DESIGN AND VALIDATION OF EDUCATIONAL TOOL FOR ASSESSMENT NEEDS OF PATIENTS WITH STOMA

Thesis

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BSTRACT

Patients with permanent stoma bowel and urine diversions are at risk for impairment in their needs and quality of life. Ostomy surgery saves many lives and returns people to better heath and a full productive life. **Aim:** To design and validation of educational tool for assessment needs of patients with stoma, test validity, reliability and applicability of the designed tool. **Method:** This study was conducted at the Ostomy Clinic, in The National Cancer Institute, Cairo University. The sample of the study included 50 adult patients, from both sexes, and seven members as jury group from The National Cancer Institute: five doctors and other two nursing members from Surgical Unit and Ostomy Clinic. An interviewing questionnaire was designed by the researcher to assess the needs of patients with stoma, based on the literature review and expertise's' opinion validation, and reliability evaluated; the tool was utilized by the researcher to collect the necessary data. **Results:** the majority of the jury group agreed upon face and content validity of the tool, and an its high reliability evaluated through Alpha Cronbach test. The study also revealed that highest needs were the psychological needs and nutritional needs. **Conclusion:** The study results concluded that, it is crucial to assess needs of patients with stoma. So, there is a continuous need for a valid, reliable, consistent and applicable needs' assessment tool for patients with stoma. **Recommendations:** Assessing the needs of patients with stoma by using the designed tool on a larger number for applicability of the designed tool.

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List of Abbreviations

BCG : Bacillus Calmette-Guérin.

CEA : Carcino-embryonic antigen.

CIS : Carcinoma-in-situ.

CT : Computerized tomography.

DRE : Digital rectal exam.

FOBT : Fecal occult blood test.

HBV : Hepatitis B virus.

HPV : Human papilloma virus.

IL : Ileal conduit.

IVs : Intravenous lines.

IVU : Intravenous urography.

MRI : Magnetic resonance imaging.

NCCN : Nursing Comprehensive Cancer Network.

NCI : National Cancer Institute.

NPO : Nothing by os (mouth).

TCC : Transitional cell carcinomas.

UOAA : United Ostomy Association of America

UTI : Urinary tract infection.

WHO : World Health Organization.

INTRODUCTION

Cancer is a collective disease describing a large group of diseases characterized by uncontrolled growth, spread of abnormal cells and disturbed proliferation. The normal growth tissue that serves no useful purpose and harms the host organism may be either benign or malignant. Cancer is a chronic, universal, highly stressful experience because of the psychosocial concomitants of cancer diagnosis, prognosis, treatment and side effects. In addition,cultural perspectives influence the meaning of cancer, which in turn affect the degree of stress associated with it. ***(American Cancer Society, (ACS), 2006)***.

Cancer caused death in approximately 42,000 people in Egypt, 31,000 of those people were under the age 70 years ***(World Health Organization (WHO), 2005).*** The ***National Cancer Institute (NCI),* (*2006)*** reported that bladder cancer accounted for 11% of all cancer cases, 15% in males and 5% in females ;and colorectal cancer accounted for 11.6% of all cancer cases, 11.8% in males and 13.8% in females.

The cancer was estimated to account for about 7.9 million people died of cancer (or around 13% of all deaths worldwide) ***(WHO, 2007)***. Breast cancer is the leading cause of deaths in

women in Egypt, and bladder cancer is the leading cause of deaths in men in Egypt ***(WHO, 2008)***.

The main types of cancer leading to overall cancer mortality each year are: lung (1.4 million deaths/year); stomach (866,000 deaths), liver (653,000 deaths), colon (677,000 deaths), breast (548,000 deaths). About 72% of all cancer deaths in 2007 occurred in low- and middle-income countries. Deaths from cancer world wide are expected to continue rising to 84 million people by the year of 2015 ***(WHO, 2010)***.

Stoma, which is sometimes called any artificial openig, is formed when any portion of the small or large intestine is brought out into the abdomen. The name given to a particular stoma depends on which piece of bowel is used, or the surgical procedure performed. Stomas can be either temporary or permanent. A stoma is round or oval, flat or pouting, as small as one centimeter or as large as 10 centimeters ***(Porrett & McGrath, 2005).***

There are approximately 750,000 individuals with an ostomy in the United States and an increase of 65.000 per year. Ostomy surgery saves many lives and returns people to better heath and a full productive life ***(United Ostomy Association of America (UOAA), 2009)***. Regarding, the incidence of ostomy in The National Cancer Institute in Egypt, patients with

colostomy estimates approximate 336, urostomy 280, while ileostomy 32 patients per year ***(NCI, 2010).***

Needs assessment is the foundation of effective and efficient care and it is important that assessment should be valid and reliable. Needs assessment tool must possess certain basic attributes to ensure that they will provide accurate and dependable measurement. The most important of those attributes are validity; reliability and usability ***(Quinn, 2000).*** A need assessment is an important map to help meeting actual and potential needs. These data help staff to set priorities in caring for those patients to meet their needs ***(Cooper, 2002)***.

Needs assessment is the process of collecting and analyzing information to develop an understanding of the issues, resources and constraints of the target population. That assessment's purpose is to determine whether the needs of the people are being met or not ***(McKenzie, Pinger& Kotecki, 2002).*** Needs assessment has also been defined as the process of identifying the problems and needs of a target group. It is a planned process that identifies the reported needs of an individual or group ***(Spradley & Mellory, 2002).*** The data gathered from needs assessment, as well as an assets' assessment, should be the basis and rational for patient care. It is important to understand the process involved in needs

assessment and the different types of needs ***(Hitchcok, Schubert & Thomas, 2003)***.

Validation is achieving a sufficient level of confidence that the model does provide on adequate representation of reality. There is no single test to prove that a model is 100 percent valid. Face validity can be established by asking people who are familiar with the real system to evaluate the assumptions and results of the model. Statistical comparisons of the outputs of the model and the real system under identical inputs can also be made to test the models' accuracy ***(Dilworth, 2002).***

Significance of the study:

Persons who have had a stoma for many years and managed it effectively may encounter problems as a result of physical and/or cognitive impairment ***(Pearson, 2010)***. Persons who have ostomies differ from many other surgical patients, as they deal with complex physical, psychological, social and financial issues, even if the surgery is a complete success ***(Turnbull, 2011).***

Patients with stoma should be aware of the potential complication that helps to initiate assessment to prevent the complication of ostomy. Education includes changing stoma appliance, choosing eating, and cleaning the skin around the stoma, maintenance of a weight, exercise, and complication

with a medication regimen. Several teaching sessions will be necessary to prepare the patient and family for life with an ostomy, assisting and teaching the patient as needed. The goal is to promote self–case ***(Wittenouer, 2006)***.

- **Theoretical definition:**

Ostomy is an artificial communication between organs or viscera and the external environment for draining, evacuation or nutrition. The creation of an intestinal ostomy is considered a simple procedure in surgery ***(Sampaio, 2007)***

- **Operational definition:**

Ostomy is a surgical opening from an organ inside the body to the outside of the body. It allows for drainage from the body to the outside or for entry of nutrients into the body and can be created from different parts of the body.

○ Aim of the Study

This study aims to:

- Design and validation of educational tool for assessment needs of patients with stoma.
- Test validity, reliability and applicability of the designed tool.

○ Research question:

- Is the designed educational tool valid, reliable and applicable?

REVIEW OF LITERATURE

The colon is also called the large bowel or large intestine. It is the lower 5 to 6 feet of the digestive system. The last 8 to 10 inches of the colon is the rectum ***(Strate & Syngal, 2005).***

Colorectal cancer:

Colorectal cancer also called colon cancer or large bowel cancer includes cancerous growths in the colon, rectum and appendix. Many colorectal cancers are thought to arise from adenomatous polyps in the colon. These mushroom-like growths are usually benign, but some may develop into cancer over time ***(WHO , 2008).***

Regarding signs and symptoms of colorectal cancer are change in bowel habits (constipation and/or diarrhea), change in frequency change in the quality of stools, change in consistency of stools, bloody stools or rectal bleeding, stool with mucus, tarry stool (melena), feeling of incomplete defecation (tenesmus), reduction in diameter of feces, bowel obstruction ***(Haugen, Bliss & Savik, 2006).***

As well, constitutional signs and symptoms will be found anemia, with symptoms such as dizziness, malaise and palpitations. Clinically, there will be pallor and a complete blood picture will confirm the low hemoglobin level, anorexia, asthenia, weakness, and unexplained weight loss. Metastasis

symptoms as shortness of breath as in lung metastasis ***(Strate & Syngal, 2005).***

The risk factors: Include the following: Age, Sex, and Heredity. The risk of developing colorectal cancer increases with age. Most cases occur in the sixty years and seventy years, while cases before age of fifty are uncommon unless families' history of cancer. Individuals who have previously been diagnosed and treated for colorectal cancer are at risk for developing colon cancer in the future. Women who have had cancer of the ovary, uterus, or breast are at higher risk of developing colorectal cancer, Heredity as (family history of colon cancer) ***(Chao & Thun, 2005).***

Larsson, Orsini and Wolk (2005) mentioned that a diet high in red meat and low in fresh fruit, vegetables, poultry and fish increases the risk of colorectal cancer, physical inactivity, Inflammatory bowel disease, environmental factors such as: "Heavy alcohol use" may also increase the risk of colorectal cancer.

Colorectal cancer diagnosis by taking the patient's past and present medical history, then the physical examination is performed though an abdominal examination, diagnostic tests by many methods as: Endoscopic image of colon cancer identified in sigmoid colon on screening colonoscopy in the setting of Crohn's disease. Digital rectal exam (DRE): The