



REVISIONES

Effect of educational intervention in postoperative people with intestinal elimination stomies: systematic review

Efeito da intervenção educativa no pós-operatório de pessoas com estomias intestinais de eliminação: revisão sistemática

Efecto de la intervención educativa en el postoperatorio de personas con estomias intestinales de eliminación: revisión sistemática

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ABSTRACT:

Objective: To identify the effect of educational intervention in the postoperative period of people with intestinal elimination ostomies.

Methods: Systematic review of the literature on PROSPERO: 42018094601 carried out in April 2018, in the bases MEDLINE, Web of Science, CINAHL, SCOPUS, Cochrane, and LILACS and BDNF via the Virtual Health Library (VHL), in addition to the reference lists of articles selected for finding additional relevant literature (including uncontrolled studies, controlled studies and randomized controlled trials) and quasi-experimental, without language and time restriction.

Results: 6 studies were selected and the type of most prevalent educational was standard education for the control group and standard education plus telephone follow-up for the experimental group. The majority of the participants were 50 years old and the duration of the educational interventions varied from 3 to 6 weeks.

Conclusion: There was a positive effect of educational intervention in the postoperative period of people with intestinal elimination ostomies in the following aspects: knowledge, satisfaction, hospitalization time, physical, mental and social aspects, quality of life, knowledge about self-care practices with feeding and ostomy, adjustment to the ostomy and complications.

Key words: ostomy; patient education as topic; postoperative period; nursing.

RESUMO:

Objetivo: Identificar o efeito da intervenção educativa no pós-operatório de pessoas com estomias intestinais de eliminação.

Método: Revisão sistemática da literatura registrada no PRÓSPERO: 42018094601 y realizada em abril de 2018, nas bases MEDLINE, *Web of Science*, CINAHL, SCOPUS, *Cochrane*, e LILACS e BDNF via Biblioteca Virtual em Saúde (BVS), além das listas de referência dos artigos selecionados para encontrar literatura relevante adicional. Incluíram-se artigos com desenho experimental (incluindo estudos não controlados, estudos controlados e ensaios clínicos randomizados e controlados) e quase-experimental, sem restrição de idioma e tempo.

Resultados: Foram selecionados 6 estudos e o tipo de intervenção educativa mais prevalente foi educação padrão para o grupo controle e educação padrão mais acompanhamento telefônico para o grupo experimental. A maioria dos participantes tinha idade a partir de 50 anos e o tempo de duração das intervenções educativas variou de 3 até 6 semanas.

Conclusão: Verificou-se efeito positivo da intervenção educativa no pós-operatório de pessoas com estomias intestinais de eliminação nos aspectos: conhecimento, satisfação, tempo de internação, aspectos físicos, mentais e sociais, qualidade de vida, conhecimento sobre práticas de autocuidado com alimentação e estomia, ajustamento a estomia e complicações.

Palavras-chaves: ostomia; educação do paciente como tema; pós-operatório; enfermagem.

RESUMEN:

Objetivo: Identificar la efectividad de la intervención educativa em el postoperatorio de personas con estomias intestinales de eliminación.

Método: Revisión sistemática de la literatura registrada en el PRÓSPERO: 42018094601 y realizada en abril de 2018, en las bases MEDLINE, *Web of Science*, CINAHL, SCOPUS, *Cochrane*, LILACS y BDNF vía Biblioteca Virtual em Salud (BVS), además de las listas de referencia de los artículos seleccionados para encontrar literatura relevante adicional. Se incluyen artículos con diseño experimental (por ejemplo, estudios no controlados, estudios controlados y ensayos clínicos randomizados y controlados) y cuasi-experimental, sin restricción de idioma y tiempo.

Resultados: Se seleccionaron 6 estudios y el tipo de intervención educativa más prevalente fue la educación estándar para el grupo de control y educación estándar más acompañamiento telefónico para el grupo experimental. La mayoría de los participantes tenía edad a partir de 50 años y el tiempo de duración de las intervenciones educativas varió de 3 a 6 semanas.

Conclusión: Se verificó efecto positivo de la intervención educativa en el postoperatorio de personas con estomias intestinales de eliminación en los aspectos: conocimiento, satisfacción, tiempo de internación, aspectos físicos, mentales y sociales, calidad de vida, conocimiento sobre prácticas de autocuidado con alimentación y estomia, ajuste a la estomia y complicaciones.

Palabras clave: ostomy; educación del paciente como tema; postoperatorio; enfermería.

INTRODUCTION

Intestinal elimination ostomy refers to the surgical opening in the abdomen, externalizing a portion of the intestinal segment, for stool diversion, which may be temporary or permanent and the consistency of the stool varies according to the intestine portion where the surgery was accomplished.^(1,2) The main causes for this type of ostomy are bowel cancer and inflammatory bowel diseases.⁽²⁾

There is shortage of statistics in the national and international scenario regarding the epidemiology of ostomies.⁽³⁾ The estimate of the Brazilian Association of Ostomates (ABRASO),⁴ in Brazil (2015), totalized 80 million stomized people.

Many people do not know how to deal with the changes occurred after producing the ostomy and require educational interventions to address them, to ensure care continuity, to minimize possible complications and to increase Quality of Life (QoL).⁽⁵⁾

These changes impair QoL, even for those who received adequate surgical planning in the preoperative period.^(6,7) Proper perioperative care and teaching are predictive on the ability of the stomized person to feel safe in managing ostomy and complications.⁽⁸⁾ Complications such as dermatitis, peristomy, prolapse, retraction, hernia, among others, may come to occur and contribute to dissatisfaction and discomfort in the stomized person, hampering their rehabilitation.^(1,3)

Thus, nurses should, in the preoperative period, support, encourage and reinforce information related to the ostomy and the recovery of the stomized person.⁽⁹⁾ However, preoperative education may be unfeasible due to lack of resources or to geographic factors, making post-operative education essential for hospital discharge.⁽⁷⁾

Postoperative educational interventions in people with intestinal elimination ostomies are essential for education, ostomy care, early identification of complications, skin peristomy treatment,⁽⁸⁾ improving QoL,⁽⁹⁾ minimizing hospitalization time and reducing hospital costs.⁽⁷⁾

In France, a systematic literature review described the types of educational interventions developed for adults who were in the perioperative period of intestinal elimination ostomy for colorectal cancer and examined their effects on QoL, psychosocial skills and self-management.⁽¹⁰⁾ In the United States of America (USA), another systematic review identified the efficacy of educational interventions in reducing complications, length of hospital stay, and post-operative readmissions for people with all types of cystitis.⁽¹¹⁾

Although the literature points out that the effect of educational intervention in the postoperative period of people with intestinal elimination ostomies is beneficial, there are no systematic review studies on this theme. The systematic reviews that exist to date address educational interventions for people with ostomy due to colorectal cancer⁽¹⁰⁾ and specifically in the postoperative period, involve all types of ostomies.⁽¹¹⁾

In this way, the available evidences arising from this study can contribute to nurses, teachers and students as an increment in the care-related context, besides subsidizing research development.

In this context, this review aims to identify the effect of using educational intervention in the postoperative period of people with intestinal elimination ostomies.

METHOD

This systematic review was recorded in PROSPERO: [42018094601](https://www.crd.york.ac.uk/PROSPERO/record/42018094601).

Based on methods of review, the knowledge about the effect of educational intervention in the postoperative period of people with intestinal elimination ostomies was synthesized,^(12,13) by means of the following stages: definition of the research question and inclusion and exclusion criteria, search and selection of studies, evaluation of methodological quality for included studies, data extraction, analysis and

synthesis of studies, bias identification, summarization, result submission and interpretation.^(13,14)

The Population, Intervention, Comparison and Results (PICO) strategy was used to formulate the research question: “What is the effect of educational intervention in the postoperative period of people with intestinal elimination ostomies?” and to choose the controlled and uncontrolled descriptors (Table 1).

Table 1: Research question and controlled and uncontrolled descriptors according to the PICO strategy. Teresina, PI, Brazil, 2018:

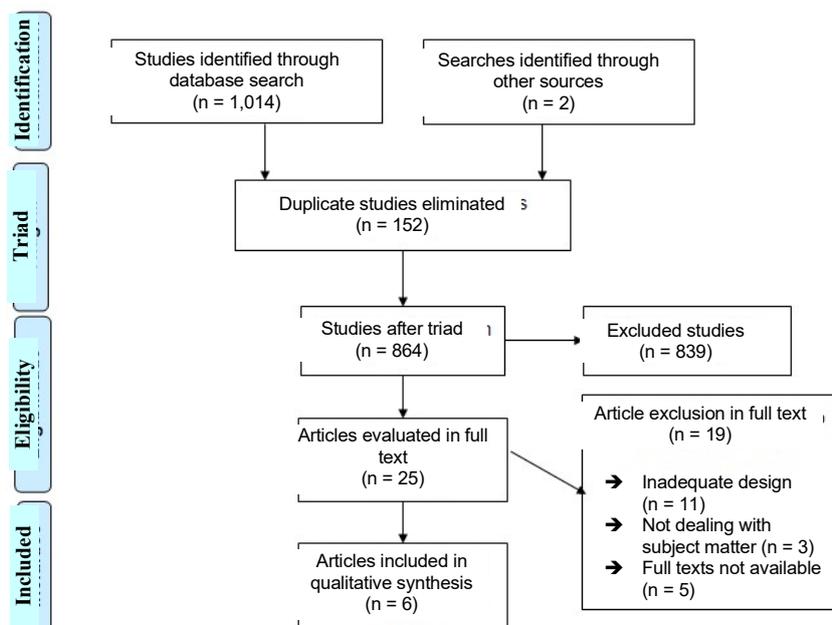
PICO	SEARCH DESCRIPTORS	TYPE
(P) People with intestinal elimination ostomies	"Ostomy"/ "Enterostomy"/ "Colostomy"/ "Ileostomy"/ care/ "ostomy adjustment"/ileostom*/colostom*	Medline via Pubmed
	Ostomy/Enterostomy/ Colostomy/ "Ileostomy"/Ostomy Care/ileostom*/colostom*	Cochrane
	"Ostomy" /"ostomy" /"Ostomy Care"/"Enterostomy"/"Colostomy"/"Ileostomy"/ "Colostomy adjustment"	CINAHL
	Ostomy/"Ostomy Care"/Enterostomy/Colostomy/Ileostomy/Colostom*/Ileostom* / "Colostomy	Web of Science
	ostomy/colostom*/ileostom* /"Ostomy Care" /enterostomy/colostomy/ileostomy /"Colostomy adjustment"	Scopus
	ostomy/colostomy/colostom/ileostomy/ileostomy*/enterostomy/"Colostomy adjustment"/estomia/estomía	Lilacs/BDE NF via the VHL
(I) Educational intervention	“patient education handout”/“patient education as topic”/“patient education”/“Telephone Consultation”/“cell phone”/ "cell"/"phone"/"cell phone"/"cellular"/"cellular phone"/"counselling"/"telephone counselling"/ "telephone follow up"/"telephone interview"/"interview"/"interviews as topic"/"interviews"/"video recording"/"video"/ "recording" /"teaching"/"methods"/"teaching methods"/"videotape"/"videotape recording"/"education"/"telenursing"/Telemedicine"/"health education"/"health"/"education"/"educational technology"/"educational"/"technology"/therapeutic education	Medline via Pubmed
	Patient Education as Topic/Patient Education/Telephone/Interviews as Topic/Cell Phone/Counseling/Telephone counselling/telephone follow-up/Telephone Interview/Video Recording/Teaching/Telenursing/Telemedicine/Health Education/Educational Technology/therapeutic education	Cochrane
	"Patient Education"/"Patient Education as Topic" /"Telephone"/"Telephone Consultation/ "Cellular Phone"/ "Counseling"/"Telephone counselling"/"telephone follow-up"/ "Telephone Interview"/"Interviews"/"Interviews as Topic"/ "Videorecording"/"Video Recording"/"therapeutic education"/"Teaching Methods"/"video teaching"/"Cell Phones"/"Telenursing"/"Telemedicine"/"Health Education"/	CINAHL

	"Educational Technology"	
	"Patient Education"/"Patient Education as Topic"/"Telephone"/"Telephone Consultation"/"Cellular Phone"/"Counseling"/"Telephone counselling"/"telephone follow-up"/"Telephone Interview"/"Interviews"/"Interviews as Topic"/"Video recording"/"Teaching Methods"/"video teaching"/"Cell Phones"/"Telenursing"/"Telemedicine"/"Health Education"/"Educational Technology"/ "Therapeutic Education"	Web of Science
	"Patient Education"/"Patient Education as Topic"/"telephone"/"Telephone Consultation"/"Cellular Phone"/"counseling"/"Telephone counselling"/"telephone follow-up"/"Telephone Interview"/"interviews"/"Interviews as Topic"/"videorecording"/"Video Recording"/"Teaching Methods"/"video teaching"/"Cell Phones"/"telenursing"/"telemedicine"/"Health Education"/"Therapeutic Education"/"Educational Technology"	Scopus
	"Patient Education"/"Patient Education as Topic"/"telephone"/"Telephone Consultation"/"Cellular Phone"/"counseling"/"Telephone counselling"/"telephone follow-up"/"Telephone Interview"/"interviews"/"videorecording"/"Teaching Methods"/"video teaching"/"Telenursing"/"Telemedicine"/"Health Education"/"Therapeutic Education"/"Educational Technology"	Lilacs/BDE NF via the VHL
	All eligible comparators	
(O) Postoperative	"postoperative period"/"postoperative"/"period"/"Continuity of Patient Care"/"Continuity of care"/"self management/behaviour therapy/empowerment/self efficacy)	Medline via Pubmed Web of Science
	Postoperative Care/Postoperative Period/Continuity of Patient Care/Continuity of care/self efficacy/empowerment/behavior therapy/self management	Cochrane
	"Postoperative Care"/"Postoperative Period"/"Continuity of Patient Care"/"Continuity of care"/"self efficacy"/"empowerment"/"behavior therapy"/"self management "	CINAHL
	"Postoperative Care"/"Postoperative Period"/"Continuity of Patient Care"/"Self Efficacy"/empowerment/"Behavior therapy"/"Self Management"/postoperative	Scopus
	"Postoperative Care"/"Postoperative Period"/"Continuity of Patient Care"/"Self Efficacy"/"empowerment"/"Behavior therapy"/"Self Management"/"Continuity of care"	Lilacs/BDE NF via the VHL

Searches were conducted in April 2018, in the bases *Medical Literature Analysis and Retrieval System on-line* (MEDLINE), *Literatura Latino-Americana e do Caribe em Ciências da Saúde* (LILACS) and *Banco de Dados em Enfermagem* (BDENF) via the *Virtual Health Library* (VHL), *Web of Science*, *Cumulative Index to Nursing and Allied Health Literature* (CINAHL), *Cochrane Central Register of Controlled Trials da Cochrane Library* and SCOPUS and reference lists of the selected articles were also searched to find additional relevant literature. The controlled and uncontrolled MeSH vocabulary descriptors of U.S. *National Library of Medicine* (NLM), descriptors of *Ciências da Saúde* (DeCS) and CINAHL titles were used, and crossings were made among the terms with the Boolean logical operators “OR” and “AND”.

Articles with experimental design (including uncontrolled studies, controlled studies and randomized controlled clinical trials) and quasi-experimental design were included, without language and time restriction. Finally, the following elements were excluded: articles that carried out an educational intervention with people younger than 18 years old, duplicated, with a high risk of bias and who did not answer the research question (Figure 1).

Figure 1- Flowchart for identification, screening, eligibility evaluation and inclusion of articles:



Search in the knowledge bases and data collect were accomplished independently by two reviewers by reading titles and abstracts and full text reading. *EndNote* was used to aid in the exclusion of duplicate studies and data extracted from the adapted form⁽¹³⁾ containing: reviewer, authors, year/local, design/evidence level, intervention type, sample (n), gender, age, type and permanence of the ostomy, duration, theory/content, effect and even bias evaluation data, such as: adequate randomization, blind allocation, blinding scheme, follow-up losses, outcome measures. Any discrepancy on the evidence level and bias was resolved by consensus or discussion with a third party investigator.

The included articles were descriptively analyzed and the results summarized and submitted through tables and discussed in two categories: characterization and effect of educational interventions.

RESULTS

Characteristics of the articles

The most recent articles were published in 2016^(15,17) and the oldest ones in 2013.⁽¹⁸⁾ The articles were written in Peru¹⁵, Norway⁽¹⁶⁾, Iran⁽¹⁷⁾, China⁽¹⁸⁾, Mexico⁽¹⁹⁾ and Turkey.⁽²⁰⁾ The most prevalent type of educational intervention was standard education for the control group and standard education plus telephone follow-up for the experimental group^(17,18) and the evidence levels were: 1.c^(16,18), 2.c⁽²⁰⁾, 2.d⁽¹⁵⁻¹⁹⁾

Table 1 - Characteristics of the articles. Teresina, PI, Brazil, 2018:

Authors	Year/Locati on	Study design/ Evidence level	Type of Intervention Educative
(A ¹):Culha; Kosgeroglu; Bolluk.	2016/Peru	Quasi-experimental/2.d	Standard Education/Education for self-care.
(A ²):Forsmoet et al	2016/Norway	Randomized Clinical Trial/1.c	Standard education /Enhanced Recovery After Surgery (ERAS)
(A ³):Iraqi; Ahmadi	2016/Iran	Randomized Clinical Trial/1.c	Standard education/ Phone follow up
(A ⁴):Almendárez- Saavedra et al.	2015/Mexico	Quasi-experimental/2.d	Standard education
(A ⁵):Karabulut; Dinç, Karadag.	2014/Turkey	Quasi experimental/2c	Standard education/ Planned group interaction program
(A ⁶):Zhang et al	2013/China	Randomized Clinical Trial/1.c	Standard education/ Phone follow up

Caption: (Aⁿ)- Identification of the article.

Characteristics of Educational Interventions

Most of the people were male^(15-16, 18-20), with an average age starting from 50 years old^(15-17,18-20) and had a colostomy or ileostomy in the same study.^(15,16,19,20)

Duration ranged from 3 to 6 weeks. One intervention used Bandura's Social Learning Theory.⁽¹⁸⁾ Overall, the effect was positive in the following aspects: knowledge, satisfaction, hospitalization time, physical, mental and social aspects, QoL, knowledge about self-care practices with feeding and ostomy, adjustment to the ostomy and complications (Table 2).

Table 2- Characteristics of the educational interventions. Teresina, PI, Brazil, 2018:

Sample (n) Age, gender, Type and permanence of the ostomy	Duration	Theory/Content	Effect
<p>(A¹) n = 64 Age: 50.87-50.75 years old Gender: 21 females and 43 males Permanent colostomy and ileostomy</p>	<p>3 weeks</p>	<p>Theory* Standard Education: there was no training and had routine nursing care. Education for self-care: Definition of ostomy, causes for surgery, changes of life after surgery, general conducts, collecting equipment, peristomal skin, nutrition, hydration and elimination, psychological support, physical activity.</p>	<p>At the last meeting, the ostomy knowledge scores in the intervention group (14.00 ± 0.43) were significantly higher than those in the control group (7.50 ± 0.70) (p <0.001). There was a relationship between the self-care agency and the ostomy-related knowledge scores at the last meeting (r = 0.466, p <0.01).</p>
<p>(A²) n=122 Age: 64-66 Gender: 47 females and 75 males Ileostomy and colostomy Permanence*</p>	<p>30 days</p>	<p>Theory* Standard Education : perioperative care; ERAS: Instruction by the stomatotherapist nurses from a protocol on perioperative care.</p>	<p>Significantly lower hospital stay in the ERAS group - 6 days [2-21 days] versus standard education - 9 days [5-45 days] (p <0.001).</p>
<p>(A³) n=70 Age: 50.86 -52.60 Gender: 43 female and 23 male Permanent colostomy</p>	<p>3 months</p>	<p>Theory* Standard Education* Phone follow up: knowledge and skills in replacing and installing collecting equipment, frequency of exchange, skin care peristomy, cleaning of the ostomy, nutrition, diarrhea or constipation treatment, trips with colostomy, sexuality,</p>	<p>Significant differences between two groups in the physical (P = 0.007), mental (P<0.001) and social (P < 0.001) aspects. Telephone follow-up was significantly effective in QoL (P<0.001).</p>

		<p>food or substances that can cause odor in the stools and referral to health services to reduce the economic problems ostomy has imposed on the person and their social life.</p>	
<p>(A⁴) n=13 Age: 41.8 years old Gender: 11 males and 2 females. Colostomy, ileostomy and both types in one person; Permanence*</p>	Not informed	<p>Theory* Standard Education: self-care practices related to dietary needs and care with ostomy.</p>	<p>Knowledge about self-care practices in feeding and ostomy increased after the intervention (t = -3.570, t = -6.390, t = -3.695, respectively) with statistically significant differences (p <0.05).</p>
<p>(A⁵) n=50 Age: 51-60 years old Gender: 20 females and 30 males Colostomy and ileostomy.</p>	6 weeks	<p>Theory* Standard Education* Planned group interaction program: Guidelines on physiological, psychological, sexual and social impact; future plans, life adjustment with ostomy and suggestions related to this process.</p>	<p>This facilitated social adaptation in individuals with ostomy (p<0.05).</p>
<p>(A⁶) n = 103 Age: 52.9-55.3 Gender: 67 males and 36 females. Permanent colostomy.</p>	1 month after discharge.	<p>Bandura's Social Learning Theory. Standard Education: Pre and post-operative care involving the following: education of the person and demarcation of the ostomy site by stomatotherapist nurses, self-care, medications and</p>	<p>Adjustment to a better ostomy at 1 month of the experimental group 130.85 versus control 123.77, p = 0.083 and 3 months of the experimental group 136.11 versus control 124.32, p = 0.006. Satisfaction with greater care at 1 month of the experimental group 1.44 versus control 2.12, p = 0.000 and 3 months of the experimental group 1.45</p>

		outpatient follow-up. Phone follow up: evaluation, management option and evolution.	versus control 2.04, $p = 0.000$. Less complications in 1 month of the experimental group 82.7% versus control 58.8%, $p= 0.028$ and 3 months of the experimental group 78.8% versus control 56.9%, $p = 0.044$.
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*Missing Information

DISCUSSION

Characterization of the educational interventions

Among the socio-demographic characteristics, male gender and age above 50 years old were the most prominent. These variables also emerged in another study⁽²¹⁾. The older the men, the greater the number of chronic non-transmittable diseases installed in them.⁽²²⁾ Age over 50 years old is a risk factor for colorectal cancer considered to be one of the main causes for producing intestinal elimination ostomies.⁽¹⁹⁾

Half of the studies specified the permanence of the ostomies^(15,17,20) and, although this variable has been little explored, it is very important to predict the adjustment of the person to the intestinal elimination ostomy⁽²⁰⁾.

Effect of the educational interventions

Educational interventions were of individual⁽¹⁹⁾ and group modalities.^(15,16,20)

Contents were heterogeneous, favoring interventions with fragmented guidelines, contradicting the holistic imperative to the rehabilitation process of the stomized person.⁽²³⁾ These guidelines should not only involve technical aspects, but also the bio-psychosocial being for coping with obstacles and empowerment.⁽²⁴⁾

Three articles used printed material to reinforce learning^(15,16,19) and another one also used slides and videos.⁽¹⁵⁾ This can enable dialogue, bonding and a critical posture towards well-being, in addition to reinforcing the orientations and quality of the educational process.⁽²⁵⁾

Concerning the professional who carried out the individual or group educational interventions, there was a notable presence of the stomatherapist nurse, which may have positively influenced care for the stomized people. The stomatherapist nurse is a reference for support to the stomized people and, for this reason, there is a need for training and contracting nurses with this specialty so that they may contribute to and increase quality of care to the stomized people in health services. When these people are guided by stomatherapist nurses in hospital institutions in the perioperative period, their difficulties decrease and there is greater adaptation to the stomized condition.⁽²³⁾

It is worth noting that educational interventions did not involve the family. Guidelines should be provided for ostomy care also to the family, as they take part in this process

and provide support, as well as suffer with their loved one in the stomization process.⁽²⁴⁾

Regarding the effect, it was verified that interventions accomplished only through standard education were positive in the knowledge about self-care practices with feeding and ostomies after the intervention ($t = -3.570$, $t = -6.390$, $t = -3.695$, respectively) with statistically significant differences ($p < 0.05$)⁽¹⁹⁾.

In addition to standard education, telephone follow-up was used in some educational interventions^(17,18). This resource becomes feasible given the difficulties faced by stomized people to return periodically to the consultations due to economic and transportation barriers⁽²³⁾.

An article used a protocol for telephone assistance⁽¹⁸⁾ and the application of these instruments is important in the different health contexts to guide the clinical decision-making of the professionals.

With regard to theoretical support, a study⁽¹⁸⁾ used Bandura's Social Learning Theory. Bandura's theoretical assumption contributes to understanding the different behavior types, even given the similarities of knowledge and abilities⁽²⁶⁾

The systematic review has shown that the defined application of Theory in the stages of creation, implementation and evaluation of an educational intervention may come to contribute to effective change in the person's behavior. However, researchers need to appropriate knowledge of the Theory to make it work⁽²⁷⁾.

The telephone is an inexpensive and accessible resource for people follow-up accomplished in the postoperative period of the ostomies and the results of the interventions that were accomplished with it, confirm their positive effect on the adjustment of the ostomies, satisfaction, cost, readmission due to dehydration, length of stay in readmission and cost of readmission due to dehydration and physical, mental and social aspects.^(17,18) This can also be seen in other health conditions, for example, with diabetic people, with whom telephone intervention coded by nurses for a period of six months, showed benefits in self-care related to physical activity and feeding plan follow-up⁽²⁷⁾.

It is recommended to carry out educational intervention studies in the postoperative period for people with intestinal elimination ostomies living in developing countries. In addition, the content of the interventions should be supported by Theory and based on Guidelines for the care of people with intestinal elimination ostomies, involving the family. Also, what distance education resources can be considered for delivery of the interventions since, after all, we live in an increasingly globalized digital world, where computer and Internet may be allies in this process and minimize the temporal, economic, transportation and geographic barriers, probably faced by people who are stomized in the postoperative period and who need guidance at this time.

CONCLUSION

Educational interventions had positive effects on aspects, such as: knowledge, satisfaction, hospitalization time, physical, mental and social aspects, QoL, knowledge

about self-care practices with feeding and ostomy, adjustment to the ostomy and complications.

Most interventions were accomplished in developed countries, with males, who were 50 years old and approached people with colostomy or ileostomy in the same study. Content, apart from being heterogeneous, was built up without the contribution of any Theory, holistic approach or family inclusion. Finally, the duration of the educational interventions ranged from 3 to 6 weeks.

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