Original Article

Adaptive responses of colostomy patients before and after using an occlude

Respostas adaptativas de colostomizados antes e após o uso do oclusor

Respuestas adaptativas de personas con colostomías antes y después del uso de obturador

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Abstract

Objective: To understand the adaptive responses of colostomy patients before and after using an occluder.

Methods: This is a qualitative study with 19 colostomy patients who met the criteria for occluder recommendation. Data collected were through two interviews at different times, analyzed by the IRaMuTeQ software, proceeding with thematic content analysis from the perspective of Calilsta Roy's Adaptation Model.

Results: Before the use of an occluder, colostomy patients felt embarrassed, the collection bag triggered changes in daily activities, nutrition and the fear of leaks provided shame, isolation and reduction of religious activities. After using an occluder, there was a new expectation of living, of interacting. The changes occurred in the rescue of positive behavior in daily activities, such as dressing, rest and the satisfaction of resuming activities that were performed before colostomy.

Conclusion: It was found that the responses were ineffective before use and effective after using an occluder.

Resumo

Objetivo: Compreender as respostas adaptativas de colostomizados antes e após o uso do oclusor.

Métodos: Estudo qualitativo com 19 indivíduos colostomizados que atendiam a critérios de indicação do oclusor. Os dados coletados foram por meio de duas entrevistas em momentos distintos, analisados pelo software IRaMuTeQ procedendo análise de conteúdo temático sob o prisma do Modelo de Adaptação de Calista Roy.

Resultados: Antes da utilização do oclusor, os colostomizados sentiam-se constrangidos, a bolsa coletora desencadeou mudanças nas atividades diárias, nutrição e o receio de vazamentos proporcionou vergonha, isolamento e redução das atividades religiosas. Após o uso do oclusor, houve uma nova expectativa de viver, do interagir. As mudanças ocorreram no resgate no comportamento positivo em atividades diárias, como forma de vestir, repouso e à satisfação de retomar atividades que eram realizadas antes da colostomia.

Conclusão: Constatou-se que as respostas eram ineficazes antes do uso e eficazes após o uso do oclusor.

Resumen

Objetivo: Entender las respuestas adaptativas de personas con colostomías antes y después del uso de obturador.

Métodos: Estudio cualitativo con 19 individuos con colostomía que atendían criterios de indicación de obturador. Los datos fueron recopilados por medio de dos entrevistas en distintos momentos, fueron analizados por el software IRaMuTeQ y luego se realizó análisis del contenido temático bajo el prisma del Modelo de Adaptación de Calista Roy.

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Conflicts of interest: this study is part of a thesis entitled "*Qualidade de vida e adaptação de pessoas colostomizadas antes e após o uso do oclusor*", presented to the Graduate Program in Nursing, *Universidade Federal da Paraíba*.

Resultados: Antes de la utilización del obturador, las personas con colostomías se sentían avergonzadas, la bolsa colectora desencadenó cambios en las actividades diarias, nutrición y el temor de escapes ocasionó vergüenza, aislamiento y reducción de las actividades religiosas. Después del uso del obturador, hubo una nueva expectativa de vivir, de interactuar. Los cambios se vieron en el rescate del comportamiento positivo en actividades diarias, como forma de vestir, reposo y el placer al retomar actividades que realizaban antes de la colostomía.

Conclusión: Se constató que las respuestas eran ineficaces antes del uso del obturador, y eficaces después.

Introduction

The construction of an intestinal stoma implies limitations and difficulties that modify the affected individuals' routine and quality of life.[1] Physical and psychological changes, changes in plans, as well as financial concerns that consequently alter the dynamics of life, including daily life, as well as their family and marital conjuncture are inevitable.[2] Social issues, such as self-image, self-care and exposure to risks of effluent leakage, are linked to feelings of shame, fear, insecurity, invasion and suffering, usually caused by the incontinence of gases and feces and the lack of security, especially during public socialization. These facts are reflected in the love and working life and difficulties in adapting and accepting colostomy are still identified, which causes isolation.[3,4]

Professionals involved in stomatherapy care, the exclusive specialty of nurses, should be guided by theoretical-methodological knowledge and provide support for daily care and reintegration into the social sphere. They are responsible not only for technical care, but also for providing support for social insertion, considering the limitations and prejudices that involve colostomy patients.[5] Through the analysis of a person's behavior related to adaptive modes, it is possible to identify effective or ineffective responses in relation to the stimulus experienced and develop nursing care that reinforces adaptive responses and intervene in non-adaptive or ineffective ones.[6,7]

Starting from Callista Roy's adaptation framework, a person is seen as an adaptable holistic system, the latter being a comprehensive concept in scientific assumptions and means that the human being is able to adjust to changes in the environment, called stimuli, insofar as it faces resistance mechanisms and emits adaptive or ineffective responses in their behavior. Thus, people are subject to stimuli that require responses that may be adaptive effective or ineffective for the promotion of their integrity, and may be focal, contextual or residual.[7] The focal stimulus confronts the person immediately, attracts their attention and energy. Contextual stimuli (environmental factors) contribute to the effect of the local stimulus. All stimuli come together to generate a person's level of adaptation.

The desire to minimize the difficulties inherent in the adaptation process involves the improvement of equipment offered in the market and the medical care provided, as well as the continuity of nursing care, as a way to ensure its rehabilitation, autonomy and exercise of citizenship in a dignified and humane manner.[8] In this perspective, currently, there are two adjuvants that can be used to improve colostomy people's adaptation and quality of life, promoting the control of physiological eliminations, which are colostomy irrigation and occluder, the latter being used after irrigation or alone.

The occluder is a cylindrical plug, functions as a disposable prosthesis, composed of polyurethane foam, surrounded by a water-soluble film, pre-lubricated with an integrated activated carbon filter and aims to occlude the colostomy at its distal end, controlling the incontinence (elimination) of feces and gases (noise and odor).[9,10] Its use must be prescribed by a physician, and its recommendation is restricted to people with terminal colostomy. Studies point out the benefits of occluder used alone without colostomy irrigation.[11,12] Costs, limitations for its use, need for monitoring and training, and risk of leakage due to intestinal pressure are pointed out as disadvantages.[13] Randomized clinical trial emphasizes the importance of training to favor colostomy patients to reduce anxiety and increase quality of life during the rehabilitation process.[14] Thus in this study, occlusor was considered as a focal stimulus for adaptation.

Despite the benefits of this technology available, there is a gap in the assessment of results for colostomy people regarding the impact on quality of life

and adaptation. In this sense, studies that understand the adaptive responses of colostomy patients before and after using an occluder are essential, since the presence of a colostomy implies changes in quality of life, at the same time it demands adaptive needs in the physical and psychosocial spheres and also the importance of health professionals to base care with a view to promoting health and well-being of persons being cared for. Thus, the question is: how does an occluder used in definitive colostomy promote adaptation? Based on this foundation, this study sought to understand the adaptive responses of colostomy patients before and after using an occluder.

Methods

This is a qualitative study involving multiple case studies, conducted at the Center for Rehabilitation of Persons with Disabilities, linked to the Municipal Health Department of the municipality of João Pessoa, state of Paraíba, Brazil. Patients with recommendation for the use of an occluder, aged over 18 years, with a definitive end colostomy of one mouth, stoma protrusion with a diameter between 20 and 45 mm, pattern of up to three solid or pasty fecal eliminations per day, capacity for self-care and occluder prescription were included. People with stomach and/or peristomal complications were not included in the study.

In a survey conducted at the service, 323 colostomy people were identified, of whom 233 had a definitive colostomy, 72 had a definitive colostomy and no complications. Of these, 50 attended the service during the collection period, however, 13 refused to participate in the research and 11 did not meet the inclusion criteria for the use of occluder. Twenty-six people with definitive colostomy were invited, three did not adapt to the use of occluder due to device leakage and expulsion and four, due to the excessive presence of gases used the occluder, but associated with colostomy irrigation. Thus, the sample consisted of 19 people with definitive terminal colostomy, using an occluder.

Participants were invited to participate in the study when they presented to the service to receive material, care with the colostomy and medical or nursing consultation, between January and July 2019. After being informed about the objective of this study and signing the Informed Consent Form, participants were interviewed with an average time of 40 minutes.

The occluder used in the research was the one-piece Conseal®, as it is the only one available in Brazil and standardized at the research site. This occluder contains microporous adhesive and hydrocolloid barrier for attachment to the skin around the stoma. It is available in two sizes (35 and 45 mm). Patients' weight and height determine the use of a 35 or 45 mm occluder, according to the graph proposed by the manufacturer, as it offers subsidies for choosing the occluder rod size (length in millimeters) in relation to abdominal wall fat layer thickness.

Regarding the interviews, they were carried out in two moments by the main researcher with people who underwent colostomy in an office provided by the Center for Rehabilitation of People with Disabilities. Initially, we investigated the changes and difficulties after surgery before the use of occluder and was guided by the guiding question: How is your life after the colostomy? Then, participants received training for the use of occluder, and after 45 days, a new interview was conducted, in which we sought to identify the changes and transformations that occurred after the use of the device, with the following guiding question: How is your life after using a colostomy occluder? These questions were previously tested with five ostomized patients followed up in that service.

The interviews were recorded, with the permission of participants whose names were kept confidential, receiving only the identification by the letter (e), followed by the Arabic numeral from 1 to 19. Data were collected exhaustively until theoretical saturation considering the following elements: limits and integration of data with theoretical sensitivity. After the completion of the interviews, participants listened to the interview in order to validate the information provided. Participants were also identified in relation to sex, age, marital status, education, religion and monthly income.

The empirical data obtained through the interviews were transcribed and organized compos-

ing the *corpus* of analysis[15] which were processed with the aid of *Interface de R pourles Analyses Multidimensionnelles de Textes et de Questionnaires* (IRaMuTeQ), version 0.7 alpha 2. The *corpus* was processed in smaller sections, called Text Segments (TS), using the Descending Hierarchical Classification (DHC). Frequency >3 and χ^2 >3.84 ($p<0.005$) was considered for the definition of classes, formed from the similarity of the vocabulary present in participants' speeches.[16] Through classification, an in-depth reading was carried out according to the assumptions of thematic content analysis,[17] interpreting the speeches of each class for identifying symbolic dimensions regarding the use of colostomy occluder and identifying the recurrent categories from Callista Roy's Adaptation Model, defined a priori for understanding the phenomenon under study.[7]

The extracted social and clinical data were recorded and organized in a table format with the aid of Microsoft Excel®, Windows 2013 version, using simple descriptive statistics: absolute frequency, relative frequency, mean and standard deviation. The study elaboration sought to meet the steps recommended by COREQ, considering that it is an instrument composed of 32 items necessary for developing qualitative studies.[18]

The study followed the ethical precepts of Resolution 466/12, being approved by the Research Ethics Committee of the Health Sciences Center of the *Universidade Federal da Paraíba*, under Opinion 2,562,857, after authorization from the Municipal Health Department of João Pessoa, Paraíba, Brazil, CAAE 80964717.4.0000.5188 (*Certificado de Apresentação para Apreciação Ética* - Certificate of Presentation for Ethical Consideration).

Results

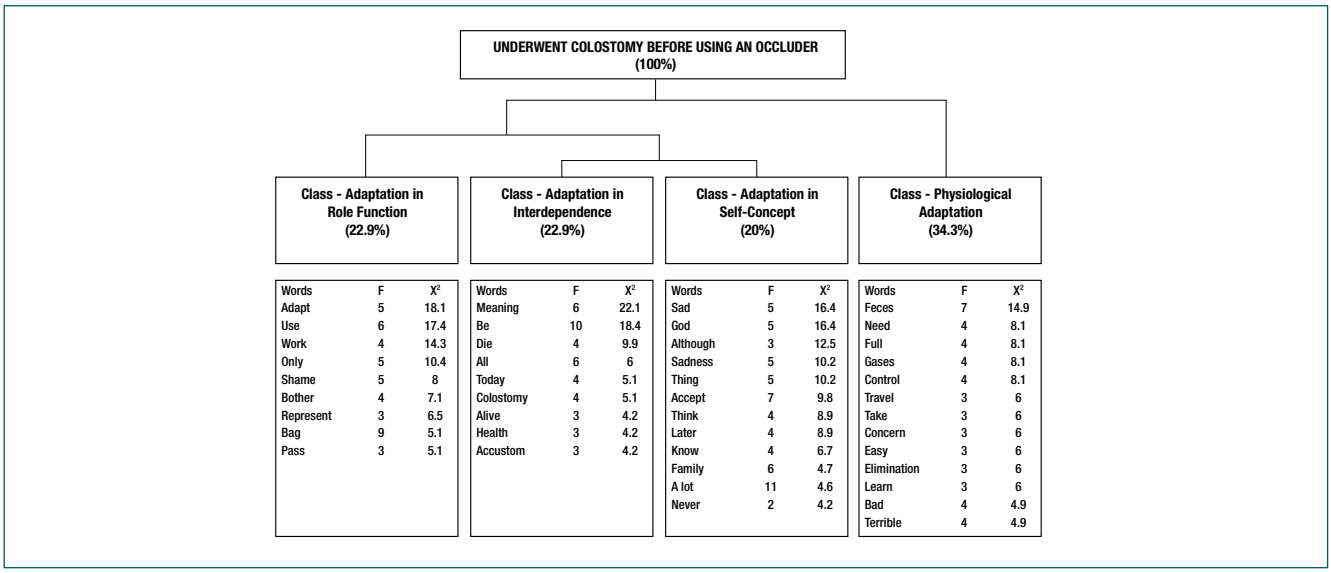
The study participants were between 41 and 79 years old, mean age 55.9 (±9.53). Thus, 57.9% were women, married and retired, 31.6% completed high school, 21.1% had higher education, 52.6% had a family income of three minimum wages, considering the minimum wage in force during the data collection period. Regarding the time of surgery for ostomy, it was observed that 89.5% performed it more than six months before the date of the interview. The text *corpus* analysis referring to the interviews conducted before the use of a colostomy occluder resulted in 655 forms, 2,251 occurrences, 402 active forms, with frequency ≥3.12 active forms and an average of 32.15 words, defining 70 analyzed segments, distributed in four semantic classes, with 100% of the *corpus*. It is observed that the dendrogram was delimited into four classes or lexical semantic categories due to the occurrence of the most significant words that contributed to name these classes derived from Callysta Roy's model. Considering Callista Roy's theoretical elements, the analytical material was categorized into four classes representing physiological adaptation, adaptation in the role function, interdependence and adaptation in self-concept. The *corpus* partition originated the first axis formed by Physiological Adaptation, which interconnects to the second axis with Adaptation in Role Function, followed by the third axis formed by Adaptation in Interdependence and Adaptation in Self-Concept, shown in figure 1.

Adaptation in the Role Function was formed by 22.9% of text segments, with emphasis on the words adapt, use, work. Participants expressed their feelings and social confrontation, as can be seen in the following statements:

> *[...] it is hard not to work as before, to be the provider of the family (e6).*

> *[...] ostomy is shame, it is being different, it is not working, people see you as a patient, it is embarrassment (e17).*

Interdependence Adaptation comprised 22.9% of the text segments, and participants, in their speeches, pointed out the interaction with others, focusing on the closest relationships. It relates to interdependence and is experienced through the satisfaction of relationships with others. Some words stand out, such as mean, be, die, today, colostomy, alive, health, among others. Problems related to this mode include anxiety, separation and loneliness.



F - Frequency; X² - chi-square

Figure 1 . Dendrogram resulting from interviews with colostomy patients before the use of occluder, representative of semantic classes derived from Callista Roy's theoretical model

There is a need for affective adequacy, the behavior of giving and receiving. These perspectives are evidenced in the following statements:

> *[...] people do not understand, the family itself, you think that people love you, at these times, they abandon you (e1).*

> *[...] I wanted a normal life, I have no leisure, no dating, my sex life died*

> *[...] I am frustrated, revolted, until today I have not gotten used to it, it modifies a lot (e11).*

> *[...] stoma means lack and, sometimes, humiliation, people do not respect you, sometimes, your own family (e19).*

> *[...] I no longer have sexual intercourse, I no longer have pleasure, I am ashamed (e7).*

Adaptation in Self-Concept obtained 20% of the text segments, and these expressed the self-concept evidenced by participants. The words sad, God, accept, think, family, beach, live, know, among others, stand out. The speeches were related to psychic integrity, defined as a compound of beliefs and feelings. Self-concept directs behavior, involves the physical self, includes body sensation and body image, and the personal self, which encompasses self-consistency, the self-ideal and the moral, ethical and spiritual self, as can be seen, below, in some excerpts of speeches:

> *[...] thought about living, not leaving, but I had a lot of sadness (e1).*

> *[...] I went to the beach to fish and I can't do any of that, I have a lot of sadness, but we have to follow what Jesus says (e16).*

> *[...] the stoma changes your body, your image seems like everyone is seeing that dirty [...] we have to have a lot of faith to move on (e17).*

Physiological Adaptation represents 34.3% and refers to the way a person responds to the environment stimuli. This response will lead to effective or ineffective behavior, favoring or compromising adaptation. The words that stood out in this class were feces, need, full, gases, control.

> *[...] it is very sad, it's boring. You are absent from everything... from your own life, you isolate your-*

self and are alone because you feel bad, feces coming out all the time, the bag full (e3).

[...] I'm ashamed to be on the street and see that bag full, it smells bad, full of gases, I feel bad (e5).

[...] soon I stopped being topless, I was ashamed. She had no feces control (e4).

[...] no one says anything, you leave the hospital without information, this is the biggest difficulty, you get lost, I was very nervous until I got here, my bag was leaking a lot [...] I was learning (e18).

The second text *corpus*, obtained after using an occluder, resulted in 493 forms, 1452 occurrences, 307 active forms, with a frequency ≥ 3.78 of active forms and an average of 33 words, defining 36 analyzed segments, distributed in 3 semantic classes, with 81.82% of the *corpus*. The dendrogram (Figure 2) exposes the *corpus* partition, which originated two axes, derived from Callista Roy's conceptual theoretical model, the first formed by class Adaptation in Interdependence and Role Function and the second interconnected to Adaptation in Self-Concept and Physiological Adaptation.

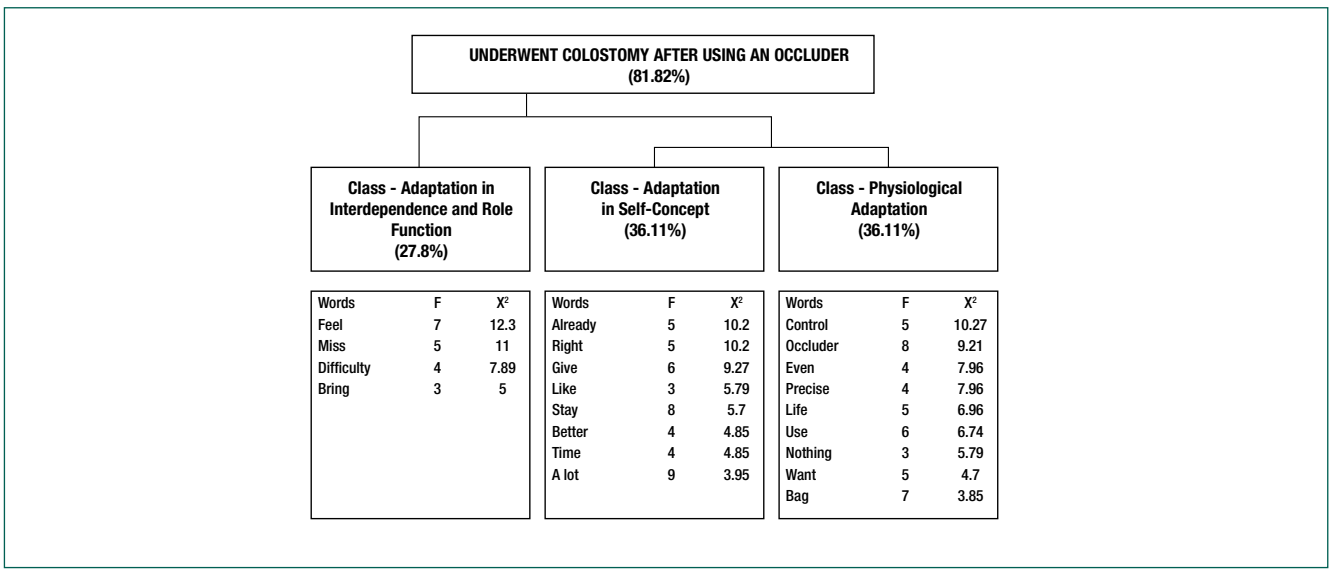
Adaptation in Interdependence and Role Function obtained 27.8% of the text segments, highlighted in the words feeling, missing, difficulty, bringing, among others. Participants reported on their anxieties and fears regarding the adaptation to the occlusor, the fear of having difficulty in obtaining the device for continuous use and the satisfaction obtained with the use of this device. Combinations of these modes occurred since the interrelationship that happens between the performance of social role and the reduction of dependence on support of family members. Thus, some statements stand out:

[...] it brought a lot of improvement, I felt more beautiful, I go to the beach, walk, sleep the way I want (e1).

[...] I am worried about missing the product, I was not afraid to use an occlusor, but I also did not find easy training (e2).

[...] I'm happy, I feel feminine, no disgust from me, I can wear the clothes I like, I feel alive again, I recovered my self-esteem (e10).

[...] this is a revolution, it made me want to even go looking for a work activity, I felt more normal (e17).



F - Frequency; X² - chi-square

Figure 2 . Dendrogram resulting from interviews with colostomy patients after the use of occluder, representative of semantic classes derived from Callista Roy's theoretical model

Adaptation in Self-Concept comprised 36.11% of the text segments, evidenced by the words already, right, give, like, stay, better, time, much, among others. Participants reported the successful experiences on the use of occluder, discussing how the device was beneficial and how they felt better about self-image:

[...] it brought me a different standard of living. I can wear a dress; I am very happy and satisfied (e2).

[...] I was even excited about sexual issues, had already given up meeting someone, the occlusor gave me a new chance (e3).

[...] the bag makes you ugly, it's an unhygienic thing and the occluder is closed there, I'm calm (e4).

[...] I feel happy, transformed, with freedom, not using the hanging bag, not seeing the feces. I'm fine (e5).

Physiological Adaptation was formed by 36.11% of the text segments, associated with individuals as physical beings, covering the words control, occlusor, precise, life, use, want, bag, among others. Participants mentioned control over physiological needs as something very important after using an occluder, which allowed them to carry out social activities that they would have had difficulties before:

[...] very good, great option, I'm still afraid of leaking and expelling (e6).

[...] now, if I have diarrhea, I put the bag right away, I'm very happy(e7).

[...] It's much better than the bag, but I'd rather be normal (e11).

Discussion

The immersion in adaptation and meanings arising from the colostomy and the application of care technologies in coping with different chronic conditions, in this study, represented by colostomy people and by the use of occluder, it allowed the unveiling of a wealth of information about the transformations that occurred in the daily lives of these people.

Adaptation in Role Function is one of the paradigms imposed by a new life after the stoma construction. It is observed, through interviews in Figure 1, that colostomy people fear embarrassment and present difficulties, especially in body image. The insecurity that this procedure causes in some is common, the fear of leaks, flatulence and causing discomfort in the people around them was reported in another study.[4] The social mode focuses on the roles occupied in society, it is defined by a set of expectations about the way that a person will occupy this position and there is a need to know who one is in relation to the other.[7]

It is clear, in the speeches, that the difficulty of coping related to reintegration into work, the lack of control of the effluent and the presence of continuous feces are predisposing factors for embarrassment, leading them to social isolation and even distancing themselves from sexual activity, which compromises affectivity. For colostomy patients, the new image is something challenging, in the face of compromises, such as sexuality, aesthetics, acceptance, self-care and self-esteem.[19,20]

In this mode of social integrity, three common problems of adaptation are emphasized, namely the transition role, the distance role and the conflict role. The transitional role is evident in the speeches, in which colostomy people sought to play and develop a new role.[7] Colostomy patients are faced with conflicts due to revolt and difficulty in adapting to a new reality, in which they have no control over the elimination of feces and gases and generate constraints, especially in situations of social coexistence. In this confrontation, nurses can develop actions that help these colostomy people in their social reintegration through strategies to strengthen self-esteem, improving body image, coping, role and promoting resilience using individual approach and group formation as resources.[21]

Still in the role of role mode, also influencing the adaptation of self-concept, colostomy people suffer from their condition and complain about the lack of material in sufficient quantity, such as collection bags and adjuvants, which further impairs their condition. The loss of an organ interferes in self-esteem and self-concept and, consequently, in body image, with loss of its social status, depression, repulsion and feelings of worthlessness. Thus, the support of family and friends, as well as health professionals, is important.[22]

Before occluder, affectivity and relationships were interspersed by fears and insecurities due to interdependence of the other. Likewise, self-image is modified, hence the importance of self-acceptance and acceptance by the other, so that there is an interaction, in this complexity of living, of existing, of involvement and feelings that may facilitate or hinder adaptation. It is observed that participants reported distancing from friends, needs, feelings of humiliation, lack of family support, attention to feel capable, useful and strengthened for this confrontation.

Marital ties were strongly emphasized in this context and the fear of not being accepted by the other interferes psychologically in adaptation and quality of life. Using a collection bag, with continuous presence of feces without control of elimination, makes it difficult to live with the people closest to them. The fear of abandonment and impotence are frequent reports requiring the support of a supportive, participatory and present spouse in coping with this stage and which contributes positively to better adaptation.[2]

Another relevant aspect is spirituality. Spiritualized people with religious beliefs can positively face the difficulties and the disease process, since, as they are not limited to scientific explanations, they achieve feelings of confidence and relief that strengthen them to face the difficulties arising from the new condition. Nevertheless, it is necessary to provide tailored support in order to prevent and minimize negative responses.[23] Despite this, the fear of embarrassing events limits the social and community dimension of religious practice, such as participation in liturgical moments and insertion in pastoral work, starting to develop the individual religious dimension.

Regarding physiology, colostomy construction involves unavoidable physical changes, brings with it many adaptation disorders and can negatively influence partners' interest and admiration, in addition to the perception of self-efficacy and body image disturbance.[24,25] Colostomy preparation is traumatic, with changes in appearance, physiology, body image, lifestyle and eating profile.[26,27]

The participants of this study stated that before using the occluder they felt uncomfortable using a collection bag, and that there were changes in their daily activities, nutrition and fear of diarrhea or constipation. It is necessary to adapt food, organize schedules, search for foods that minimize odor and control the consistency of feces.[28] Constant concern increases the level of stress and irritability. Colostomy patients reported the importance of learning to live with the stoma and regulate bowel habits through feeding. Thus, individualized nutritional guidance is essential to assist in the regularization of intestinal transit, prevent malnutrition and provide improvement in nutritional quality.[27]

Sleep and rest are also compromised, because there is a need for adequate positioning to sleep with the bag attached to the body, in order to prevent it from becoming detached. Colostomy patients may suffer fatigue because their sleep pattern is impaired. Demand for care due to fear, anxiety, the possibility of effluent leakage and the need to change the bag requires attention and physical effort, which can interfere with night rest.[29,30]

After using an occluder, in Figure 2, the testimonies show positive psychological aspects, such as "I feel as I did before the colostomy". "I am happy". However, they are afraid that there is a lack of occlusor for its use or that the device supply is reduced, compared to what is dispensed monthly. It is observed that colostomy patients give a new meaning to their lives, improving adaptation, analyzed in the theoretical context of Roy's adaptation model. Therefore, the occluder is configured as a focal stimulus for adaptation, although other contextual stimuli contribute to individuals' adaptation as their resilience to the definitive ostomy condition.

In this theory, the self-concept mode is seen as two components: the physical self, which includes body sensation and body image, and the personal self, which involves the ideal self, the moral, ethical and spiritual self.[7] These components were reported in the speeches described, when it was stated that the occluder provided transformations in these domains. Using an occluder favored positive changes in psychosocial aspects since it interfered in the interrelationships and promoted better adaptation and quality of life for this population. There was an increase in hope and self-esteem expressed in the Adaptation in Self-Concept class based on feelings of overcoming and satisfaction, such as "I feel happy, transformed and free". The interviewed subjects gave a new meaning to their experiences and feelings and mentioned the return to normality with the effluent control. Thus, using an occluder changes the understanding that the intestinal stoma is something frightening that breaks with body normality.[30]

It is noted that with the occluder, there is a new expectation of living, of interacting. Changes in colostomy persons' perception regarding the use of an occluder are notorious. There is a rescue in positive behavior in daily activities, such as how to dress, rest and satisfaction in resuming activities that were performed before the surgical procedure. The testimonies denote a better perception of self-image, sexuality and self-esteem and reveal the use of the device as a facilitator of social reintegration.

Spirituality also emerges in the testimonies as something that strengthens the confrontation, observing that beliefs and faith generate energy, hope and positive thinking. At this moment, the return to religious activities in the community and even pastoral dimension is evident, surpassing the individual dimension arising from social isolation.[31] Therefore, self-concept reaffirmation directs the self-acceptance behavior. In this way, the manifestation of faith promotes acceptance of difficulties and disagreements, flowing positive expectations, which facilitates the rehabilitation and adaptation of a new life. Faith, trust and divine protection generate the strength and hope to face the emotional weaknesses arising mainly from participation in liturgical rituals such as masses, services, moments of praise and worship.[32] Thus, religiosity, in addition to improving the spiritual quality of life of these people, is also a determining aspect of human life.[33]

A colostomy person faces difficulties in preparing to take over a new role after using an occluder. As for distance, individuals feel uncomfortable, because the new social role to be played is partial or unwanted. This fact is common in the face of colostomy, due to non-acceptance of the intestinal stoma. In the conflict role, it occurs whenever individuals fail to perform the prescribed and established behaviors.[7] The use of coping strategies as an occluder as soon as possible considering the indications and contraindications for use minimizes the impact of illness and the improvement of psychological aspects.[34]

The use of occluder enabled social changes, which are supported by study participants' testimonies and denote overcoming and improving self-image, sexuality and self-esteem, showing this device as a facilitator of social reintegration.

In this study, it was noticed that people with definitive colostomy presented a better coping with the imposed conditions, because they know that there will be no reconstruction of intestinal transit. Many see colostomy as life expectancy and seek means that favor adaptation to improve the quality of their lives. It was also observed that people with colostomy with more time since surgery were not motivated to test new devices, accommodated to using a collection bag and to their condition, even considering the colostomy bag as part of their body.

It is important to state that time is a primary factor in this adaptation. The human being is changeable and some overcome these difficulties, especially when they remain active, with occupation, and are accepted by family members, when guided and informed by health professionals, especially nurses, about self-care devices and complications that may arise, both in the stoma and in the peristomal skin.

The use of an occluder as an alternative device to a colostomy bag is shown to be beneficial for giving a physical appearance closer to the natural one, promoting more comfort and satisfaction to colostomy people. However, some limitations restrict its

indication, such as stomach and peristomal complications, conditions that influenced the number of participants in the study, but that did not affect the method follow-up and the quality of the findings.

Thus, the results found in this study reveal the empirical and pragmatic adequacy of Callysta Roy's theory with its adaptation model to support and guide researchers on the subject in qualitative research, guiding the analyzes with the theoretical domains. The knowledge of adaptive responses can promote a new caring look in health professionals, arousing greater sensitivity and attention in the appreciation of verbal and even non-verbal expressions of beings cared for.

It is worth mentioning that knowledge of expressions revealed in this research is often still scarce in national literature. Additionally, there is a need for longitudinal studies with larger groups, which can plan comprehensive and integrated health care for this group and their families. Although for a qualitative study the sample was satisfactory, it is considered pertinent to listen to a greater number of subjects in future research in order to deepen the understanding of the contributions and difficulties of using an occluder. In this perspective, cohort studies that encompass the adaptation and quality of life of colostomy people can provide consistent arguments that allow the definition of public policies to standardize the use of this device in the public health network, providing a better quality of life for colostomy patients.

The study had as a limitation the difficulty of accessing a larger number of participants by the criteria of recommendation of use of occluder, loss of segment of participants during the 45 days of assessment of the adaptive responses after using an occluder. Moreover, the scarcity of studies using the adaptation model of Callista Roy, before and after the use of occluder in definitive colostomy, can also be considered a limitation.

Conclusion

The study made it possible to understand the adaptive responses as ineffective before use and effective after using an occluder in definitive colostomy, allowing to reflect on the difficulties faced by this population in the face of incontinence, the need to change the collection bag frequently, making them hostages of their own lives, from the cycle of exclusion, discrimination and isolation. However, the occluder allowed an advance in this cycle, improving aspects of life, interrelationships, especially in social and physiological ways. Thus, the recommendation based on criteria should be encouraged earlier to favor a better adaptation at this stage of life. Understanding the adaptation with the use of occluder affirms the need for the nursing team to act with a focus on devices that can promote the continence of these people, making them more independent and happier. This perspective of using a colostomy occluder will allow a better performance of nursing aimed at biopsychosocial aspects, as well as the adaptation of colostomy people with a view to better quality of life.

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Collaborations

Diniz IV, Alves KL, Sá CMCP, Almeida AM, Silva RA, Soares SHO and Soares MJGO contributed to study design, data analysis and interpretation, article writing, relevant critical review of intellectual content and approval of the final version to be published.

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