



Original Research Article

An Exploratory Study to Assess the Physical, Psychological Problems and Coping Mechanisms in Colostomy Patients in Selected Hospital of Jaipur City

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ABSTRACT

Introduction: The population of colorectal cancer survivors is growing day by day. Cancer that originates in the colon or rectum may be called colon cancer, rectal cancer, or colorectal cancer. Colon cancer is the term most commonly used to refer to this type of cancer. Most (over 95%) colon cancers are adenocarcinomas that develop when a change (i.e., mutation) occurs in cell that line the wall of the colon or rectum.

A colostomy is surgical procedure that creates an artificial opening in the body. This opening is called a stoma (from the Greek word for 'mouth'). The stoma gives body a new way to get rid of its waste.

Materials & Methods: An exploratory study was conducted to assess the physical, psychological problems and coping mechanisms in colostomy patients in SMS hospital of Jaipur. A sample of twenty patients who underwent Colostomy in the selected setting and are on follow up for 3 months, are included. The patients were assessed longitudinally at seventh, fifteenth, and at three months interval post-surgery.

Results: The data revealed that, there is no significant improvement in the physical health status of colostomy patients even after 3 months of surgery. Colostomy patients who are between 18-35 years of age, male unmarried and not getting chemotherapy are mostly using 'problem focused' approach. Whereas "emotion focused" coping is used by patients who are above 35 years of age, married and getting chemotherapy. 'Problem focused' coping will hasten the recovery to the status of independence.

Conclusion: The study highlights the need for family interventional programs, which address the specific concerns related to health status and coping of the patients.

Key words: Psychological Problems, Colostomy & CCL.

INTRODUCTION

The large bowel is a leading site for cancers in developed countries whereas small bowel cancers are rare worldwide. The incidence rates of both large and small bowel cancer are low in India, and rectal cancer is more common than colon cancer.

The incidence rates of colon cancer in eight population registries vary from 3.7 to 0.7/100,000 among men and 3 to 0.4 per lakh among women. For rectal cancer the incidence rates range from 5.5 to 1.6 per lakh among men and 2.8 to 0 per lakh among women.

One intriguing observation is the occurrence of rectal cancer in young Indians. Rural incidence rates for large bowel cancer in India are approximately half of urban rates. Based on data from eight registries, we estimate that, the incidence of large bowel cancer in India is going to be 18,092 in women.

The women patients are more sensitive to the presence of a stoma, and it affects their quality of life much more than the male. Formation of a permanent stoma affects aspects of religious worship and adversely affects quality of life among who have Muslim religion as it interferes with their prayer rituals. So in these cases preoperative counseling, with the help of local religious authorities is recommended in the same way various coping mechanisms such as both avoidant (e.g. escape) and approach (e.g. confrontive) coping styles have been reported among survivors of various types of cancer including colostomy, and breast cancer (Jean comb, 2003).

Harisi R et al (2004), investigated the quality of life in 372 ostomates and non-ostomates having surgery following rectal cancer were included in this prospective study. Two groups those who underwent sphincter saving operation (64.51%), and those who underwent operation (35.49%) were compared for quality of life assessment. Compared to other studies, in this study it was found that colostomy did not affect quality of life significantly.

Approximately one third of patients who have colostomies for 10 years develop parastomal hernia, but only 10 percent of these require surgical intervention. Hernia may be embarrassing for the patient, thus exacerbating fears about the colostomy being visible. Herniation also can cause difficulties in adherence of appliances, resulting in leakage and skin problems. Abdominal support garments may help.

Bowel prolapsed through the stoma is most common in patients with transverse-loop colostomies. If not engorged, prolapsed can reduce spontaneously or be rolled back using cold pack. Surgical repair is required if there is danger of bowel ischaemia. Stenosis of the stoma causes pain and cramping and may be treated with manual dilatation, stool softeners, or surgery. Patients with colostomy also report phantom pain or rectal fullness, particularly after abdomino-perineal resection, and these sensations often do not respond well to analgesics.

Although patients frequently are concerned about their diets following colostomy, the general advice is to eat a varied, well-balanced diet, but to exercise moderation with foods that cause gas (e.g., beans, onions, excessive fiber). High-fiber foods such as dried fruit, nuts, or popcorn can cause bolus obstruction, but a moderate amount of fiber taken with an appropriate amount of water is advised to avoid constipation. Diarrhea is more common in patients with ileostomies and proximal colostomies, and patients may not appreciate that fluid outputs are normal in these cases because of the loss of water absorption from the colon. Adequate fluid replacement is necessary in these patients (Piwonka MA, 1999).

Colostomy patients have lot of problems, which may be psychological and emotional. Coping mechanisms are also different from person to person in addition manipulative behavior can be very frustrating to caregivers which has counter effect on the patient. Like Anger experienced post-operatively can be related to a new diagnosis, prolonged and complicated hospital stays, treatments, unknown, poor relationships with health care providers, and stress. Anxiety experienced post-operatively can be due to an actual or perceived threat to self-concept,

an actual or perceived loss of a significant other, a threat to one's role function, the unknown. Altered self-concept and change in body image experienced post-operatively can be related to colostomy surgery and the resultant loss of bowel control, and changed body appearance. Ineffective coping experienced post-operatively can be due to negative self-concept, disapproval by others, inadequate problem-solving, loss related grief, sudden change in life pattern, recent change in health, inadequate support systems, unanticipated stressful events, occurrence of several major events in a short period of time, unrealistic goals.

Depression experienced post-operatively can be due to stress, hopelessness, helplessness, lack of support systems, chronic illness chronic pain, palliative care diagnosis, extensive surgery, inadequate coping skills, separation from family, role changes or identity crisis.

Altered family processes can be related to the impact that ill family member can have on the family system. An illness, hospitalization, surgery, previous diagnoses, coping styles, culture can all place tremendous stress on a family and greatly interfere in keeping a family strong and united.

Hopelessness experienced post-operatively can be related to chronic illness, treatments (prolonged total parenteral nutrition), failing or deteriorating physiologic condition (prolonged pain, impaired body image), separation from significant others (inability to participate in work, social activities).

Objectives of study were: 1.) To assess the status of physical health of the patients having colostomy. 2.) To assess the status of psychological health of the patients having colostomy. 3.) To find out the coping mechanisms used by the patients having colostomy. 4.) To correlate status of physical health of colostomy patients with selected

variables. 5.) To correlate status of psychological health of colostomy patients with selected variables. 6.) To correlate coping mechanisms used by colostomy patients with selected variables.

MATERIALS & METHODS

An exploratory study was conducted to assess the physical, psychological problems and coping mechanisms in colostomy patients in SMS hospital of Jaipur city. A sample of twenty patients who underwent Colostomy in the SMS Govt. hospital and were on follow up for 3 months, were included between 10th February 2014 to 31st May 2014. The patients were assessed longitudinally at seventh, fifteenth, and at three months interval post-surgery using three tools which consist of “demographic and selected variables”, and two standardized tools “Short form health survey questionnaire” and “CCL coping check list”

RESULTS

Section I: Table 1: Frequency and Percentage distribution of respondents according to their characteristics.

Majority (75%) of the patients was between 18-45 years of age and 55% patients are between 18-35 years of age and mean age is 35.6 years with SD of 13.3 years. Majority (55%) of the patients was females and 45% are males. Majority (65%) of the patients studied up to the higher secondary. Thirty five percent are house wives, 30% are doing service, 20% are unemployed, 10% in agriculture, 5% are labor, Majority (70%) of the patients are married, while 30% are unmarried. All married are living with their spouse. Thirty percent of the spouses are unemployed, 29% are in service, and 21% are in agriculture followed by 14% in business. Out of 14 spouses 9 have studied up to the higher

secondary and five have studied above higher secondary. Forty percent of the patient's family income is less than rupees 5000 and 50% having in between rupees 5000-10000/- where as 5% have between rupees 10001-15000/- and above 15000/- each respectively. Sixty percent of the patients stay in joint family whereas 40% stay in nuclear family. Sixty percent of the patients have only one family caregiver, while 40% are having more than one family caregiver. Majority (55%) of the patients have up to two children whereas 45% have more than two children. Forty five percent of patients are staying in capital region and 55% in other areas. Majority (60%) of the patients live in urban area and 40% live in rural area. Majority (60%) of the patients are ill since 0-3 months whereas 30% of the patients are sick since 3-6 months. Fifty five percent of the patients are on chemotherapy and 45% are not.

Section B: Presentation of analysis and interpretation of data as per the objectives :-

- ❖ To assess the status of physical health of the patients having colostomy.

Table – 1 : Status of Physical Health of Patients at Different Time Intervals after Surgery. N=20

Time interval after surgery	Status of Physical Health		'P' Value
	Mean	SD	
7 days	9.0	2.2	0.06
15 day	10.3	2.5	
3 months	11.2	3.8	

(P value ≤ 0.05)

Minimum and maximum physical health score is 6 and 20 respectively. High score indicates good health status.

Data reveals as shown Table no.1 that mean physical health status in patients after 7 days of surgery is 9.0 (SD-2.2), after 15 days 10.3 (SD-3.8) and after 3 months 11.2 (SD-3.8). The difference between 7th and 15th day is not statistically significant. Hence it can be interpreted that status of

physical health is improving very slowly over a period of three months.

As shown in Table no. 2 that, mean physical health of patients between 18-35 years of age, is 7.5(SD-1.0) after 7 days, 9.2(SD-2.8) after 15 days and 13.5 (SD-4.8) after 3 months of surgery. Mean physical health in patients above 35 years of age, is 10.0(SD-2.3) after 7 days, 10.2(SD-2.4) after 15 days, 10.5(SD-4.1) after 3 months of surgery.

Mean physical health in males, is 8.8(SD-2.0) after 7 days, 10.5(SD-2.2) after 15 days and 14.4(SD-2.4) after 3 months of surgery. Mean physical health in females is 9.2(SD-2.7) after 7 days, 10.1(SD-3.1) after 15 days, 8.0(SD-1.9) after 3 months of surgery. Both the groups have significant relationship in terms of physical health at 3 months interval of surgery.

Mean Physical health in patients who studied up to 12th is 9.3(SD-2.5) after 7 days, 10.1(SD-2.7) after 15 days and 10.4(SD-3.6) after 3 months of surgery. Mean physical health in the patients who studied more than 12th is 8.2(SD-1.3) after 7 days, 10.5(SD-2.7) after 15 days, 12.5(SD-3.8) after 3 months of surgery.

Mean physical health in married patients, is 9.5(SD-2.5) after 7 days, 10.5(SD-2.7) after 15 days and 10.2(SD-3.6) after 3 months of surgery. Mean physical health in unmarried, is 7.8(SD-1.3) after 7 days, 9.8(SD-2.7) after 15 days, 13.5(SD-3.8) after 3 months of surgery.

Mean physical health in the patients whose monthly family income is up to rupees 5000; is 9.0(SD-2.8) after 7 days, 10.3(SD-2.7) after 15 days and 11.6(SD4.1) after 3 months of surgery. Mean physical health in the patients whose monthly family income is more than rupees 5000; is 9.0(SD-2.0) after 7 days, 10.2(SD-2.7) after 15 days, 10.9(SD-3.9) after 3 months of surgery.

Mean physical health in patients who stay in nuclear family, is 8.6(SD-1.6) after 7 days of surgery, 9.5(SD-2.7) after 15 days and 9.5(SD-2.8) after 3 months of surgery.

Mean physical health in the patients living in joint family, is 9.2(SD-2.7) after 7 days, 10.8(SD-2.5) after 15 days, 12.3(SD-4.2) after 3 months of surgery.

Table No.2: Correlation between Physical Health of Patients and Selected Variables at Different Time Intervals after Surgery N=20

Demographic and selected variables of patients	(f)	Time interval of assessment of physical status of patients after surgery (Minimum scores-6, Maximum scores-20)		
		7 days	15 days	3 months
		Mean (S.D.)	Mean (S.D.)	Mean (S.D.)
Age				
18-35	11	7.5(1.0)	9.2(2.8)	13.5(4.8)
Above 35	9	10.0(2.3)	10.2(2.4)	10.5(4.1)
'p' value		0.06	0.38	0.28
Gender				
Male	9	8.8(2.0)	10.5(2.2)	14.4(2.4)
Female	11	9.2(2.7)	10.1(3.1)	8.0(1.9)
'p' value		0.90	0.77	0.00
Education				
≤ 12th	13	9.3(2.5)	10.1(2.7)	10.4(3.6)
12th	7	8.2(1.3)	10.5(2.7)	12.5(3.8)
'p' value		0.71	0.77	0.23
Marital status				
Married	14	9.5(2.5)	10.5(2.7)	10.2(3.6)
Unmarried	6	7.8(1.3)	9.8(2.7)	13.5(3.8)
'p' value		0.16	0.45	0.10
Monthly family Income				
≤5000	8	9.0(2.8)	10.3(2.7)	11.6(4.1)
>5000	12	9.0(2.0)	10.2(2.7)	10.9(3.9)
'p' value		0.72	0.84	0.63
Type of family				
Nuclear	8	8.6(1.6)	9.5(2.7)	9.5(2.8)
Joint	12	9.2(2.7)	10.8(2.5)	12.3(4.2)
'p' value		0.96	0.24	0.15
No. of family caregiver				
One	12	8.7(2.2)	10.9(2.7)	9.7(3.0)
More than one	8	9.3(2.6)	9.5(2.5)	13.0(4.2)
'p' value		0.57	0.26	0.06
No. of children				
≤Two	11	9.8(2.1)	12.2(2.0)	11.6(3.1)
>Two	9	9.3(2.8)	9.5(2.6)	9.4(3.8)
'p' value		0.49	0.06	0.23
Place of staying				
Rural	8	9.6(3.1)	9.8(2.5)	10.8(4.5)
Urban	12	8.5(1.6)	10.5(2.8)	11.4(3.6)
'p' value		0.69	0.61	0.81
Chemotherapy				
No	9	8.2(2.0)	10.4(2.7)	13.7(3.7)
Yes	11	9.6(2.4)	10.1(2.6)	9.1(2.7)
'p' value		0.21	0.75	0.00

(P value≤0.05)

Mean physical health in the patients who have one family caregiver, is 8.7(SD-2.2) after 7 days, 10.9(2.7) after 15 days and 9.7(SD-3.0) after 3 months of surgery. Mean physical health in the patients who has more than one family caregiver is 9.3(SD-2.6)

after 7 days, 9.5(SD-2.5) after 15 days, 13.0(SD-4.2) after 3 months of surgery.

Mean physical health in the patients having up to children, is 9.8(SD-2.1) after 7 days, 12.2(SD-2.0) after 15 days and 11.6(SD-3.1) after 3 months of surgery.

Mean physical health in the patients have more than two children is 9.3(SD-2.8) after 7 days, 9.5(SD-2.6) after 15 days, 9.4(SD-3.8) after 3 months of surgery.

Mean physical health in the patients living in rural area, is 9.6(SD-3.1) after 7 days, 9.8(SD-2.5) after 15 days and 10.8(SD-4.5) after 3 months of surgery. Mean physical health in the patients living in urban area is, 8.5(SD-1.6) after 7 days, 10.5(SD-2.8) after 15 days, 11.4(SD-3.6) after 3 months of surgery.

Hence it can interpreted that age, education, marital status, monthly family income, type of family, number of family caregiver, number of children, and rural or urban background do not have any bearing on status of physical health of the patient. Whereas gender is having bearing on physical health status, i.e. females have poorer physical health status after 3 months of surgery as compared to males.

Objective 2

- ❖ To assess status of psychological health of the patients having colostomy.

Table No. 3: Status of psychological Health of Patients at Different Time Intervals after Surgery N=20

Time interval after surgery	Status of Psychological Health		'P' value
	Mean	SD	
7 days	12.15	3.9	0.936
15 days	12.55	4.1	
3 months	12.25	5.6	

(p value ≤ .05)

Minimum and Maximum mental health score (Psychological Problems) is 6 and 27 respectively. High score indicates good health status.

As shown in Table No. 3 that, mean psychological health in patients after 7 days, is 12.15 (SD-3.9), after 15 days 12.55 (SD-4.1) and after 3 months 12.25 (SD-5.6). The between 7th and 15th days is not significantly significant. Hence, it can be interpreted that status of psychological health is improving very slowly over a period of three months.

Data revealed that, mean psychological health in 18-35 years of age, is 10.5 (SD-1.9) after 7 days, 10.7 (SD-1.2) after 15 days and 14.0 (SD-5.6) after 3 months of surgery. Mean psychological health in above 35 years of age, is 13.0(SD-4.5) after 7 days, 11.7 (SD-4.7) after 15 days, 11.2(SD-6.4) after 3 months of surgery. Mean psychological health in males, is 11.4(SD-3.0) after 7 days, 12.9(SD-3.4) after 15 days and 16.6 (SD-

4.5) after 3 months of surgery. Mean psychological health in females, is 12.9(SD-4.9) after 7 days, 12.2(SD-4.5) after 15 days, 7.9(SD-2.9) after 3 months of surgery. Mean psychological health in the group of the patients who had education up to 12th is 13.0(SD-2.34) after 7 days, 12.3(SD-4.7) after 15 days and 11.4(SD-4.4) after 3 months of surgery. Mean psychological health in the group who had education more than 12th is 10.4 (SD-.71) after 7 days, 12.8(SD-1.6) after 15 days, 13.7(SD-4.2) after 3 months of surgery. Mean psychological health in married patients, is 13.1(SD-4.3) after 7 days, 13.2(SD-4.5) after 15 days and 11.5(SD-6.0) after 3 months of surgery. Mean psychological health mean in unmarried, is 9.9(SD-1.8) after 7 days, 10.8(SD-3.3) after 15 days, 14.0(SD-5.3) after 3 months of surgery. Mean psychological health in the patients whose monthly family income is up to rupees 5000; is 11.7(SD-5.3) after 7 days, 11.3(SD-4.4) after 15 days and 12.5(SD-6.5)

after 3 months of surgery. Mean psychological health in the patients whose family monthly family income is more than rupees 5000; is 12.4(SD-3.2) after 7 days, 13.3(SD-4.1) after 15 days, 12.0(SD-5.5) after 3 months of surgery. Mean psychological health in patients who live in nuclear family, is 12.0 (SD-4.4) after 7 days, 11.0 (SD-4.6) after 15 days and 9.3(SD-4.6) after 3 months of surgery. Mean psychological health in the group who live in joint family, is 12.2(SD-54.0) after 7

days, 13.5(SD-3.8) after 15 days, 14.1(SD-5.9) after 3 months of surgery. Mean psychological health in the patients, who have one family caregiver, is 10.9 (SD-3.9) after 7 days, 13.4 (SD-4.7) after 15 days and 10.0 (SD-4.7) after 3 months of surgery. Mean psychological health in the group who has more than one family caregiver is 13.6 (SD-3.9) after 7 days, 11.4 (SD-3.5) after 15 days, 15.0 (SD-6.0) after 3 months of surgery.

Table No. 4: Status of Psychological Health of Patients According to Selected Variables at Different Time Intervals

Demographic and selected variables of patients	Frequency	Time interval of assessment of psychological status of patients after surgery (Minimum scores-6, Maximum scores-27)		
		7 days	15 days	3 months
		Mean (S.D.)	Mean (S.D.)	Mean (S.D.)
Age				
18-35	11	10.5 (1.9)	10.7 (1.2)	14.0 (5.6)
Above 35	9	13.0 (4.5)	11.7 (4.7)	11.2 (6.4)
'p' value		0.39	0.63	0.36
Gender				
Male	9	11.4 (3.0)	12.9 (3.4)	16.6 (4.5)
Female	11	12.9 (4.9)	12.2 (4.5)	7.9 (2.9)
'p' value		0.47	0.62	0.00
Education				
≤ 12 th	13	13.0 (2.34)	12.3 (4.7)	11.4 (4.4)
12 th	7	10.4 (.71)	12.8 (1.6)	13.7 (4.2)
'p' value		0.24	0.78	0.26
Marital status				
Married	14	13.1 (4.3)	13.2 (4.5)	11.5 (6.0)
Unmarried	6	9.8 (1.8)	10.8 (3.3)	14.0 (5.3)
'p' value		0.08	0.24	0.32
Income				
≤5000	8	11.7 (5.3)	11.3 (4.4)	12.5 (6.5)
>5000	12	12.4 (3.2)	13.3 (4.1)	12.0 (5.5)
'p' value		0.72	0.32	0.88
Type of family				
Nuclear	8	12.0 (4.4)	11.0 (4.6)	9.3 (4.6)
Joint	12	12.2 (4.0)	13.5 (3.8)	14.1 (5.9)
'p' value		0.89	0.19	0.07
No. of family caregiver				
One	12	10.9 (3.9)	13.4 (4.7)	10.0 (4.7)
More than one	8	13.6 (3.9)	11.4 (3.5)	15.0 (6.0)
'p' value		0.13	0.30	0.05
No. of children				
≤Two	11	13.4 (3.7)	16.4 (2.3)	13.8 (4.9)
>Two	9	13.0 (4.9)	11.5 (4.5)	10.2 (6.4)
'p' value		0.78	0.06	0.22
Place of staying				
Rural	8	12.3 (5.5)	10.8 (4.1)	11.2 (6.6)
Urban	12	12.0 (3.0)	13.6 (4.1)	12.9 (5.4)
'p' value		0.84	0.15	0.54
Chemotherapy				
No	9	10.2 (2.7)	12.2 (4.2)	15.6 (6.4)
Yes	11	13.7 (4.3)	12.8 (4.4)	9.4 (3.5)
'p' value		0.05	0.76	0.01

Mean psychological health in the patients, who have up to two children, is 13.4 (SD-3.7) after 7 days, 16.4 (SD-2.3) after 15 days and 13.8 (SD-4.9) after 3 months of surgery. Mean psychological health in the patients who have more than two children is, 13.0 (SD-4.9) after 7 days, 11.5 (SD-4.5) after 15 days, 10.2 (SD-6.4) after 3 months of surgery.

Mean psychological health in the patients, who is living in rural area, is 12.3 (SD-5.5) after 7 days, 10.8 (SD-4.1) after 15 days and 11.2 (SD-6.6) after 3 months of surgery. Mean psychological health in the patients who has is living in urban area, is 12.0 (SD-3.0) after 7 days, 13.6 (SD-4.1) after 15 days 12.9 (SD-5.4) after 3 months of surgery.

Hence it can be interpreted that age, education, marital status, income, type of family, number of children and rural or urban background do not have any bearing on status of Psychological health of the patients whereas gender, number of family caregivers and chemotherapy status is correlated with status of Psychological health of patient.

Mean psychological health in the patients, who is not on chemotherapy, is 10.2 (SD-2.7) after 7 days, 12.2 (SD-4.2) after 15 days and 15.6 (SD-6.4) after 3 months of surgery. Mean psychological health in the patients who is on chemotherapy treatment, is 13.7 (SD-4.3) after 7 days, 12.8 9 (SD-4.4) after 15 days, 9.4 (SD-3.5) after 3 months of surgery.

Those patients getting chemotherapy have poorer status of Psychological health as compared to those not on chemotherapy.

Treatment Status of Patient

Objective 6

To correlate coping mechanisms used by colostomy patients with selected variables.

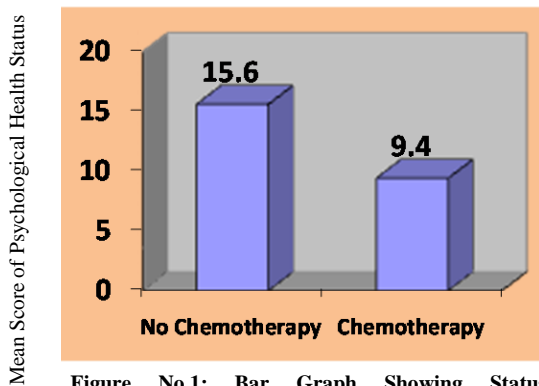


Figure No.1: Bar Graph Showing Status of Chemotherapy and Psychological Health Status of Patients

Objective

To find out the coping mechanisms used by the patients having colostomy.

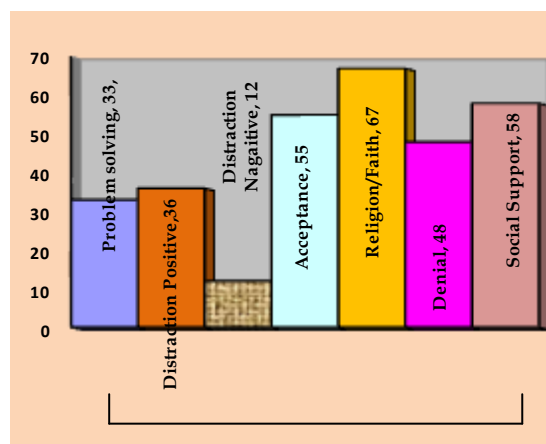


Figure No.2: Bar Graph Showing Coping Strategies Used by Colostomy Patients

Colostomy patients use 33% of the ‘problem focused’ repertoire, 43% of the emotional focused (‘distraction positive’ 36%, ‘distraction negative’ 12%, ‘Acceptance’ 55%, religion/faith 67% and ‘denial’ 48% and 58% of the ‘social support’ coping repertoire.

Hence, it can be interpreted that majority of the patients are using ‘social support coping followed by ‘emotion focused’ then ‘problem focused’.

Table no 5:- To correlate coping mechanisms used by colostomy patients with selected variables

Demographic and select variables of patients	f	Types of Coping							Social support
		Problem focused	Emotion focused					Sub Total	
			Dist pos.	Distneg	Acceptance	Religion	Denial		
Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	
Age									
18-35	11	5.5(3.7)	6.5(3.1)	0.2(.5)	5.2(3.3)	4.5(1.2)	5.2(2.2)	21.7(7.7)	4.7(1.2)
Above 35	9	2.4(2.7)	4.4(3.1)	1.0(1.1)	5.7(3.1)	6.1(2.7)	5.8(2.1)	23.1(4.1)	3.2(1.7)
'p' value		0.09	0.29	0.25	0.69	0.18	0.69	0.56	0.13
Gender									
Male	9	5.6(2.1)	7.5(1.7)	0.7(1.1)	7.0(1.3)	4.5(2.0)	4.2(1.9)	23.9(5.4)	4.7(1.2)
Female	11	1.0(2.8)	2.8(3.0)	1.6(.9)	5.1(3.9)	7.6(1.6)	6.5(1.3)	23.6(6.7)	2.3(2.0)
'p' value		0.00	0.00	0.05	0.32	0.00	0.01	0.87	0.01
Education									
≤ 12 th	13	2.6(3.6)	4.2(3.5)	1.3(1.0)	5.9(3.6)	6.8(2.0)	5.4(2.0)	23.8(6.7)	3.0(2.2)
12 th	7	4.4(2.7)	6.8(2.4)	.7(1.2)	6.2(1.8)	4.5(2.3)	5.1(2.1)	23.5(4.6)	4.2(1.2)
'p' value		0.12	0.07	0.15	0.93	0.05	0.77	0.90	0.34
Marital status									
Married	14	2.3(3.2)	4.3(3.3)	1.4(1.1)	6.2(3.2)	6.9(2.0)	5.5(2.1)	24.5(5.9)	3.1(2.1)
Unmarried	6	5.5(2.8)	7.0(2.8)	.5(.8)	5.5(2.5)	4.0(1.7)	5.0(2.0)	22.0(6.2)	4.3(1.5)
'p' value		0.08	0.11	0.09	0.29	0.01	0.61	0.40	0.27
Income									
≤5000	8	3.0(3.7)	5.3(3.8)	1.2(1.2)	5.3(2.6)	5.6(3.2)	5.0(2.1)	22.6(6.3)	3.1(2.3)
>5000	12	3.5(3.3)	5.0(3.1)	1.0(1.0)	6.5(3.3)	6.3(1.7)	5.5(2.0)	24.5(5.9)	3.7(1.9)
'p' value		0.71	0.81	0.77	0.31	0.81	0.53	0.27	0.63
Type of family									
Nuclear	8	1.2(1.7)	3.7(1.9)	1.2(1.0)	6.5(3.3)	6.5(2.4)	5.5(1.8)	23.5(4.4)	3.0(1.7)
Joint	12	4.6(3.6)	6.0(3.8)	1.0(1.2)	5.7(2.9)	5.7(2.4)	5.2(2.2)	23.9(6.9)	3.8(2.2)
'p' value		0.06	0.19	0.65	0.53	0.45	0.84	0.90	0.17
No. of family caregiver									
One	12	2.7(3.3)	4.4(3.4)	1.3(1.1)	5.8(3.5)	6.6(1.8)	6.2(1.7)	24.5(6.6)	3.0(2.2)
More than one	8	4.0(3.5)	6.0(3.3)	.8(1.1)	6.3(2.5)	5.3(2.8)	4.2(1.8)	22.7(5.2)	4.0(1.7)
'p' value		0.42	0.32	0.36	0.71	0.23	0.02	0.52	0.33
No. of children									
≤Two	11	4.4(3.7)	7.2(3.3)	1.4(1.3)	7.0(2.4)	6.4(2.8)	5.2(1.9)	27.2(8.1)	5.0(1.2)
>Two	9	1.2(2.4)	2.7(2.2)	1.4(1.1)	5.8(3.7)	7.2(1.6)	5.6(2.2)	23.0(4.0)	2.1(1.9)
'p' value		0.01	0.01	0.94	0.54	0.68	0.58	0.42	0.01
Place of staying									
Rural	8	2.6(3.7)	4.2(3.4)	1.3(1.1)	4.7(3.0)	6.3(2.2)	5.5(1.7)	22.2(6.8)	3.2(2.2)
Urban	12	3.7(3.2)	5.7(3.3)	1.0(1.1)	6.9(2.8)	5.8(2.5)	5.2(2.2)	24.7(5.4)	3.6(1.6)
'p' value		0.31	0.31	0.44	0.12	0.69	0.84	0.27	0.81
Chemotherapy									
No	9	4.4(2.7)	6.2(2.4)	0.3(0.7)	6.1(1.4)	4.4(2.1)	3.8(1.7)	21.0(2.2)	4.3(1.6)
Yes	11	2.3(3.7)	4.2(3.9)	1.8(.9)	6.0(4.0)	7.3(1.7)	6.5(1.3)	26.0(7.1)	2.8(2.1)
'p' value		0.14	0.15	0.00	0.67	0.00	0.00	0.07	0.16

Data revealed that Problem focused' coping 5.5 (SD-3.7) and 'social support' coping 4.7 (SD-1.2) repertoire is used by the patients who are between 18-35 years of age. Patients who are 35 years old or above do not use 'problem focused' coping 2.4 (SD-2.7) and 'social support' coping 3.2 (SD-1.7) repertoire.

More 'problem focused' coping and 'social support' coping is used by males 5.6 (SD-2.1, 4.7 (1.2) respectively than females

1.0 (SD-2.8), 2.3 (SD-2.0). In 'emotion focused' coping, more 'religion' and 'denial' type of coping is used by females. Hence, it can be interpreted that 'problem focused' coping, 'distraction positive' coping and 'social support' coping are used significantly less by females whereas 'distraction negative' coping, 'religion' coping and 'denial' are used more than males.

More 'religion' coping is used by the patients who studied up to higher secondary 6.8 (SD-2.0) than the patients, studied above higher secondary 4.5(SD-2.3).

'Religion' coping 4.0(1.7) is used significantly less by unmarried patients but use 'problem focused' coping and 'social support' coping more than married patients.

There is no significant difference in coping mechanisms between the patients whose family monthly income is up to rupees 5000/- and more than rupees 5000/-. Patients who live in joint family use 'problem focused' coping 4.6 (3.6) significantly more than the patients live in nuclear family 1.2(1.7).

More 'denial' coping is used by the patients who have only one family caregiver 6.2(SD-1.7) as compared to the patients who have more than one family caregiver 4.2(SD-1.8), which is highly significant (.02).

The 'problem focused' coping 4.4(SD-3.7) and 'distraction positive' coping 7.2(SD-3.3) are more significantly used by the patients who have up to two children as compared to who have more than two children 1.2 (SD-2.4), 2.7(SD-2.2) respectively.

Coping is not significantly related to place of staying i.e. rural or urban settings.

The patients, who are getting chemotherapy, inclined towards 'distraction negative', 'religion' and 'denial' type of coping. This difference is highly significant. 'distraction negative' 1.8(SD-0.9), 'religion' 7.3 (SD-1.7), 'denial' 6.5(SD-1.3) are more used by the patients on chemotherapy than patients not on chemotherapy 0.3 (SD-0.7), 4.4 (SD-2.1), 3.8 (SD-1.7) respectively.

Hence, it can be interpreted that more than 35 years, females, have education less than 12th, married, family income less than rupees 5000/-, nuclear family, number of family caregiver only one, rural background, on chemotherapy patients use

'emotion focused' coping, 'social support' coping and 'problem focused' coping respectively. Whereas age 18-35 years, males, have education more than 12th, unmarried, family income more than rupees 5000/-, joint family, number of family caregiver more than one, urban background, not on chemotherapy use 'problem focused' coping, 'social support' coping and 'emotion focused' coping respectively.

Occupation of spouse, educational status of spouse, no. of family caregiver, place of staying, area of staying, duration of illness do not have any effect upon type of coping.

Additional findings

Patients are anxious about their sexual life; but in Indian culture, patients feel hesitated to discuss about their sexual life. Only one patient took initiative to talk about her sexual life and effect of stoma upon this. She asked, "Should I stop sex related activity because it can cause cancer in her husband".

Relative of patients do not allow patients to talk about his/her colostomy, they think that it can aggravate the anxiety in patient and this is not the matter to discuss with anyone. So patients are not give opportunities to talk freely about their doubts.

Sometimes even in permanent colostomy, patients have hope that normal passage can be restored later in the life. Patients do not accept the reality.

Most of the subjects are reluctant to become independent in care of colostomy which creates burden disturbs the family.

CONCLUSIONS

The Conclusions drawn from the present study explores:

1. Physical problems are independent of demographic factors and select variables except gender and chemotherapy.

2. Psychological problems are independent of demographic and select variables except gender, number of family caregiver and status of chemotherapy.
3. Most of the patients are using 'social support' coping.
4. Colostomy patients who are between 18-35 years, male, unmarried and not getting chemotherapy are mostly using 'problem focused' coping.
5. 'Emotion focused' coping is used by patients who are above 35 years of age, married and getting chemotherapy.

Implication & Recommendation

The findings of study have implication at various level of nursing like nursing practice, nursing education, nursing administration and nursing research in following ways:-

- Nursing students need to be taught about the various factors which can affect the status of physical health, psychological health and coping mechanisms among colostomy patients.
- Nurse administrator should arrange 'in service' educational programmes regarding psychological problems faced by patients. Nurse administrator should have adequate knowledge regarding various groups such as colostomy society to help colostomy patients.
- Colostomy nurse should be posted in OPD/ward for better patient care.
- Nurse posted in OPD has to be trained in counseling techniques so that she can assist patients in coping.
- Nurses can give importance to significant factors which affect physical and psychological status of patients while doing assessment,

planning and implementing nursing care.

- Focused and need based care has to be provided by nurses.
- Gender sensitive care need to be given to the colostomy patients.
- Nurse should identify the major factors affecting health.
- Nurse should strengthen family support by education and counseling.
- Support groups can be made for colostomy patients in Out Patients Department, where nurse can be the therapist and meetings can be held regularly.
- Nurses should assess family caregiver problems and make them comfortable so that they continue to provide support.
- There is a need to examine the concerns related to psychological and social aspects of adjustments required due to colostomy.

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