety life style, Egyptian societies.

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INTRODUCTION

Colostomy is a surgically created opening in the abdominal wall through which digested food passes. It may be temporary until the bowel rests or heals, or it may be permanent, when the disease affects the end of the colon or rectum.⁽¹⁾ Colostomy is a life saving surgery that enables the patient to enjoy a full range of activities. Thousands of people annually undergo ostomy surgery for various reasons and return to their healthy functioning lifestyle.⁽²⁾

Creation of a colostomy exerts a profound impact on the patient's life with physical disfigurement, loss of bodily functions and change in personal hygiene.⁽³⁻⁵⁾ Ostomy patients usually suffer from many alterations associated with presence of the stoma itself. These alterations could be resulting from poor care of those patients, or life-style and

emotional disturbances which usually affect the quality of life and safety of the patients. Furthermore, the trans-cultural aspect plays a very serious role in occurrences of these complications.^(6,7) A study of operative risks in patients with colorectal cancer, reported that the placement of a diverting colostomy yielded a 13% mortality and that most colostomies were performed in the emergency settings.⁽⁸⁾

The number and proportion of older patients undergoing surgical procedures are increasing as a result of increased life expectancy.^(8,9) Older patients have a natural physiological decline that may impair the ability to compensate appropriately for the added stress of complicated surgery. However, the presence of significant comorbid conditions is the most important determinant of surgical outcome.⁽¹⁰⁾ Clearly, surgeons will increasingly be confronted with older patients undergoing operations that involve

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the consideration of creating a fecal ostomy with more older patients being subject to ostomies. It is important to evaluate the risk of these procedures in patients of advanced age.⁽¹¹⁾

Although patients were managing their colostomies, including males and females with a median age of 67 years,⁽¹²⁾ a study in Tucson, Arizona, showed that three hundred and seven (178 males, 129 females) underwent colostomy closure over 5 years period. The mean age was 52 years and 27% of the patients were 70 years old or older. An increased morbidity was associated with this procedure in patients 70 years or older. This necessitates careful preoperative assessment.⁽¹³⁾ Patients aged 70 years and older undergo proportionally more emergency and permanent fecal ostomy procedures than younger patients, with longer hospital stays. More postoperative complications, and higher mortality rates occurred among this age group. So, older

patients should be treated in a similar way to younger patients in term of subsequent ostomy takedown, if an acceptable operative risk is present.⁽¹⁴⁾ Now, improvement in preoperative care, anesthetic techniques, and surgical procedures have permitted many operations that were once limited to younger patients to be offered to patients of advanced age.⁽¹⁵⁾

In planning reversal procedures, the quality of life and social impairments associated with an ostomy must be considered for patients who have difficulties in proper managing stoma, which affect their psychological well being.⁽¹⁶⁾ Thus, the caregivers must be trained on how they can manage those patients safely minimizing their complaints through a holistic and comprehensive plan of care. To integrate with the community centers, as well as to construct guidelines for stoma patients to fulfill the arising need or their partners' needs for considering safety.^(17,18)

AIM OF THE STUDY:

The main aim of the study was to assess the patient's perspective positive aspects of practicing colostomy through:

1. Assessment of the main causes of colostomy operations.
2. Assessment of post operative problems and sexual dysfunctions.
3. Assessment of embarrassments to practice colostomy.

SUBJECTS AND METHODS

A prospective study was carried out in surgical outpatient clinics of three hospitals in two different governorates, namely, Alexandria Main University Hospital, El-Moassat Hospital and El-Menia University Hospital. The study included a sample of 75 adult and old adult colostomy patients, of both sexes. Their age ranged from 20 to 70 years. The participants were selected randomly from patients at least one month postoperative. The study period extended for two years. Data were collected using a structured questionnaire, specially designed

assessment sheets and personal interview with the patients who performed colostomy.

Data collection were divided into two parts.

A- **Part one:** included socio-demographic data such as age, sex, marital status, education level and area of residence.

B- **Part two:** included examination of stoma for presence of inflammation, bleeding, stenosis, herniation, prolapse, ulceration and necrosis. Bowel observation was also carried for diarrhea, constipation, gases, leakage, abdominal cramps and presence of odor. Skin around the stoma was assessed for presence of itching, irritation, ulceration, infection and folliculitis.

Psychological response and sexual alterations were assessed by asking the patients directly about the problems related to sex such as pain during intercourse, erectile dysfunction, dryness, as well as psychological response to sexual practices

as fear, anxiety or avoidance of sexual practices.

The preparatory phase of the study included obtaining permissions to conduct the study from the authorities of different study settings and obtaining patient approval for participation. In addition, a pilot study was conducted to ensure applicability. Ten patients were included. Each sheet was evaluated and tested for reliability and the modifications were done accordingly. The collected data were processed using the statistical analysis (SPSS) version 16 and Minitab 15.

Constraints that faced the authors included the following: seven patients refused to complete the study and five patients died before completion of the study leaving 63 patients out of the 75. The period of interview was rather longer per patient (20-45 minutes) and sometime it was done in two visits. Data collection from 17 patients was completed by home visits. Lastly, training of the assisting staff

for the accuracy of data collection was an additional stress on the researchers who interviewed patients by themselves.

RESULTS

The total number of observed cases was 63 patients, distributed as follows: 35 patients from Alexandria Main University Hospital and El-Moassat Hospital and 28 patients from El-Menia University Hospital.

Table (1) shows the socio-demographic characteristics of the study sample. More than half (50.8%) were old adults (40 years and more) with a mean of $37.81 \pm SD 13.126$ years. All males (54%) were married with a mean of 2.38 ± 0.023 SD. Females accounted for 46% of the whole study sample. Illiterate and read & write patients collectively contributed to more than half of the study sample (30.2% + 20.6%, respectively), with total mean of 2.81 ± 1.35 SD. Those from the two Alexandria hospitals were 55.6% while those from El-Menia Hospital constituted

44.4% of the patients, with total mean of 1.43 ± 0.530 SD \pm .

Table 1: Socio-demographic characteristics of the studied sample.

Socio-demographic characteristics	n=63	%	Mean \pm SD
Age in years			
20-	13	20.6	
30-	18	28.6	37.81 \pm 13.126
40 +	32	50.8	
Gender			
Male	34	54	1.46 \pm 0.502
Female	29	46	
Marital status			
Married	34	54	2.38 \pm 0.023
Unmarried	29	46	
Educational level			
Illiterate	19	30.16	
Read & write	13	20.63	
Basic education	12	19.05	2.81 \pm 1.354
Secondary level	10	15.87	
University	9	14.29	
Setting			
Alexandria University & Al-moaassat hospitals	35	55.6	1.43 \pm 0.530
El-Menia University Hospital	28	44.4	

SD = Standard deviation

Table (2) illustrates the distribution of the studied sample according to diagnostic items and the gender of the patients. The table shows that 53.3% males and 46.7% females had cancer. Both inflammatory bowel disease and obstruction were higher among males valuing 54.5% and 66.7% versus 45.5% and 33.3% among females respectively. Temporary colostomy was more dominant (64%) among males, while

permanent colostomy was the most dominant (52.6%) among females. As regards pouching systems, about 1-6 folds of males mentioned presence of pouching more than females. It is clearly noticed that there were no statistically significant differences between the diagnoses ($\chi^2 = 0.842$, $P < 0.05$), types of colostomy ($\chi^2 = 1.679$, $P < 0.05$), pouching system, ($\chi^2 = 1.027$, $P < 0.05$) for each item and gender.

Table 2: Distribution of study sample according to diagnostic items and gender.

Diagnostic items	Gender				Total n=63	χ^2
	Male		Female			
	No.	%	No.	%		
1- Diagnoses						
Cancer	16	53.3	14	46.7	30	0.842
Inflammatory bowel disease	6	54.5	5	45.5	11	
Obstruction	4	66.7	2	33.3	6	
Trauma & rupture	6	50	6	50	12	
Other	2	50	2	50	4	
2- Types of colostomy						
Temporary	16	64	9	36	25	1.679
Permanent	18	47.4	20	52.6	38	
3- Pouching system						
Yes	16	61.5	10	38.5	26	1.027
No	18	48.6	19	51.4	37	

P < 0.05

Table (3) illustrates the distribution of the study sample according to diagnostic items and educational level in relation to the setting offering the care. It was observed that 60% from Alexandria and 40% from El-Menia had cancer. Both inflammatory bowel disease and obstruction were higher in Alexandria hospitals 64% and 83% respectively while trauma, rupture and other diagnoses were higher in El-Menia Hospital, valuing 67% and 75% respectively. Temporary colostomy dominates among El-Menia patients (52%) while permanent colostomy dominates among Alexandria patients (61%).

Regarding pouching system, Alexandria patients experienced pouching (84.6%) five times more than those of El-Menia (15.4%). In contrary, El-Menia patients did not experience pouching system (1.85 folds more than Alexandria patients. Both secondary and read & write patients percentages were higher in Alexandria 80% and 61.5% respectively. Illiterate and University level of education dominates among El-Menia patients (52.6% and 55.6%, respectively). Table (3) showed that there was a statistical significant difference between the two settings, ($\chi^2 = 16.819$, P< 0.05) regarding the pouching system.

Table 3: Distribution of study sample according to diagnostic items, educational level and setting.

Diagnostic items and educational level	Setting				Total n=63	χ^2
	Alexandria		El-Menia			
	No.	%	No.	%		
1- Diagnosis						
Cancer	18	60	12	40	30	7.994
Inflammatory bowel disease	7	64	4	36	11	
Obstruction	5	83	1	17	6	
Trauma & rupture	4	33	8	67	12	
Other	1	25	3	75	4	
2- Types of colostomy						
Temporary	12	48	13	52	25	2.815
Permanent	23	61	15	39	38	
3- Pouching system						
Yes	22	84.6	4	15.4	26	16.819*
No	13	35.1	24	64.9	37	
4- Educational level						
Illiterate	9	47.4	10	52.6	19	8.354
Read & write	8	61.5	5	38.5	13	
Basic education	6	50	6	50	12	
Secondary level	8	80	2	20	10	
University	4	44.4	5	55.6	9	

P < 0.05 * Significant

Table 4 reveals that patients with cancer and temporary colostomy counted 36.7% and those with cancer and permanent were 63.3%. Patients with cancer, but without pouching system contributed to 60%. The results shown in

table (4) indicated that, there are no statistical significant differences between the diagnosis and both pouching system and types of colostomy among the studied patients ($\chi^2 = 2.386$, P= 0.05, and $\chi^2 = 9.542$, P=0.05, respectively).

Table 4: Distribution of study sample by diagnosis and pouching system and type of colostomy.

Diagnosis	Pouching system				Total n=63	χ^2	Type of colostomy				Total n=63	χ^2
	Yes (n=26)		No (n=37)				Temporary		Permanent			
	No.	%	No.	%			No.	%	No.	%		
Cancer	1	40	18	60	30	11	36.7	19	63.3	30		
Inflammatory bowel disease	5	45.5	6	54.5	11	4	36.4	7	63.6	11	9.542	
Obstruction	3	50	3	50	6	4	66.7	2	33.3	6		
Trauma & rupture	5	42	7	58	12	3	25	9	75	12		
Other	1	25	3	75	4	3	75	1	25	4		

P < 0.05

Table 5 shows that most of Alexandria patients (84.6%) used pouching system compared to only 15.4% of El-Menia patients. On the contrary, 64.9% of El-Menia patients had not practiced pouching system. The study revealed highly statistical significant differences (N2 = 0.000, P < 0.05).

Table 5: The correlations of study sample according to pouching system and setting.

Pouching system	Setting				Total		Pearson χ^2 asyp sig. (2 index) N ₂
	Alexandria		El-Menia		No.	%	
	No.	%	No.	%			
Yes	22	84.6	4	15.4	26	41.27	0.000*
No	13	35.1	24	64.9	37	58.73	

* = Significant (P < 0.05)

Table (6) illustrates the distribution of patients regarding to their gender and sexual act and psychological alteration. It is observed that sense of sadness and depression was common among 42.6% males and 57.4% females. The difference was highly statistically significant (N² = 0.000, P < 0.05). While males complaining from anxiety about sexual practices constituted one third among males (33.3%) and two thirds (66.7%)

among females, showing highly statistically significant difference between the two genders ($N^2 = 0.003, P < 0.05$).

The avoidance of sexual relations was a little bit higher among females (52.6%) than among males (47.4%). There was a statistically significant difference between the

two studied genders ($N^2 = 0.013, P < 0.05$).

Sexual problems were more among male patients (55.8%) than among females (44.2%), showing highly statistically significant differences ($N^2 = 0.063, P < 0.05$). Similar percentage (50%) of the both genders refused to speak about this topic.

Table 6: The correlation of study sample according to sexual and psychological alterations and the gender

Sexual & psychological alterations	Male n=34		Female N=29		Total 63		Sign. N_2
	No.	%	No.	%	No.	%	
Sense of sadness & depression	20	42.6	27	57.4	47	74.6	0.000*
Anxiety about sexual practices	10	33.3	20	66.7	30	47.6	0.003*
Avoidance of sexual relations	9	47.4	10	52.6	19	30.2	0.013*
Sexual problems	24	55.8	19	44.2	43	68.3	0.063
Refused to speak about this topic	10	50	10	50	20	31.75	0.089

* Significant ($p < 0.05$)

1- Distribution of patients according to frequency of changing of stoma bags

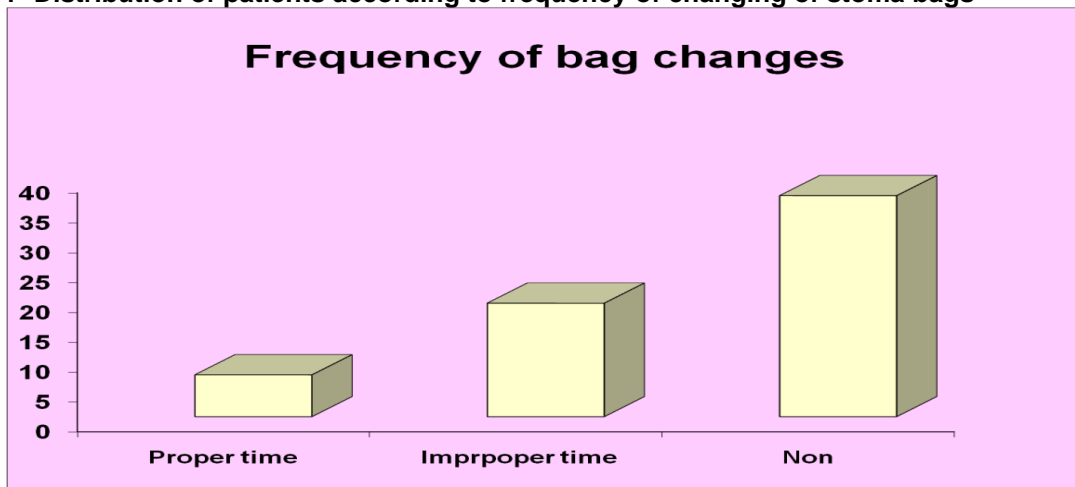


Figure 1 showed that about half of the sample (>40%) never used stoma bags while 25% were changing the bags at improper time and about 10% of them were changing the bags at proper time.

DISCUSSION

Ostomy is an artificial communication between organs or viscera and external evacuation of the intestinal contents. According to the cause of disease, stomas can be temporary or permanent. Most patients with stoma have colorectal cancer.^(19,20)

Socio-demographic characteristics of the study sample are shown in table 1. More than half (50.8%) of the patients were old adults (≥ 40 years). Several studies are in accordance with these findings, showing that the majority of adult stoma patients due to cancer or intestinal TB were aged 45-55 years or more⁽²¹⁾ and that there is an increased number and proportion of older patients undergoing surgical procedures.^(8,9,13) The study comprised 54% of males and 46% of females (Alexandria and El-Menia). The median age of males and females with was 67 years, was mentioned in a study of positive and negative aspects of colostomy irrigation.⁽¹²⁾

The present study showed, that 53.3%

males and 46.7% females were diagnosed as having cancer, while both inflammatory bowel disease and obstruction dominates among males (Table 2). Undergoing operative intervention for colorectal cancer was reported in elderly patients.^(8,22) There was a statistically significant difference between the diagnosis, types of colostomy and pouching system with the different gender. Similar, findings were reported in many studies, with more older patients being subjected to ostomies.^(11,22,23)

The present study clearly observed that 84.6% of Alexandria patients used pouching system, versus only 15.4% of El-Menia patients (Table 5). The study revealed highly significant differences between the two settings. Litterature review revealed that the performance of colostomies in emergency settings is necessary⁽⁸⁾ and ensured that correct information given empathetically and more effective care are the best ways to lead

patients through experience of living with the stoma.^(7,24)

As regards the stoma complications, this study postulated that 25% of the patients used stoma bags (Figure 1), but were changing the bags at improper time. It was reported that older patients had difficulties in properly managing stoma bags; and that the bags affect their psychological well being.⁽¹⁶⁾ Figure (3) postulates stoma complications as stenosis, bleeding and retractions (14%, 12% and 10% respectively). Most studies mentioned that, although nurses and enterostomal therapists may be more familiar with the practical and stomal problems, the surgeons still neglect this aspect among stoma patients. They should have answers to every question about the operation and its results.⁽²⁵⁾

The present study illustrates that sexual act and psychological alteration of colostomy patients varies significantly due to gender. Males showed more sense of

sadness and depression (42.6%) while anxiety about sexual practices was higher among females (66.7%), as well as avoidance of sexual relations (52.6%). Also 50% of each gender refused to discuss the sexual problems. The literatures mentioned that all the psychological problems, so far also affect sexual function. For instance, impotence and decreased libido may be a symptom of depression rather than the sequel of the operation.^(26,27) Stoma individuals face real and symbolic losses, which bring about negative feelings in their relationships. Particularly, the mutilation and social disrepute make it difficult for patients to face this situation which can affect lifestyle and their safety.⁽²⁶⁾ There is a clear-cut need for sexual education of the health professional.⁽²⁸⁾

CONCLUSION

The study concluded that a significant percentage of ostomy operations were due to cancer (53.3% males and 46% female). Postoperative sexual dysfunction is common among both sexes due to presence of stoma,

stress and erectile dysfunction. The trans-cultural aspect was in the form of embarrassment to expressing any problems related to sexual practices. This study will help in making alterations that lead to change in negative impacts on patients' safety and quality of life. As well, it will reduce stoma problems that affect their sexual practices and cause multiple physiological and psychological components that alter the patients' well-being.

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