Teaching strategies for self-care of the intestinal stoma patients

Estratégias de ensino para o autocuidado de estomizados intestinais

Estrategias de enseñanza para el autocuidado de ostomizados intestinales

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Teaching self-care must ensure the intestinal stoma patient more independence concerning the family and health professionals. The planning involves the assessment of the clinical and socio-demographic data, and the conditions for the self-care. This study aimed at identifying strategies to teach self-care for intestinal stoma patients in the scientific production. We used an integrative review on MEDLINE, PUBMED, LILACS, CINAHL and COCHRANE bases from 2005 to 2011, 7 papers were selected. In the perioperative teaching, multimedia, telephone follow-up, personal meetings, interactive material through the Internet were used, besides the continuing education of the health professionals. These different strategies profess the needs of each individual that promote self-care learning about the surgery and its consequences, skills development and the necessary adaptation of the condition of a stoma patient. The nurse needs to have technical and scientific knowledge on surgical technique, demarcation, treatment, complications, and skills for the teaching of self-care.

Descriptors: Self Care; Teaching; Ostomy; Familiar Nursing.

O ensino do autocuidado deve assegurar ao estomizado intestinal maior independência em relação à família e aos profissionais de saúde. O planejamento pressupõe a avaliação dos dados clínicos, sociodemográficos e das condições para a realização do autocuidado. Objetivou-se identificar, na produção científica, estratégias de ensino do autocuidado para estomizados intestinais. Utilizou-se a revisão integrativa nas bases MEDLINE, PUBMED, LILACS, CINAHL E COCHRANE de 2005 a 2011, foram selecionados sete artigos científicos. No ensino peroperatoratório foi utilizado multimídia, acompanhamento telefônico, encontros presenciais, materiais interativos via internet; além da educação permanente dos profissionais de saúde. Estas diferentes estratégias preconizam o atendimento das necessidades de cada indivíduo que favorecem o aprendizado do autocuidado sobre a cirurgia e suas consequências, desenvolvimento de habilidades e adaptações necessárias com a condição de estomizado. O enfermeiro necessita ter conhecimento técnico-científico sobre técnica cirúrgica, demarcação, tratamentos, complicações e habilidades para o ensino do autocuidado.

Descritores: Autocuidado; Ensino; Estomia; Enfermagem Familiar.

La enseñanza del autocuidado debe garantizar al paciente ostomizado intestinal mayor independencia frente su familia y profesionales de la salud. La planificación presupone evaluación de los datos clínicos, sociodemográficos y las condiciones para el autocuidado. El objetivo fue identificar en la producción estrategias de enseñanza del autocuidado para ostomizados intestinales. Se utilizó la revisión integradora en las bases MEDLINE/PUBMED, LILACS, CINAHL E COCHRANE de 2005 a 2011, con selección de siete artículos científicos. En la enseñanza peroperatoria fue utilizada multimedia, seguimiento telefónico, encuentros presenciales, materiales interactivos por internet, y educación permanente de los profesionales de la salud. Las estrategias preconizan la atención a las necesidades de cada persona, favoreciendo aprendizaje del autocuidado sobre cirugía y sus consecuencias, desarrollo de habilidades y adaptaciones necesarias para la condición de estomizado. El enfermero necesita tener conocimiento técnico-científico acerca de la técnica quirúrgica, demarcaición, tratamientos, complicaciones y habilidades para enseñanza del autocuidado.

Descripciones: Autocuidado; Enseñanza; Estomía; Enfermería de la Familia.
Introduction

The intestinal stoma patients, due to an oncological disease, are predominantly attacked by colorectal cancer (CC), which in epidemiological terms represents the third most common neoplasia in both sexes and the second cause in developed countries. The survival of these patients increases due to an early diagnosis, with global average around five years, in around 40 to 55% of the cases\(^1\).

For the year 2013, in Brazil, there was an estimated occurrence of 14,180 new cases of the colorectal cancer in men and 15,960 in women, that is, an estimated risk of 15 new cases per each 100 thousand men and 16 per each 100 thousand women. In the country, CC in man is the second most frequent in the southeastern region and the third in the southern and central western regions. In the northern region it is the fourth most frequent and in the Northeastern region, the fifth. For the women it is the second most frequent in the southwestern and southern regions, the third in the central western and northeastern regions, and the sixth in the northern region\(^1\).

These are the risk factors for this pathology: family history of CC, genetic predisposition and development of intestinal inflammatory diseases, besides the diet based on animal fat, low ingestion of fruits, vegetable and fibers, associated to the excessive intake of alcohol and tobacco, sedentarism, obesity and being over the age of 40 years\(^1\)-\(^3\).

Ostomy means a surgical opening for a temporary or permanent deviation of the colonic effluent, through the abdominal wall, with suture of the external part, resulting from several situations, such as intestinal inflammatory diseases, diverticulitis disease, anal incontinency, ischemic colitis, familial adenomatous polyposis (FAP), traumas, megacolon, severe peritoneal infections, actinic proctitis, CC, among others. For a long time the term used was ostomy (ostomia) and, currently, considering the Brazilian writing, the adoption of the terminology *estoma* ou *estomia* was common sense\(^4\)-\(^5\).

Studies have shown the association between eating habits and the development of CC. The ingestion of red meat has been related to an increase of risk of CC, but it depends on the quantity, time of the eating habit and type of cooking. The high ingestion of processed red meat, related to biochemical and genetic mechanisms include the formation of carcinogenic agents like nitrous components, heterocyclic amines and polycyclic aromatic hydrocarbon. The ingestion of processed meat has been associated to the increase of the fecal concentration of nitrous compounds, due to the nitrous compounds present in the meat. These are alkaline agents able to react with the DNA cell and alter its nitrogen basis, contributing to start a carcinogenesis. This same effect was not observed in the white meat such as birds and fish\(^2\)-\(^3\).

The main clinical manifestations of the diagnosis of this cancer are related to the anatomic location, to the stage of the neoplasia and to the portion of the impaired intestinal segment. The symptomatology of colon cancer is identified by the clinical history and physical exams, alterations in the intestinal habit, such as the change in the frequency of evacuation, caliber of the feces and presence of blood in the feces, anemia, abdominal pain and flatulence. In the rectal cancer there is generally complaint of tenesmus, rectal pain or anal bleeding\(^6\)-\(^8\).

The therapeutical forms are anti-neoplastic chemotherapy, radiotherapy and, as primary treatment, the surgery, and they may be indicated in association. The surgical procedure consists in the removal of the affected intestinal portion and in the lymph node excision near this region in order to avoid metastasis, whose organ of higher synergy is the liver\(^6\)-\(^9\).

The early detection of CC is made with the research of the blood hidden in the feces, in subjects from 50 years of age on, with risk factors and when some alteration is identified, colonoscopy is indicated.

The confection of intestinal ostomies (colostomy or ileostomy) can be temporary or definitive with terminal location or in the loop. The temporary
derivations have the purpose to protect anastomoses of high risk of dehiscence and the reestablishment of the intestinal flow, without the need of laparotomy (4-6).

The terminal colostomy is resulting from surgery such as abdominoperineal resection of the rectum or after the surgery of Hartmann (sigmoidectomy or rectosigmoidectomy with closure of the rectal stump), in cases of CC in a more advanced stage, which makes the reconstruction of the intestinal flow impossible (4-6).

The construction of an intestinal ostomy is a chance of survival facing this clinical diagnosis and it is fundamental for the physiological recovery and rehabilitation of the patient. The selection of the place of the stoma in the preoperative phase is extremely important, once the patient must be able to visualize it and also to promote self-care with security and comfort. A distance of about five centimeters from the umbilical scar, of the bone prominences, of the skin folds and of the previous scars located on the recto-abdominal muscle is recommended (4).

The confection of the stoma generates difficulties in the initial phase of returning home, once they face some problems, both physical as well as psychological ones, with consequent need of changes in the everyday activities. The teaching of self-care assures independence to the stoma patient in his care concerning the family and the health professionals. So, the stoma patient can distinguish the complications of his stoma, as well as important difficulties in the maintenance and change of devices. The education of the patient and the planning of hospital discharge are vital components of the assistance of perioperative nursing (10).

The planning of self-care teaching presupposes the evaluation of the clinical and socio-demographic data and the conditions for home self-care, which provides the choice of teaching strategies adequate to the reality of each patient/family member.

After the hospital discharge, the process of living as an intestinal stoma patient begins. This process can be favored with the teaching of individualized self-care, once each person presents different reactions facing the situation of change in the body image, the need to learn new health care, the use of devices and the clinical assistance of control of the oncological disease (11-12).

Therefore, the present study aims at identifying and evaluating the evidences found in the national and international scientific literature on teaching strategies on self-care for adult/elderly intestinal stoma patients and their effectiveness so that this information can guide the practice of nursing and scientific researches.

**Method**

It is an integrative review of the literature which has the objective to search researches made and consists in the analysis of multiple studies which allow general conclusions concerning the area of study (13-14).

The integrative review, when allowing the synthesis of knowledge of the studies included in the review, enables the health professional who rendered the care to take decisions concerning the interventions that could result in a more effective care for the organization consolidating the clinical practice to the scientific foundation (13-16).

This method of review is one of the purposes of the Practices Based on Evidence (PBE), defined by Archie Cochrane, which is characterized by an approach turned to clinical care and to teaching based on the knowledge and the quality of evidence. Its advantage is that it allows the simultaneous inclusion of the experimental and quasi-experimental researches, having the potential to build knowledge in nursing, producing founded knowledge so that the nurses can perform a clinical practice of quality (13-15,17).

The evidences were classified in seven levels. Level I: Studies of systematic review or meta-analysis of controlled randomized clinical essays; level II: Studies of well-delineated controlled randomized clinical essays; level III: Studies of well-delineated clinical essays non-randomized; level IV: Cohort studies and studies of well-delineated case-control (non-experimental); level V: Studies of systematic
review of descriptive and qualitative studies; level VI: Evidences of only one descriptive and qualitative study and level VII: Evidences originated from the opinion of authorities and/or reports of a committee of specialists.\(^{(18)}\)

In this sense, the guiding question for this study was: Which are the strategies used for the teaching of self care of adults/adults stoma patients? The criteria of inclusion of the studies in this integrative review were articles which approached strategies of teaching of self-care for intestinal stoma patients, indexed in the following data bases: MEDLINE, PUBMED, CINAHL, LILACS and COCHRANE published in Portuguese, English and Spanish, in the last six years (2005 a 2011), obtained integrally and that would approach the demands of learning of intestinal stoma patients and the strategies used.

The search in all databases was made through the crossings among the descriptors: self-care in rehabilitation, teaching, ostomy and family nursing. In the databases of CINAHL we obtained a total of 457 scientific articles, in the Medline, 242 articles, in the Lilacs, 41 articles, in the Pubmed, 3453 articles and in Cochrane, 58 scientific articles.

After the reading of the titles and briefings and according to the pre-established criteria of inclusion and exclusion, 25 publishings were selected. A detailed analysis was made, which reached a sample of seven scientific articles for the study.

In this integrative review 25 integral articles were analyzed, from which six were selected referring to the database CINAHL and one to the database LILACS. Of those, 10 studies were concomitantly in the CINAHL, PUBMED and MEDLINE. No study was obtained in the databases COCHRANE. The final sample was composed of seven scientific articles, as shown in figure 1.

### Results

Study 1 (level of evidence II) presented the research with the use of multimedia program of teaching on self care for stoma patients and behavior of the stoma patients in postoperative period. The patients who received that teaching improved the knowledge on self-care, attitudes and behavior in a statistically significant way, when compared to those who received conventional teaching on the same content. In the long term, this study showed that the multimedia packages can improve the involvement of the patient for the care with ostomy, with improvement of the capacity for self-care.

<table>
<thead>
<tr>
<th>Study No.</th>
<th>Title</th>
<th>Author (s)</th>
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<td>4</td>
<td>Teaching stoma patients to self-care</td>
<td>Black P.</td>
<td>Nurs Resid Care. 2009.</td>
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Figure 1 – Demands of learning of the intestinal stoma patients and strategies used, according to the titles, authors, publishing and year of publication

Study 2 (level of evidence IV) explored the satisfaction of the patient in different aspects of the follow-up of assistance to health in treatment for CC, the receptivity concerning the alternative strategy for the teaching of self-care with telephone follow-up. The nurses specialized in oncology were responsible for providing information and for the clinical experience. The patients received telephone follow-up, the
male patients showed higher levels of availability to accept this approach than the female patients. The satisfaction of the care offered by the nurses and the acceptance of the patient as to the use of telephone in the follow-up of the surgery point at the feasibility of this alternative in the follow-up of these surgical patients after the hospital discharge.

Study 3 (level of evidence II) verified the costs and the efficiency of teaching on self-care with ostomy and equipment, with a multimedia program of learning and a program of conventional teaching. These programs of multimedia teaching in health not only offer useful information to the patients in the absence of health professionals, but also increase the supplied information on the traditional clinical practice. The frequency of knowledge of self-care, the attitude of self-care and the behavior of self-care were measured. Patients in the group of learning of the multimedia teaching showed results significantly better in the measures of efficacy, and the relations of cost showed that the model of learning proposed was better than the conventional model, after one cycle of intervention. This research provides useful information for those who would like to improve the capacity of self-care of stoma patients.

Study 4 (level of evidence VI) showed the strategy of teaching directed to the stoma patient on self-care with the stoma at home and provided information of support and health. In this sense, it also shows that the success of rehabilitation of the stoma patient depends on several factors, such as the type of the stoma, whether temporary or permanent, the understanding about the correct use of the equipment and collecting bags and the comprehension of the aging process, which are fundamental. It also highlights that the role of the caregiver at home is to help in the care of a stoma patient and it requires a degree of experience and knowledge. The caregiver must also be alert and understand the physical emotional and psychosocial needs of the elderly stoma patient.

Study 5 (level of evidence VI) approached the development of a tool of interactive education for the nursing care of the stoma patient through the internet or through a CD-ROM or DVD combining ways of information, including live class and e-class. This interactive educational resource is indicated to help students on the care and practices of nursing assistance to stoma patients. This educational tool has the objective to improve knowledge and abilities of the people working in the nursing assistance to the stoma patients in their self-care, to promote rehabilitation with specific focus. This method showed that the nursing professionals searched the expansion of their knowledge and the assistance to the stoma patient using other ways which lead to learning beyond the class-room. However, a higher comprehension of this method compared to the traditional method was not evident. This interactive educational resource helped the students in the development of the nursing assistance to the stoma patient.

Study 6 (level of evidence VI) illustrated an interactive method of a program of permanent education on care to stoma patients in the primary and secondary attention, with the objective to increase the knowledge and qualification of the nurses. This program was made out of working hours, being valued by the nursing professionals despite the initial resistance of some. This program instrumentalized the nursing professional for the teaching of self-care of the stoma patient and for the planning of hospital discharge, besides making a better integration between primary and secondary attention possible.

Study 7 (level of evidence VI) made a clinical study with intestinal stoma patient, applying Orem’s theory of self-care. The theory professes that all human beings have the potential to develop their intellectual abilities and practices, besides the essential motivation for self care. So, the patients can improve, once self-care is learned and it is not instinctive and proposes steps and rules for the nursing practice, such as: initial contact with the patient who requires care; continuity of the care in order to develop the nursing actions; stage of preparation of the patient to develop actions of care, independently of the nursing supervision. The
nurses must consider the care centered in the family as an integrating part of the planning of nursing assistance, considering the individual needs of the patients.

**Discussion**

The analysis of seven studies on the strategies of teaching of self-care for the intestinal stoma patients made the identification of different strategies used in the perioperative teachings of these subjects possible, with the inclusion of aspects which favored the learning of self-care, as attitudes and behavior on the surgery and its consequences.

The strategies of teaching showed the feasibility of those alternatives in the follow-up of these surgical patients after the hospital discharge. The training of the health professionals for the teaching of self-care of an intestinal stoma patient contributes for the quality of the assistance rendered.

The development of strategies of teaching for self-care must be understood as a partnership between the patient and the health professional, in which the problems are identified with the definition of appropriate actions for the learning of this clientele.

The development of teaching of self-care presupposes the dialogical interaction of the health professional with the intestinal stoma patient or candidate to an ostomy, the insertion of the family and the establishment of demands of self-care and evaluation of the potential of the patient for self-care.

The teaching of self-care must happen in the perioperative phase, with intervention in the preoperative phase, which, besides the demarcation of the place of the stoma, the teaching of the patient and his family regarding the surgery and its consequences and self-care; and it favors the adaptation of a new condition and minimizes the effect caused by surgical mutilation. In the postoperative phase, the teaching of self-care with ostomy and equipment must be continued, as well as the care with the wound, eating, physical activities, continuation of the daily and labor activities and the conduction to the Program of Stoma Patients of the Unified Health System.

The care of the stoma patient is based on the philosophy of self-care and is directed to the autonomy of the patient, to the self-confidence, to the personal responsibility and to the personal initiative.

The content of teaching is based on what the patient identifies as necessity, from the observations made by himself, by his family and also by the health professionals. The nursing professionals have a fundamental role in the recovery and reach of rehabilitation of the intestinal stoma patient, by the characteristic of their work of assistance to the patient, which makes the following points possible: a longer period of time of contact and the establishment of a greater link in the teaching of the patient and his family, with approach of physical and psycho-social aspects, such as diet, odor control and handling and changing of equipment, self-esteem, corporal image, wearing clothes and sexuality.

It was possible to verify that the different strategies of teaching, as well as the clinical and social data are important to analyze the capacity of the patients for self-care. The nurse needs to have technical and scientific knowledge on the surgical technique, demarcation of the stoma, types of treatment and possible complications, besides developing abilities for the teaching of self-care for the patient and his family members.

In this teaching, the family member must be prepared to be alert and identify physical or psycho-emotional problems of the intestinal stoma patient, in order to pursue the necessary professional support in the institution where the treatment is occurring.

The capacity of self-care must be evaluated from the development of the abilities of the stoma patient and his family member, so that they can have autonomy and independence in the taking of decisions regarding the types of care that they can take, as well as identify the need of help from other members of the family.

The importance of the role of the nursing professional is pointed out in the pursuit of subsidies...
which favor the planning of the teaching for the stoma patient and his family, as well as their preparation to offer professional support to make the physiological recovery and the reach of rehabilitation of intestinal stoma patient possible.

Different strategies of teaching profess the assistance of the needs of each patient, with the inclusion of aspects that favor the learning of self care, such as attitudes and behavior concerning the surgery and its consequences, the development of motor, cognitive, interpersonal abilities and the necessary adaptations to deal with the condition of the stoma patients.

Conclusion

In brief, according to the sample of this study, composed of seven scientific articles, there was a predominance of levels of evidence II and VI, from the articles selected 4 (57%) were classified with level of evidence VI, 2 (28%) with level of evidence II and 1 (14%) with level of evidence IV.

There is the need to have more studies on the strategies of teaching of self-care for intestinal stoma patients, once part of these studies still showed to be limited, once they did not demonstrate effectiveness of the use of these strategies, that is, the comparison of the teaching of digital bases related to the teaching of self-care in a traditional way, nurse-patient. However, the studies of the sample brought important aspects for the clinical practice in perioperative nursing.

The strategies of teaching researched in the studies showed the feasibility of those alternatives in the follow-up of those surgical patients after hospital discharge, thus contributing for the quality of the assistance rendered.

Strategies which involve more technological resource are not always feasible because, in the reality in which these studies were made, there are cultural and social economical aspects which affect such results, such as the educational level to make the patient manipulate the available materials whether they are manual or digital media among others, however, in the Brazilian reality such strategy cannot obtain the expected success due to the educational levels existing in the population with intestinal ostomy that come from the Brazilian lower classes. Considering the necessities of learning of self-care of the patient/family member and their conditions, and also the availability of communitarian and health institutions resources for the implementation of the strategies, which also requires the active participation of the subjects involved, which allows dialogical relation, autonomy and independence in the taking of decisions on the care they managed to take. The need of help from other members of the family is also present, as well as the pursuit of a resolution through specialized assistance by the health professionals.

Collaborations

Silva J, Sonobe HM, Buetto LS, Santos MG, Lima MS and Sasaki VDM contributed for the conception, analysis, interpretation of the data, writing of the article and final approval of the version to be published.

References

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