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ORIGINAL RESEARCH ARTICLE

QUALITY OF LIFE AMONG OSTOMATES ATTENDING AT A CANCER HOSPITAL, CHITWAN, NEPAL

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ABSTRACT

Background: Stoma is a global public health problem. Stoma can be temporary or permanent and creates multiple difficulties in terms of quality of life (QoL). So the QoL of ostomates needs to be regularly assessed. The objective of the study was to find out the Quality of life among ostomates attending outpatient clinics at a Cancer Hospital, Chitwan.

Methods: A descriptive cross sectional study was conducted among 138 ostomates. Consecutive sampling technique was used by face to face interview method using standard tool "City of Hope Quality of Life Questionnaire for a patients with an ostomy". Data were analyzed by using descriptive and inferential statistics.

Results: The mean QoL of the respondents was 5.03±0.75. More than half (52.9%) of the respondents had lower QoL. Statistical significant association was found between QoL of the respondents and recent involvement in occupation ($p<0.001$), duration of having stoma ($p=0.049$) and stoma related complications ($p=0.014$). There is a positive correlation between overall QoL of the respondents and QoL in physical domain ($r=0.632$, $p<0.001$), psychological domain ($r=0.723$, $p<0.001$), social domain ($p=0.809$, $p<0.001$) and spiritual domain ($r=0.581$, $p=0.001$) respectively.

Conclusions: It is concluded that more than half of respondents had lower QoL. Here, stoma affects all domains of QoL of ostomates. Qualitative study explores all aspect of life more effectively. Counseling must be directed to continue job, adjustment to changed life style and prevention of complication.

INTRODUCTION

Stoma is a surgically made opening in the skin of abdomen that allows intestinal contents to pass from the bowel rather than being eliminated through the anus. It may be placed on a permanent or temporary basis.[1]

A stoma bag is attached to the abdominal opening where feces drain. An individual who has colostomy, ileostomy or urostomy undergoes a complex treatment with wide range of adjustments affect the individual's social and psychological functioning.[2]

There is not available of accurate data of survivors of ostomates in the world. Estimates range is from 450,000 to 800,000.[3] Only in China, more than 1 million patients had a permanent colostomy and its numbers are increasing at the rate of 100,000 per year.[4] Now there are three to four thousands of ostomates in Nepal and many more ostomates withdraw from social activities simply because they believe that they are not 'normal' as their bowel is 'outside the body' after surgeries.[5]

Having a stoma led to poorer scores in most aspects

of quality of life and that having a stoma made some time after the initial operation was more distressing.[6] In both cancer and non-cancer patients with stoma, fatigue or sleeplessness, leakages, pain, bladder or bowel complaints, physical functioning or activity, travelling or being away from home, other daily activities (including work), clothing and diet were among the 10 most common reported themes influencing daily life.[7]

A numerous related research studies have been conducted in the world. In Nepal, only limited studies[8] had focused on a psychosocial problem of ostomates while no study has been conducted relating to all aspects of life.

Developing countries like Nepal, these problems are being largely ignored that affects QoL. Studies conducted in Nepal showed the need of study more to explore all aspects of life (beyond psychosocial) of ostomates to determine QoL. Thus this study was conducted to find out the QoL among ostomates attending outpatient clinics at a Cancer Hospital, Chitwan, Nepal.

METHODS

A descriptive cross sectional study was conducted at BPKMCH, Chitwan, Nepal after getting ethical clearance from CMC-IRC. Total 138 ostomates who completed six month duration of having stoma surgery and attained in OPD of BPKMCH were selected by non probability consecutive sampling technique. Individual interview was done with standard tool "City of Hope Quality of Life Questionnaire for patients with an ostomy" for four weeks duration. Data was collected from Oct-Nov 2016. Data entered in EPI 3.1 and IBM SPSS version and analyzed by using descriptive and inferential statistics.

RESULTS

Table 1 shows that out of 138 respondents, 81.9% had colostomy, 94.2% had permanent stoma and 66.7% had <2 years duration of having stoma. Regarding stoma related problems, out of 138 respondents, 30.4% had diet adjustment problem and 90.6% had clothing problem due to location of stoma, 63.0% had resumed their sexual activity and among them 24.1% were satisfied with their sexual activity, and 13.8% respondents were having stoma related complications among which 47.3% had skin irritation.

Table 1: Respondents' Stoma Related Information (n=138)

Variables	Frequency	Percentage
Types of stoma in terms of location		
Colostomy	113	81.9
Ileostomy	12	8.7
Urostomy	13	9.4
Types of stoma		
Permanent	130	94.2
Temporary	8	5.8
Years of having stoma		
<2	92	66.7
3-4	16	11.6
>5	30	21.7
Diet adjustment problem		
Yes	42	30.4
No	96	69.6
Clothing problem due to location of stoma		
Yes	125	90.6
No	13	9.4
Resuming sexual activity		
Yes	87	63.0
No	51	37.0
Satisfying sexual activity (n=87)		
Yes	21	24.1
No	66	75.9
Stoma related complications		
Present	19	13.8
Absent	119	86.2
Types of complications (n=19)		
Skin irritation	9	47.3
Parastomal hernia	4	21.1
Prolapsed	3	15.8
Others*	3	15.8

Others: leaking, mucocutaneous separation, stenosis*

Table 2: Respondents' QoL in Different Domains (n=138)

Domains	Min. Score	Max. Score	Mean± SD	Mean %
Physical	3	9	6.24±1.19	66.6
Psychological	3	7	4.72±0.77	68.2
Social	1	8	4.04±1.19	53.8
Spiritual	2	9	5.39±1.23	41.8
Total	**3**	**7**	**5.03±0.75**	**69.57**

Higher score indicates higher QoL or fewer problems. Possible range of score was from 0 to 10, SD=Standard Deviation; significance level at 0.05

Table 2 indicates the mean and standard deviation of the individual domain of QoL and total score. The total QoL mean score was 5.03±0.75 with mean percent 69.57. The major influencing factor for reduction the QoL mean score was social domain (4.04±1.19) with mean percent 53.8 and psychological domain (4.72±0.77) with mean percent 68.2, spiritual domain (5.39±1.23) with mean percent 41.8 and physical domain (6.24±1.19) with mean percent 66.6 respectively.

Table 3: Respondents' Level of QoL (n=138)

Quality of Life	Frequency	Percentage
Lower quality (<5.03)	73	52.9
Higher quality (>5.03)	65	47.1
Total	**138**	**100.0**

Total mean ± SD = 5.03±0.75

Table 3 reveals that out of 138 respondents, only 47.1% had overall higher quality of life.

Table 4: Association between Respondents' Level of QoL and Socio-demographic Variables (n=138)

Variables	Level of Quality of Life		χ^2	p-value
	Lower	Higher		
	No. (%)	No. (%)		
Age in years				
21-30	12(50.0)	12(50.0)	0.632	0.959
31-40	16(59.3)	11(40.7)		
41-50	16(53.3)	14(46.7)		
51-60	15(51.7)	14(48.3)		
≥61	14(50.0)	14(50.0)		
Sex				
Male	47(53.4)	41(46.6)	0.025	0.873
Female	26(52.0)	24(48.0)		
Marital status				
Married	69(52.3)	63(47.7)	-	0.684*
Unmarried	4(66.7)	2(33.32)		
Occupation before having stoma				
Agriculture	49(62.0)	30(38.0)	10.789	0.029**
Business	3(27.3)	8(72.7)		
Daily wages	9(64.3)	5(35.7)		
Service	8(33.3)	16(66.7)		
Others	4(40.0)	6(60.0)		
Recent involvement in occupation				
Yes	14(27.5)	37(72.5)	21.025	<0.001
No	59(67.8)	28(32.2)		

*Significance level at 0.05, Others: students, priest*Fisher exact test **likelihood ratio*

Table 4 shows that there is no significant association between QoL with age, sex and marital status of the respondents. But there is significant association between QoL of respondents and the types of occupation (p=0.029). Higher QoL was found on occupation of business (72.7%). Similarly, there is significant association between QoL and recent involvement in occupation (p<0.001).

Table 5: Association between Respondents' Level of QoL with Stoma Related Information (n=138)

Variables	Level of Quality of Life		χ^2	p-value
	Lower	Higher		
	No. (%)	No. (%)		
Type of stoma				
Permanent	68(52.3)	62(47.7)	-	0.722*
Temporary	5(62.5)	3(37.5)		
Years of having stoma				
<2	53(57.6)	39(42.4)	6.020	0.049
3-4	10(62.5)	6(37.5)		
>5	10(33.3)	20(66.7)		
Stoma related complications				
Yes	15(78.9)	4(21.1)	6.000	0.014
No	58(48.7)	61(51.3)		
Diet adjustment problem				
Yes	26(61.9)	16(38.1)	1.965	0.161
No	47(49.0)	49(5.0)		
Clothing problem				
Yes	67(53.6)	58(46.4)	0.262	0.609
No	6(46.2)	7(53.8)		
Resuming sexual activity				
Yes	43(49.4)	44(50.6)	1.140	0.286
No	30(58.8)	21(41.2)		
Satisfying sexual activity (n=87)				
Yes	12(57.1)	9(42.9)	0.660	0.417
No	31(47.0)	35(53.0)		

*Significance level at 0.05, *Fisher exact test*

Table 5 revealed that there is significant association between QoL of the respondents and duration of having stoma (p=0.049). Higher QoL is found on duration of having stoma >5 years (66.7%). Significant association was also found with stoma related complications (p=0.014); lower QoL was found on respondents having stoma related complications (78.9%). There is no significant association between QoL with type of stoma, diet adjustment problem, clothing problem, resuming sexual activity and satisfying sexual activity.

Table 6 shows the bivariate correlation among four domains and total QoL of the respondents. There is statistically significant positive relationship between physical and psychological domain (r=0.300, p<0.001) and physical and social domain (ρ =0.278, p=0.001). Concerning psychological and social domain, there is statistically significant positive relationship (ρ =0.462, p=0.001). Similarly, there is statistically significant positive relationship between psychological and spiritual domain (r=0.288, p=0.001), and social and spiritual domain (ρ =0.440, p<0.001).

Table 6: Relationship between Respondents' QoL and Different Domains

Domain	Physical	Psycho-logical	Social	Spiri-tual
Physical	1			
Psycho-logical	0.300*	1		
ΨSocial	0.278*	0.462*	1	
Spiritual	0.040	0.288*	0.440*	1
Total QoL	**0.632***	**0.723***	**0.809***	**0.581***

*Significance level at 0.05, * p –value <0.01*

Ψ Spearman rank correlation was used in social domain with each of other domain

Regarding correlation between overall QoL and four domains, there is statistically significant positive relationship between overall QoL and QoL on physical domain (r=0.632, p<0.001), psychological domain (r=0.723, p<0.001), social domain (ρ =0.809, p<0.001) and spiritual domain (r=0.581, p=0.001) at 0.05 level of significance. This indicates that respondents who had increase QoL in physical, psychological, social and spiritual domain tended to have increased overall QoL.

DISCUSSION

The present study examined the QoL in patients with ostomy attending at the stoma clinic of Chitwan, Nepal, in which 81.9% of the respondents had colostomy among which 94.2% had permanent stoma. Some studies[9, 10] showed conflicting result (67.6% and 59.1% had colostomy and 80.4% had permanent stoma). Similarly, duration of having stoma >5 years were 21.7% which is inconsistent with other studies (16.2%, 44.8%). [8, 11]

This study observed only 13.8% of the respondents had stoma related complications of which 47.3% had skin irritation but another study[8] revealed inconsistent result where 38.5% respondents experienced stoma related complications. likewise, an adjustment problem was present on diet (30.4%) and clothing (90.6%) but another two studies[9 12,] reported inconsistent result which found problem on diet modification (82.4%, 55%) and clothing problem (48%, 54%). Having a stoma also alter sexual life, here 63.0% of the respondents resumed sexual activity after stoma surgery among them only 24.1% were satisfied, while this finding is not supported by another study[9] in which 33.3% resumed sexual activity and among them 31.4% reported being satisfied with sexual activity. Another study[12] revealed nearly similar finding on resuming sexual activity (59%) but inconsistently the majority (81%) had satisfied with sexual activity.

This study found that, best outcome was found on physical domain (6.24±1.19), which disagree with the study[9], that showed the best outcomes was found on spiritual domain and another study[13] also showed that upper quartile participants had more favorable scores for several spiritual QoL domains (all p <0001). Another report[4] also contradicts in which majority (89.4%) of ostomates suffered from physical problem. On the other side the findings of the present study showed that the lowest outcome was found on the social domain (4.04±1.19) which concurs with another studies.[9, 13] However a study in Brazil was used WHOQOL-BREF questionnaire to evaluate quality of life of ostomates showed exactly the same result with best QoL in physical domain and poor QoL in social domain.

Regarding QoL, only 47.1% had the higher QoL with the mean score of 5.03±0.75. There was not exist exactly comparable (mean score) study findings however it is consistent with the study findings[2] in which 44% respondents possessed best QoL but an Irish survey found that the overall quality of life of people with a stoma is within normal limits.[12] where the majority (69%) said it was good to excellent.

In this study, there was significant association (p=0.029) between overall QoL and the type of occupation of the respondents before stoma surgery. The respondents who had the occupation of business had higher QoL and who had the occupation of daily wages had lower QoL. Another study[2] also found significant association between QoL score of ostomates with occupation. Similarly, there was a significant association between overall QoL of the ostomates and the recent involvement in occupation (p<0.001). Respondents who were recently involved in occupation had higher overall QoL. While another

study[14] showed unemployed had higher mean QoL score (117.21) than ostomates who were employed (109.10) which could probably be due to different setting of the study and constrains for stoma appliances.

Finally, longer the duration of having stoma surgery significantly predicted higher overall QoL (p=0.049) in the current study which is consistent with the other study.[2] Experienced ostomates might be adjusted with their daily life. Similarly, there was also a significant association between overall QoL of the respondents and stoma related complications (p=0.014). Moreover, there was statistically positive relationship between overall QoL and QoL on physical domain (r=0.632, p<0.001), psychological domain (r=0.723, p<0.001), social domain (ρ =0.809, p<0.001) and spiritual domain (r=0.581, p=0.001).

CONCLUSION

Stoma is unexpected and unwanted procedure which alters an individual's quality of life. More than half of the respondents had lower QoL. Highest QoL was found in Physical domain and the lowest was found in social domain. Significant association was found between QoL of the respondents and recent involvement in occupation, duration of having stoma, and stoma related complications. There is a positive correlation between QoL of the respondents with all (physical, psychological, social and spiritual) domains respectively. Providing counseling before and after surgery, educating ostomates on proper use of ostomy appliances and lifestyle modification is necessary to prevent stoma related complications. All four domains (physical, psychological, social and spiritual) of QoL are interlinked each other and have great influences on ostomates' life. So it should be on prime concern while counseling the patient. A qualitative study is recommended to explore further hidden issues.

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