

### **Psychological Factors in Postoperative Adjustment to Stoma Surgery**

<sup>1</sup>Dr Usama Shabbir, Post Graduate Resident North Surgery Ward Mayo Hospital King Edward Medical University, Lahore.

<sup>2</sup>Dr Mohammad Sohail Asghar, Post Graduate Resident North Surgery Ward Mayo Hospital King Edward Medical University, Lahore

<sup>3</sup>Dr Jamal Anwar, Post Graduate Resident North Surgery Ward Mayo Hospital King Edward Medical University, Lahore

<sup>4</sup>Dr Haseeb Elahi, Post Graduate Resident North Surgery Ward Mayo Hospital King Edward Medical University, Lahore

<sup>5</sup>Dr Habib, Medical Officer North Surgery Ward Mayo Hospital King Edward Medical University, Lahore

<sup>6</sup>Dr Aima Zahid, Post Graduate Resident Histopathology Department Mayo Hospital King Edward Medical University, Lahore

**Corresponding Author:** Dr Mohammad Sohail Asghar, Post Graduate resident North Surgery Ward Mayo Hospital King Edward Medical University, Lahore

**Type of Publication:** Original Research Paper

**Conflicts of Interest:** Nil

#### **Abstract**

It is bluntly observed, from decades, that the patients of stoma experience significant postoperative psychological symptoms clinically. Accordingly, the complications of psychology further are often not perceived through all those elaborated through the care of patients suffering with stoma. According to the previous psychiatric history, frustration about the planning of the upcoming surgery, the presence of believe and thought belongs to negative stoma all represented to be particularly connected with psychological illness after surgery. The best way to screen the implications is questionnaires and staff, with specific training, aimed to enhance the psychological morbidity detection and also strives to empower links with the relation of mental health services.

In this area, the future study considered be potential, using psychometrically significant procedures, specifically be indomitable of the prediction, prevention, identification and managing of inferior psyche alterations after stoma surgery.

**Keywords:** Colostomy; Ileostomy; Urinary diversion; Clinical Psychology, Adjustment Disorders; Depressive disorders

#### **Introduction**

Surgery resulting in the stoma formation entails a reasonable psychological adjustment degree. In some patient, who have some experience of this kind of surgery; have involvement clinically in particular psychological symptoms. The most general symptoms are major depressive disorders or anxiety disorder and ironically these symptoms are basically not identified by the professionals of healthcare (Bill, 2014).

Basically stoma is described as a surgical formation of a false opening; however it is not necessarily applied to intestines, but commonly, as people thinking of stomas, they are visualizing intestinal stomas. Accordingly, all stomas are recognizable through a proper prefix: such as a “colostomy” refers that stoma is generated with the colon, similarly, an “ileostomy” is referred from the ileum and

finally, “urostomy” is specific for urinary diversion (Borwell, 2016).

According to the reviews of Bill (2014), the research of the prevalence of psychological morbidity which basically conducted in this particular has been systematically difficult. This further categorized into matters regarding attractiveness and change body image, odor, noise, and leakage. The research is very limited in this specific field, so the focus on intrapersonal features is also less in the psychological morbidity association.

This narrative review about the detection of the problem by experts of health issues will be contemplated as well as features particularly demonstrated being linked with psyche of set of symptoms might be determined. After that, importance of stoma recognition as well as opinions may be discussed.

### **Prevalence of Psychological Morbidity in Patients Suffered with Stoma**

According to the literature, almost the patients’ ratio between the eighteen to twenty-six percent encounter operation stemming stoma development incident; there are many symptoms associated with psyche between the time periods of 3 months after surgery. The estimate of prevalence for morbidity at one year after surgery is of an identical magnitude. Several types of research have been mentioned the rate of prevalence to be much elevated than this. The elevated rates are probably to be an expression of methodological limitations and the most general psychological health issues which happen are adjustment disorders with depressed or anxious mood, panic disorder, a foremost depressive disorder with or lacking agoraphobia, generalized anxiety, and social phobia disorder.

Harilingam et al. (2015) have demonstrated that 29% of patients who cross-examined enhanced psychologically

after the process of surgery faced the modifications in their psyche signs.

Krouse and Krouse (2013) described that the prevalence approximates for the surgical patients’ group are of identical significance as those originate for patients who have suffered from astectomy surgery. In the psychological morbidity levels, there have been on important alteration suffered by the patients of this group regardless of present advances in the care of stoma. Psychological morbidity, as it has been seen, in the undergone patients of sphincter-saving resection is lesser as compared to the undergone patients after the process of surgery ensuing in the stoma formation. The significant psychological symptoms presence post-operatively may settle an overall after surgery recovery of the patient. Similarly, patients may also undergo sexual dysfunction postoperatively. This further owes to the psychological factors and factors of surgery or both psychological and surgery factors combination. Fewer patients experience implications with occupational functions.

### **Prevalence Study’s Methodological Issues**

According to several previous types of research, as mentioned by Krouse and Krouse (2013) we also found that there are numerous methodological issues which are basically inherent. It is also significant that health professionals are of these operational issues according that the participating while preparation, debating and executing the study according to the particular arena. According to previous literature they have endeavored about the evaluation of incidence about the period of time of the research, and some other has endeavored to evaluate prevalence retrospectively.

Afterward, studies are according to lead the inaccurate evaluation obligated to careful memory effects. It was observed that multiple numbers of patients who are previously experiencing clinically significant

psychological morbidity earlier the execution of the surgery. Studies have commonly not taken such kinds of pre-operative morbidity into consideration. The research studies facing symptomatology of post-operative psyche are the single sign of the adjustment of psychological changes (Noone, 2010).

As described by Harilingam et al. (2015) professionals in this specific area used multiple approaches about the morbidity of the psyche. All similar approaches comprise patients' health institute records review; semi-structured interviews and further non-standardized measures with unidentified psychometric properties. Some studies particularly used psychometrically consistent tools have utilized as measures that have not be regulated on those patients who are physically ill. The time length, which has intervened between the time of interview and the time of surgery, is a particular contributory variable, though some researches do not comprise this precise information.

We gather fact with the basis of time duration when it was studied and the time of surgery and these are mostly those patients who are at the age of 4 to 19 years and they had living in the stomas' condition. It has been done due to multiple different factors that impact of psychological morbidity level in initial periods after the execution of operation.

Different individuals who have been studied further due to dissimilar premorbid diseases and as per different studies, there was a failure to consist of a proper control group. There is also an issue of the limited time period of the researches, biased samples and a small number of observed patients. So the conclusions are mostly drawn from those observations which made according to the samples, which do not represent the whole population of stoma patients. Several methodological factors may particularly mystify the outputs of research with the aim to

deliver psychological morbidity estimates and further make it a meaningful understanding of outputs strenuous.

### **Detection of Psychological morbidity**

The recognition and medication regarding different issues after the patient's release from North Surgical Ward, Mayo Hospital Lahore is basically poor. Medical staff considerably does not understand and detect psychiatric disorders. Clinical symptoms of significant psychology after the surgery of stoma are frequently not recognized by the professional of healthcare specifically working with stoma patients.

As per the descriptions of Slim and Valverde (2018) surgeons have a significant role in emphasizing with colleagues the possibility of the psychological symptoms may present in the patient or not. This rate of low detection may be due to patients' reluctance to reveal emotionally indicted material for a specific fear that they may ponder as troublesome and may be due to a hesitancy of professionals of healthcare to inquire about these areas. According to senior researchers, the approach through which surgical outpatients discussions are approved may not be encouraging to concerns and worries disclosure by stoma patients.

Psychological issues detection is likely to elevate the probability that a patient may obtain a suitable pharmacological or psychological medication. There are also some secondary advantages consequently in reduction terms in the tactless usage of services, improved quality of life and return to work (Slim and Valverde, 2018).

### **Psychological Morbidity and its' associated Factors**

Multiple efforts have been done to recognize features which further linked with elevated psychological morbidity rates in some particular sufferers. Specific analyses stated initial pertain identical to the study also. All those variables which may not recognized expressively linked in the result further specified. Those

variables having the representation may also linked may be demonstrated. Specifically it is mentioned that the duration of illness earlier to surgery is specific indication, which further is, basically about the long history about provocative symptoms of bowel about disease, probably while creating a life changing begin with stoma afterwards the recognition of cancer (Shore, Bergin and Garrett, 2015).

It is further possible that this case may be associated with some patient, thus, research indication further advised the length of the preoperative symptoms which seems not particularly linked with psychological symptoms development. Gender, marital status, age, pre-surgical diagnosis, stoma type, and illness severity, before surgeries, have not considered being linked the results of psyche. The occurrence of previous study must be demonstrated while connecting with elevated symptomatology (Steinhagen, Colwell and Cannon, 2017). According to the remarks of Wade (2016) the patients' satisfaction degree with pre-operative planning stoma surgery is particularly related to post-operative legislation that is psychological. Those clients who are displeased with their arrangement tend to be more considerably ardent to maintain and develop morbidity that is significant compared to those who observe their arrangement as satisfactory. Those clients who involve in physical issues and stoma connected symptomatology that is psychical to own particular psychological issues. We observed in health psychology that patients with beliefs and ideas regarding their infection are more significant in considering their reactions that are emotional when compared with illness related aspects. It was also demonstrated that the particular level to which patients of stoma decided with mental poison that are stoma-associated believes accounted for approximately 60% of their inconsistency in psychological results.

We found views that are various reactions from patients such as some patients genuinely believe that “according to my stoma, we personally define our rules”. Properly, some patients stated we now have no problem” that “we are ultimately complete personalities and about stoma, Regarding the other hand, some patients showed their negativity in this regards, as one 19 years patient told us that I’ve no control of my body and I feel this after my stoma surgery” I feel. We also found that if there are two patients and they went through same surgery procedure, both have different post-operative views according to their postoperative complications as one may be clinically oppressed and another one that is second maybe not depressive symptoms. Their ideas and values about their situation seem to be the key to understanding why they react in the real means they do. These findings regarding past history that are psychiatric satisfaction with preoperative preparation, postoperative physical symptomatology and the significance of stoma-related cognitions have wide-ranging implications for clinical practice that will now be discussed.

### **Development of Ostomy**

Gastrointestinal ostomies could be carried out towards diseases of benign or malignant, produced as mentioned by optional or in conditions of emergency, designed from little or large bowel, regarded momentary or permanent, as well as established through healing or palliative intent operations. Regardless of this heterogeneity, specific principles of stoma development are common: the bowel for the ostomy must always be well-vascularized and mobilized adequately to reduce tension. As Mentioned by basic facts some recommendations for ostomy development surgery are presented here.

- Whenever possible, laparoscopic ostomy foundation is ideal to ostomy foundation via laparotomy.

a. Recommendation Grade: Intense recommendation is followed by low-quality research, 1C.

b. Specifically, usually, there are no random trials evaluating ostomy development via conventional open surgical techniques versus minimally invasive techniques. Nevertheless, several observational researches have recognized the security and favourable short-term effects of laparoscopic ostomy development in contrast with surgery involving a laparotomy. Mentioned strengths to the laparoscopic approach consist of lower pain and narcotic specifications, shorter hospitalization, earlier return of bowel function, and less general difficulties related to open surgery. Laparoscopic ostomies also might be convenient to reverse. Whenever creating an ostomy laparoscopically, specific focus must always be paid to prevent twisting the exteriorized bowel (for a loop ostomy) or kinking the mesentery (for an end ostomy).

- Loop ileostomy is ideal over transverse loop colostomy for momentary fecal diversion in most cases.

a. Grade of Recommendation: Weak recommendation based on moderate-quality research, 2B.

b. At least 5 small, random trials and many observational researches have been performed to attempt to resolve whether loop ileostomy or loop colostomy (usually transverse loop colostomy) is the ideal method for momentary fecal diversion. Several meta-analyses have also been performed based on this research, and results are conflicting, in part, owing to significant heterogeneity among researches. To summarize, presented research reveals that loop ileostomy and transverse loop colostomy both effectively divert the fecal stream and minimize the consequences.

Description	Benefit vs risk and burdens	Methodological quality of supporting evidence	Implications
1A Strong recommendation, High-quality evidence	Benefits clearly outweigh risk and burdens or vice versa	RCTs without important limitations or overwhelming evidence from observational studies	Strong recommendation, can apply to most patients in most circumstances without reservation
1B Strong recommendation, Moderate-quality evidence	Benefits clearly outweigh risk and burdens or vice versa	RCTs with important limitations (inconsistent results, methodological flaws, indirect or imprecise) or exceptionally strong evidence from observational studies	Strong recommendation, can apply to most patients in most circumstances without reservation
1C Strong recommendation, Low- or very-low-quality evidence	Benefits clearly outweigh risk and burdens or vice versa	Observational studies or case series	Strong recommendation but may change when higher-quality evidence becomes available
2A Weak recommendation, High-quality evidence	Benefits closely balanced with risks and burdens	RCTs without important limitations or overwhelming evidence from observational studies	Weak recommendation, best action may differ depending on circumstances, or patient's or societal values
2B Weak recommendations, Moderate-quality evidence	Benefits closely balanced with risks and burdens	RCTs with important limitations (inconsistent results, methodological flaws, indirect or imprecise) or exceptionally strong evidence from observational studies	Weak recommendation, best action may differ depending on circumstances, or patients' or societal values
2C Weak recommendation, Low- or very-low-quality evidence	Uncertainty in the estimates of benefits, risks and burden; benefits, risk and burden may be closely balanced	Observational studies or case series	Very weak recommendations; other alternatives may be equally reasonable

GRADE = grades of recommendation, assessment, development, and evaluation; RCT = randomized, controlled trial. Adapted from Guyatt G, Guterman D, Baumann MH, et al. Grading strength of recommendations and quality of evidence in clinical guidelines: report from an American College of Chest Physicians Task Force. *Chest* 2006;129:174-181.

Source: (Borwell, 2016)

### Clinical practice Implications

Our main research verdict in post-operative adjustment specific to stoma surgery has several implications regarding clinical surgeon's practice working in this department. Patients with stoma surgery experience should be monitored regularly for the occurrence of main psychological symptoms during the postoperative follow-up. It is advised that overall patients who have such surgery experience resulting in the stoma formation be analyzed psychologically after three months of surgery.

Stoma care nurses and other surgical staff could use different monitoring questionnaire which specifically made for the purpose. We use "Hospital Anxiety and Depression Scale (HAD) in Mayo Hospital, Lahore. There is another famous measure named "The Stoma Cognitions Questionnaire" which is recently being developed. Monitory measures are swift and comfortable to manage and may support hospital staff to recognize psychological symptoms.

According to the explanation of White and Unwin (2015), the questionnaire frequently functions stimulus for the information disclosure regarding fears and anxieties. Several studies found that breast cancer's patient's regular monitoring through specific high profile nurse counselor

may result in 76% of those patients who required psychological support being indicated to practitioners of mental and psychological health. There are some training courses that support professionals of healthcare to enhance the assessment and interview questioning skills and to enhance the psychological issues detection.

With the preceding perspective presented by Buyukiscan (2018) patients recognized to be undergoing clinically particular symptoms may then be signified to mental health services suggestions from the professionals or specialists of mental health. According to the report, produced by “The Royal College of Physicians and Psychiatrists” on the care of psychological medical patients, there should be a focus on the better treatment of such kinds of patients.

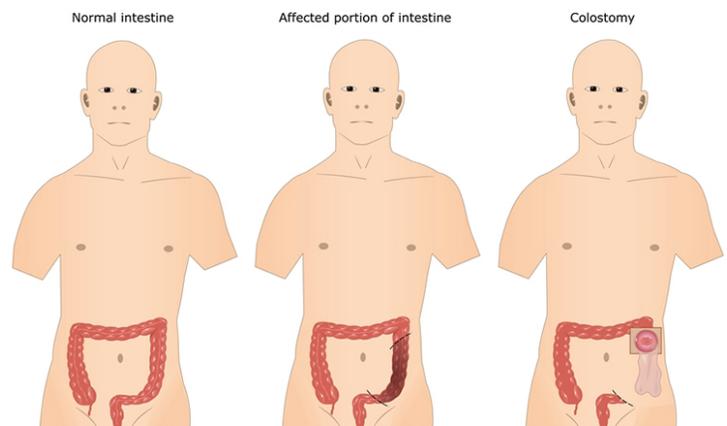
This report does not specifically deal with those surgical patients' psychological requirements as several issues are concerning the psychological problem recognition, methods of treatment and liaison psychiatric provision services are of significance to surgical patients. We also observed that surgeons should have enough access to liaison the services of mental health where psychiatrists and psychologists may deliver advice on administration and also consent recommendations of stoma patients who may be undergoing some issues. The advantages of liaison psychiatric facilities aside from generating advantages in reduced distress and incapacity terms comprise short durations of stay in the hospital and a decline in improper outpatient attendances.

Those patients who have a specific background of psychological implications are at significant psychological issues developing risk after surgery. It is a somehow better clinical practice that all these types of patients must be inquired pre-operatively regarding the past psychiatric history presence. Similarly, those patients who have a specific history of the same types of issues must be

managed completely for surgery and after surgery follows up, specifically after their discharge from Mayo Hospital in order to maintain psychological symptoms. In the psychological outcome, pre-operative preparation satisfaction is a very significant determinant. We also asked patients regarding their satisfaction level before surgery in Mayo Hospital Lahore. We also give them the opportunity to discuss their issues or complications with a surgical team member in accordance with a struggle to enhance their level of confidence regarding surgery and its preparation process.

### **Psychological Impacts of Living with Stoma**

According to Jayarajah et al. (2016), a time period of treatment could be supposed once any qualification adjusts in someone's body provides place. Commonly, in between 16-26% of patients might suffer from negative psychological problems following a stoma development instantly postoperatively. These types of symptoms tend to be commonly anxiousness and depression, but could additionally add suicidal ideation. Someone might expect this particular number of people to enhance over the course of personal healing, nevertheless a year following their stoma creation, approximately the same percentage of people are still suffering from unfavourable psychological symptoms.



(Stoma – Living With a Stoma and its Psychological Impacts: Colostomy Diagram)

Source: (Jayarajah et al., 2016)

According to the views of Vonk-Klaassen et al. (2015) People who have problems tend to be more inclined to experience negative psychological stress, which can be really a large number considering side-effect rates in patients with stomas vary from 21-70%. Other aspects associated with an enhanced danger of post-operative depression and stress consists of inferior socioeconomic status and a past background of post-operative psychological distress.

### Stoma Surgery Impacts

We observed in several patients that the emotional and psychological effects of having a stoma may be enormous. Accordingly, heaving a stoma may probably decline an individual's life quality and thus their emotional condition must be frequently analyzed and supported completely this time.

The individual may also advantageous from a recommendation of a mental health specialist. Stoma patients not only managing with some specific and sensitive issues, such as control loss over their feces elimination, some patients also experience body image changes, sexual dysfunction, stigma, social separation, decreased or swings in mood and high embarrassment (Buyukiscan, 2018).

The adjustment period may be predictable when any particular change taken placed in someone's body. Similarly, we observed in Mayo Hospital, that our 16 to 26% of patients experienced oppressed psychological symptoms shadowing an immediate stoma creation in postoperative conditions. These symptoms are basically depression and anxiety, but may also comprise suicidal ideation (in some severe cases as observed in Mayo Hospital, Lahore). Medical professionals need to expect

these kinds of people to enhance the recovery courses; therefore one year's monitoring of their stoma creation is enough in some cases to monitor the negative psychological symptoms (Byrne, Wynne and Lovius, 2011).

### General Intestinal Reactions of Diets after Stoma Surgery

According to the "Academy of Nutrition and Dietetics, United Ostomy Associations of America" below is the chart of some specific foods and their intestinal reactions after stoma surgery

Gas	Asparagus, beans, beer, broccoli, Brussels sprouts, cabbage, carbonated beverages, cauliflower, onions, peas
Incomplete digestion	Apple peels, cabbage, celery, coconut, corn, dried fruit, mushrooms, nuts, pineapple, popcorn, seeds, skins from fruits, skins from vegetables
Thickened stool	Applesauce, bananas, cheese, pasta, rice, peanut butter (creamy), potato (without skin), tapioca
Thinned stool	Fried foods, grape juice, high-sugar foods, prune juice, spicy foods
Increased odor	Alcohol, asparagus, broccoli, dried beans, eggs, fish, garlic, onions, peas
Reduced odor	Buttermilk, cranberry juice, parsley, yogurt

### Conclusion and Future Research

We advise, specifically as concluding note and according to the futuristic point of view, that surgeons who are basically concerned with this specific research, (either in participatory capacity or only the advisory board) must strive to avoid certain methodological deficiencies which have observed in previous studies.

Valid measures use about psychological distress is essential, specifically regulated usage of those who have some crucial physical symptoms. Some other experts also

expected in the diminishing but unclear impacts regarding specific memory and reflective examination.

We also suggest that medical professionals should aim to comprise patients at an identical time length post-operatively. It is better to decline the result contamination which may happen as an output of the features irrelevant to the study. The experts of mental health and surgeons must also compose collectively regarding the effective approach development of supporting stoma patients who also have issues of mental health while achieving the best life quality post-operatively.

Further study to recognize the pre-operative features which particularly participate in post-operative psychological morbidity must be carried out and monitored as well. This will empower researchers and authors to analyze the impact specifically intended while altering the pre-operative risk components. Several researches are there to analyze struggles to elevate the detection rates and further comprise surgical teams training in provoking the patients' issues and observing clinically particular symptoms.

Psychological, pharmacological and surgical interferences to curtail postoperative and psychological morbidity may prudently assess. Several health experts have confidence about implications which further affecting the patients specifically not the issues as well as it should be dealt by specialist stoma care nurses, but basically they are not at right position, surgeons also have strong influence on patients as they can promote psychological regulations to this surgery form and analyzing specific individuals while undergoing issues.

This specific study has conducted to provide health professionals through the discoveries at North Surgical Ward, Mayo hospital Lahore of 250 patient's prevalence in this specific stoma surgery specific area and to concentrate the issues related to methodology so that it

may eliminate futuristic researches and finally to emphasize the impacts of psychological care of stoma surgery patients.

### **References**

1. Bill, A. (2014). Factors in Making a Small Surgical Stoma. *Annals of Surgery*, 146(2), pp.274-277.
2. Borwell, B. (2016). Psychological considerations of stoma care nursing. *Nursing Standard*, 11(48), pp.49-55.
3. Buyukiscan, E. (2018). Factors Predicting Psychological Adjustment among University Students in Turkey. *International Journal of Psychological Studies*, 10(4), p.25.
4. Byrne, E., Wynne, W. and Lovius, B. (2011). Factors influencing the psychological adjustment of adolescents with cleft lip and/or palate. *British Journal of Plastic Surgery*, 42(3), p.355.
5. Harilingam, M., Sebastian, J., Twum-Barima, C., Boshnaq, M., Mangam, S., Khushal, A., Marzouk, D. and Tsavellas, G. (2015). Patient-related factors influence the risk of developing intestinal stoma complications in the early post-operative period. *ANZ Journal of Surgery*, 87(10), pp.E116-E120.
6. Krouse, H. and Krouse, J. (2013). Psychological Factors in Postmastectomy Adjustment. *Psychological Reports*, 48(1), pp.275-278.
7. Noone, P. (2010). Pre- and postoperative steps to improve body image following stoma surgery. *Gastrointestinal Nursing*, 8(2), pp.34-39.
8. Shore, J., Bergin, D., and Garrett, S. (2015). Results of Blepharoptosis Surgery with Early Postoperative Adjustment. *Ophthalmology*, 97(11), pp.1502-1511.
9. Slim, K. and Valverde, A. (2018). Stoma without rod (or stoma with spur). *Journal of Visceral Surgery*, 155(5), pp.403-406.

10. Steinhagen, E., Colwell, J. and Cannon, L. (2017). Intestinal Stomas—Postoperative Stoma Care and Peristomal Skin Complications. *Clinics in Colon and Rectal Surgery*, 30(03), pp.184-192
11. Wade, B. (2016). Colostomy patients: psychological adjustment at 10 weeks and 1 year after surgery in districts that employed stoma-care nurses and districts which did not. *Journal of Advanced Nursing*, 15(11), pp.1297-1304.
12. Wallace, A. (2016). The key factors that affect psychological adaptation to a stoma: a literature review. *Gastrointestinal Nursing*, 14(6), pp.39-47.
13. White, C. and Unwin, J. (2015). Post-operative adjustment to surgery resulting in the formation of a stoma: The importance of stoma-related cognitions. *British Journal of Health Psychology*, 3(1), pp.85-93.