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Ostomy and clothing: a primer on developing clothing for people with an ostomy

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Ostomy and clothing: a primer on developing clothing for people with an ostomy

ABSTRACT

The ostomy can be understood as a surgery that aims to produce a new path for the exit of feces or urine from the human body. By empirical observation, it is believed that people with ostomy are unattended by the Textile and Apparel Industry. In this sense, this article aims to present the preliminary structure of a booklet for the development of garments for ostomized people. As data collection instruments, a bibliographic survey and a scripted and semi-structured questionnaire with 12 questions divided into two blocks were used: the individual and his stoma and the ostomized individual and their relationship with clothing. Methodologically, this article can be understood as applied, qualitative, descriptive and field research. The results obtained in the research were converted into recommendations and presented in leaflet format. It is concluded that the booklet contributes through three perspectives: (I) marketing, by proposing guidelines to the industry for the development of inclusive clothing; (II) socially, by encouraging the ostomate to broaden their understanding of the condition; and (III) academically, for providing expansion on the literature on the subject.

Key words: Ostomy. Clothing inclusive. Product development.

Ostomia e vestuário: cartilha de desenvolvimento de vestuário para pessoas ostomizadas

RESUMO

A ostomia pode ser compreendida como uma cirurgia que objetiva produzir um novo trajeto para a saída de fezes ou de urina do corpo humano. Por observação empírica, acredita-se que as pessoas ostomizadas encontram-se desassistidas pela Indústria Têxtil e de Confecção. Nesse sentido, este artigo tem como objetivo apresentar a estrutura preliminar de uma cartilha para o desenvolvimento de peças de vestuário para pessoas ostomizadas. Como instrumentos de coleta de dados, empregou-se um levantamento bibliográfico e um questionário roteirizado e semiestruturado com 12 perguntas divididas em dois blocos: o indivíduo e seu ostoma e o indivíduo ostomizado e sua relação com o vestuário. Metodologicamente, este artigo pode ser compreendido como pesquisa aplicada, qualitativa, descritiva e de campo. Os resultados obtidos na pesquisa foram convertidos em recomendações e apresentados sob o formato de folheto. Concluí-se que a cartilha contribui por meio de três perspectivas: (I) mercadologicamente, ao propor orientações à indústria para o desenvolvimento de um vestuário inclusivo; (II) socialmente, ao estimular à pessoa ostomizada a ampliar sua compreensão sobre a condição; e (III) academicamente, por prover expansão acerca da literatura sobre o assunto.

Palavras-chave: Ostomia. Vestuário inclusivo. Desenvolvimento de produto.

Ostomía y vestimenta: desarrollo de vestimenta para personas ostomizadas

RESUMEN

La ostomía puede entenderse como una cirugía que tiene como objetivo producir un nuevo camino para la salida de heces u orina del cuerpo humano. Por observación empírica, se cree que las personas ostomizadas no cuentan con la ayuda de la industria textil y de la confección. En este sentido, este artículo tiene como objetivo presentar la estructura preliminar de un folleto para el desarrollo de prendas para ostomizados. Como instrumentos de recogida de datos se utilizó una encuesta bibliográfica y un cuestionario guionizado y semiestructurado, con doce preguntas divididas en dos bloques: el individuo y su ostoma y el ostomizado y su relación con la vestimenta. Metodológicamente, este artículo puede entenderse como investigación aplicada, cualitativa, descriptiva y de campo. Los resultados obtenidos en la investigación se convirtieron en recomendaciones y se presentaron en forma de folleto. Se concluyó que el folleto aporta a través de tres perspectivas: (I) marketing, al proponer lineamientos a la industria para el desarrollo de ropa inclusiva; (II) socialmente, animando a la persona ostomizada a ampliar su comprensión de la condición; y (III) académicamente, por brindar expansión sobre la literatura sobre el tema.

Palabras clave: ostomía. Ropa inclusiva. Desarrollo de producto.

1. INTRODUCTION

The ostomy consists of a surgery that aims to produce a new route for the exit of feces (digestive) — which can be classified as a colostomy for the large intestine or as an ileostomy for the small intestine — of urine (urostomy) or even for food. The digestive ostoma is necessary when part of the intestine is removed, whether due to the occurrence of cancer, accidental perforation, inflammatory bowel diseases, accidents or genetic reasons. Anyone who doesn't have an ostomy can end up being ostomized at some point in their life. This condition is characterized by the involuntary release of excrement through the ostoma, which makes the ostomized person have to use a collection bag at all times of their day, and it is not possible to remove or place them only when necessary, as there is no control of the excrement output. Depending on the cause and condition, the need to use the bag can vary from just a period of time to a lifetime.

With the ostomy, several difficulties can appear. Empirically, it is observed that one of them, in particular, deals with physical and psychological autonomy based on clothing. As clothing is linked to the personal, social and functional image (GODINHO, 2017), in ostomized people, there is a clear influence on the value of the image and on the ergonomic factors that matter for the acceptance of this condition and the well-being of the individual. Due to issues such as cleaning the bag and the spontaneous release of excrement, the social life of the ostomized person can also be negatively affected, which, it is believed, can cause their social exclusion.

In its traditional molds, social exclusion already occurs in clothing. Beauty standards favor, in the dissemination of the pieces in fashion shows or in televised campaigns, a specific type of body: tall, thin, young and without movement

difficulties (MODA INCLUSIVA..., 2012; GODINHO, 2017). With this, it is believed that there is a significant portion of society marginalized by the Textile and Apparel Industry. If the data from the Brazilian Institute of Geography and Statistics (IBGE,2010), it can be seen that, in this portion, there are 45 million Brazilians with some type of disability.

From this perspective, the Textile and Apparel Industry that is concerned with thinking and producing clothing as a process of inclusion — understood as inclusive clothing — establishes itself as an alternative for the democratization of clothing through various biotypes and based on belief in universal accessibility (MODA INCLUSIVA..., 2012).

According to the Michaelis dictionary (2018, np), the concept of universal can be understood as that “[...] which encompasses all things; which extends to everything and everyone, without exception”. The concept of accessibility, on the other hand, is focused on “[...] ease of access; [and the] quality of what is accessible” (MICHAELIS, 2018, np).

Given the above, the aim of this article is to present the preliminary structure of a booklet for the development of garments for ostomized people. Therefore, the following data collection instruments were used: (I) a bibliographic survey with authors chosen in a narrative way; and (II) a scripted and semi-structured questionnaire with 12 questions subdivided into two blocks, the first focused on the individual and their ostoma, and the second on the ostomized person and their relationship with clothing.

The collected data were analyzed qualitatively from an interpretivist epistemological stance. This allows us to understand that, given the classification proposed by Gil (2008), this article can be understood as an applied, qualitative, descriptive and field research.

It is noteworthy that this article presents an excerpt from the *stricto sensu* research developed by Mariana Luísa

Schaeffer Brilhante in the context of the Graduate Program in Clothing and Fashion Design (PPGModa) at the University of the State of Santa Catarina (Udesc). The author's master's thesis has the title INCLUSIVE FASHION: PHYSICAL AUTONOMY AND PSYCHOLOGICAL COMFORT IN THE DRESSING PROCESS OF THE PARAPLEGIC PERSON and is expected to be defended in the first half of 2021. Furthermore, it is emphasized that the research is being guided by the paraplegic person. Professor Lucas da Rosa and is linked to the Clothing Design and Technology Research Line.

Finally, it is noteworthy that the body of knowledge of the article is structured from the approach to the concepts of ostomy, collection bags and inclusive clothing. In turn, this approach is based on an unsystematic literature review. Next, the methodological procedures, the research results and their respective discussion are presented. Having explored the obtained data, we proceed to the final considerations and recommendations for future work.

2 OSTOMIES AND COLLECTION BAG

According to Stumm, Oliveira and Kirschner (2008, p. 27), the origin of the word ostomy has a Greek root, being stoma a “[...] opening of surgical origin, when there is a need to divert, temporarily or permanently, normal traffic of feeding and/or eliminations”. Ostomas can be of three distinct types: (I) colostomy; (II) ileostomy; and (III) urostomy. A colostomy is a digestive ostomy of the large intestine; ileostomy, on the other hand, is a digestive ostomy of the small intestine; and the urostomy can be understood as an ostomy of the urinary tract. It is interesting to consider that the opening of the ostoma can be done on the right or left side of the abdomen (Figure 1).

Figure 1. Ostomy simulation



SOURCE: Pocket Nurse (2019).

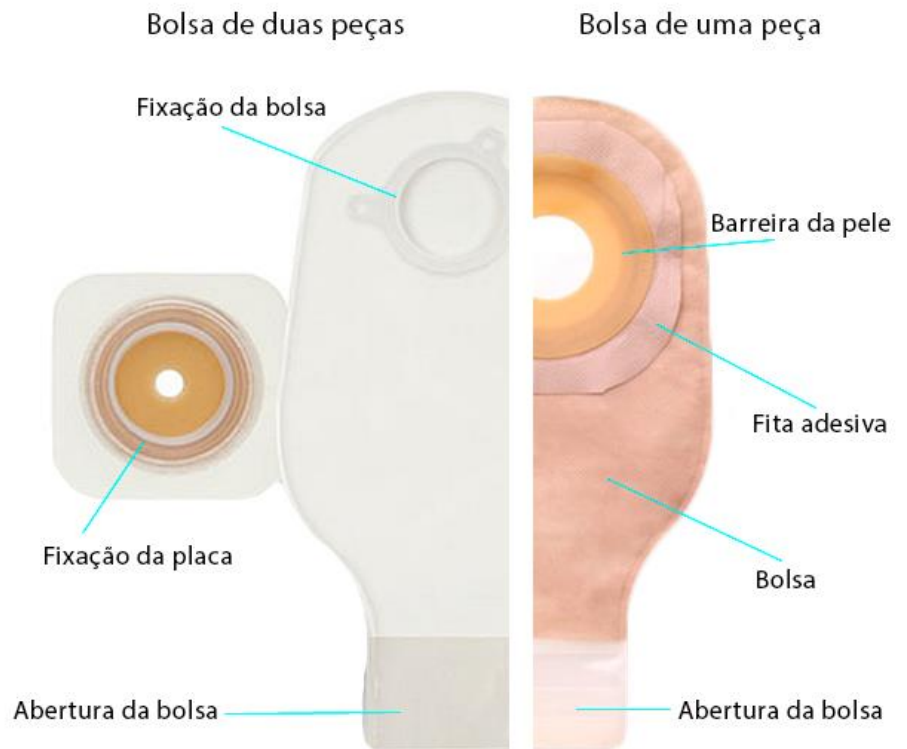
IMAGE DESCRIPTION: anatomical piece of the female abdomen, with two examples of ostomies, one on the left part, smaller and about 2 cm below the navel, a little more to the left and another on the right part, larger and starting on the same line of the navel, a little more to the right of the same. The ostomies present with a reddish color, natural of this type of ostomy. End of description.

The fixation of ostomies can be temporary or permanent, although most cases are permanent colostomy. The causes for a person to need an ostoma can vary, however, the most common is the involvement of cancer of the colon or rectum (STUMM; OLIVEIRA; KIRSCHNER, 2008).

As described by Stumm, Oliveira and Kirschner (2008), for collection bags, there are two types of systems: one-piece or two-piece (Figure 2). The one-piece system is characterized by being, as the name suggests, just a complete piece, that is, the bag ends up being fixed to the individual's skin. For maintenance, the one-piece bag must be completely removed for replacement. The two-piece system consists of a skin attachment plate and a bag. Thus, to maintain this system, it

is possible to change only the bag and keep the plate fixed to the skin and ostoma.

Figure 2. Two-piece bag and one-piece bag



SOURCE: adapted from Cancaster (2015).

IMAGE DESCRIPTION: features two ostomy bags. The first, on the left, is a white, U-shaped, two-piece bag that is tapered at the bottom, where the bag opening for removing droppings is located.

In addition, the image shows a square plate with a membrane in the middle, which must be attached to the ostoma, and a socket at the top of the pouch for that plate. The second pouch, on the right, is a one-piece pouch, light beige, U-shaped and tapered at the bottom, where the pouch opening is located for removing excrement. At the top of this pouch you can see the skin barrier — a membrane to be attached around the ostoma — and the pouch's adhesive tape, which serves to stick to the skin around the ostoma. End of description.

According to Morais (2015), there are smaller bags for special occasions. The author states that the need to empty the bag is triggered when its content is 1/3 full and that the average daily emptying fluctuates between 5 to 10 times,

while the bag change can be done once or twice a week , as appropriate.

Although the bags are safe, Stumm, Oliveira and Kirschner (2008) point out the feeling of emotional insecurity of ostomized individuals regarding possible leaks. When there is a need to empty the piece, it is observed that the ostomized person tends to exclude themselves from their social groups. Due to the number of times this occurs, it is believed in the possibility of social confinement. In this sense, next, the role of adapted clothing is explored as a tool to physically and psychologically help individuals in their condition.

2.1 The role of inclusive clothing

It can be considered that clothing has the function of protection and ornament, being a fundamental part of life in society, as it is linked to the concept of identity, belonging and differentiation (OLIVEIRA, 2013). Callan (2007) understands clothing as the material expression of a social manifestation of a cultural context, that is, a changing reflection of how society engenders itself and its zeitgeist (spirit of time). This allows us to state that clothing can also be understood as a way of integrating the individual into society, which favors their social inclusion or exclusion (BROGIN; MERINO; BATISTA, 2014; GODINHO, 2017). Sousa, Xavier and Albuquerque (2017, p. 5) corroborate the above and maintain that:

Fashion needs to be an open door to inclusion, for this to happen it is enough that we have a perception of social inclusion as a rule of society, in all areas. Social inclusion must be prioritized [...] with clothes being another resource for this [...].

To achieve this inclusion, Sousa, Xavier and Albuquerque (2017) point out that clothing creators, fashion designers or

stylists must respect the right of all consumers to dress with aesthetic and ergonomic quality. As examples of companies operating under this umbrella, Brogin, Merino and Batista (2014) cite Able to Wear, Cast Clothing, Lydda Wear and Xenii.

Brogin, Merino and Batista (2014) highlight that the positive results obtained by companies and creators of inclusive clothing are based on the design centrality of usability. Gonçalves and Beirão Filho (2008, p. 118) mention that, "[...] in relation to the usability of a product, in a time of globalization, this cannot be considered an added value, but an intrinsic value to the product [...]". This implies saying that usability is at the heart of inclusive clothing, however, it cannot be considered its end.

In addition to usability, Gonçalves and Beirão Filho (2008), Brogin, Merino and Batista (2014), Sousa, Xavier and Albuquerque (2017) and Krone, Oliveira and Rizzi (2020) argue that inclusive clothing must pay attention to design requirements such as efficiency, efficacy, satisfaction, accessibility, comfort, wearability, flexibility, sensory pleasure, metabolic capacity and neuromuscular ability, among other aspects deemed pertinent and under investigation, case by case. In particular, Brogin, Merino and Batista (2014, p. 10) argue that:

[...] these requirements must provide safety during the use of clothing, tactile and thermal comfort, freedom of movement, ease of handling and use, adequacy to the function proposed, durability and quality.

To meet the above requirements, Brogin, Merino and Batista (2014) advise that clothing should be designed based on the anthropometric measurements of the targeted users and studies on raw materials, trim, modeling and forms of maintenance, interaction and communication between the product, the medium and the intended target audience. In turn, Krone, Oliveira and Rizzi (2020) state that to make

clothing even more inclusive, complementary accessories or specific treatments can be added to the pieces, such as sound devices and prints with salient textures. In addition to the material aspects that meet physiological or psychomotor needs, Godinho (2017) mentions that, in the design of inclusive clothing, the social longing for self-fulfillment of individuals must be taken into account, the paradigms of self-acceptance and the social signs articulated to the groups through which these users transit. The author adds:

[...] it is necessary an understanding that this social group [of people with disabilities] also requires due attention in relation to clothes, which not only offer functionality, but must also be made within an aesthetic that allows an increase in self-esteem, becoming a means of social inclusion (GODINHO, 2017, p. 94).

In this sense, it is considered that the lack of inclusive clothing aimed at adequately meeting the physiological, psychological and social needs of people with disabilities in the Textile and Apparel Industry is reflected in a form of exclusion by omission. Brogin, Merino and Batista (2014) inform that these individuals can be neglected or even marginalized due to the lack of options through the sector's offers. Godinho (2017) adds that clothing is an instrument of inclusion, exclusion, acceptance or social repulsion. Thus, it can be considered that the lack of inclusion of people with disabilities as consumers of clothing constitutes a type of discrimination, as pointed out in Article 4, cap II of Law no. 13,146, of July 6, 2015 (BRASIL, 2015, np):

§ 1 Discrimination due to disability is considered to be any form of distinction, restriction or exclusion, by action or omission, which has the purpose or effect of harming, preventing or nullifying the recognition or exercise of the fundamental rights and freedoms of a person people with disabilities, including denial of reasonable accommodation and the provision of assistive technologies.

From this perspective, it is important to emphasize that, according to Decree no. 3.298, of December 20, 1999 (BRASIL, 1999, np), the deficiencies can be classified into:

I - physical disability - complete or partial alteration of one or more segments of the human body, [...] presenting itself in the form of paraplegia, paraparesis, monoplegia, monoparesis, tetraplegia, tetraparesis, triplegia, triparezia, hemiplegia, hemiparesis, ostomy, amputation or absence of a limb, cerebral palsy, dwarfism, limbs with congenital or acquired deformities, except for aesthetic deformities and those that do not produce difficulties in performing functions;

II - hearing loss - bilateral, partial or total loss of forty-one decibels (dB) or more [...];

III - visual impairment - blindness, [...] low vision, [...] cases in which the sum of the visual field measurement in both eyes is equal to or less than 60o; or the simultaneous occurrence of any of the above conditions;

IV - mental disability - intellectual functioning significantly lower than average, with manifestation before the age of eighteen and limitations associated with two or more areas of adaptive skills [...];

V - multiple disability - association of two or more disabilities.

Thus, regardless of the type of disability, clothing needs to adapt to the needs of its users' bodies and ensure their autonomy. It is believed that, with this, it is possible to provide the physical, psychological and social comfort of this public, since not depending on other people to meet their basic needs is a matter of dignity. After presenting the concepts that supported this research, the methodological aspects of this study are presented below.

3 METHODOLOGICAL PROCEDURES

Data collection for this article occurred through a bibliographic survey and through a semi-structured questionnaire with open questions directed at ostomates. The objective of the questionnaire was to try to understand the difficulties and facilities found daily in the lives of these individuals, especially those related to clothing. The questionnaire was designed with 12 questions and included gender and age group. The questions were divided into two blocks: (I) the individual and his ostoma; and (II) the ostomized individual and its relationship with clothing (Chart 1).

Table 1. Questionnaire script

Number	Block	Data to be collected
1	The individual and his ostoma	Gender
two		age group
3		Ostoma and permanence
4		cause of ostoma
5		Ostomy bag usage time
6	The ostomized individual and its relationship with clothing	Number of clothing changes per day (including nightwear)
7		Important criteria when choosing clothing
8		Motivation for changing clothes after starting to dress
9		Abandonment of the use of certain post-surgery garments and their motivation
10		Use of new post-surgery garments and their motivation
11		Difficulties in acquiring post-surgery garments and their motivation
12		Clothing suggestions for people with an ostomy

SOURCE: the authors (2021).

From the questionnaire (Table 1), 22 responses were obtained in 5 days of research, between 09/10/2019 and 09/15/2019. It is noteworthy that the questionnaire was disseminated to groups of ostomized people on the social

network Facebook. Below, the results of the survey will be presented.

3.1 Search Results

Personal data and the cause of the stoma, in relation to the respondents, can be accurately observed in Table 2. It is noteworthy that 16 people (72.7%) are female, while 6 people (27.3%) are of the male gender. As for the age group, 7 people (31.8%) are between 50 and 60 years old, 4 people (18.2%) are between 60 and 70 years old, 4 people (18.2%) are between 31 and 40 years old, 3 people (13.6%) are over 70 years old, 3 people (13.6%) are between 19 and 30 years old and one person (4.5%) is up to 18 years old. As for the type of ostoma, 13 people (59.1%) have a colostomy, 8 people (36.4%) have an ileostomy and one person (4.5%) has a urostomy. As for permanence, 12 people (54.5%) have a permanent stoma, while 10 people (45.5%) have a temporary stoma.

Table 2. Respondent data

Gender	age group	Ostoma and permanence	stoma cause
Female	50–60 years	temporary colostomy	rectum cancer
Female	31-40 years	temporary ileostomy	Appendicitis Verminosis Malignant
Female	19-30 years old	temporary ileostomy	bowel cancer
Male	60–70 years	permanent urostomy	bladder cancer
Male	60–70 years	permanent colostomy	rectum cancer
Female	19-30 years old	temporary ileostomy	ulcerative colitis disease
Male	60–70 years	permanent colostomy	lower bowel cancer
Female	50–60 years	permanent colostomy	Diverticulitis

SOURCE: the authors (2021).

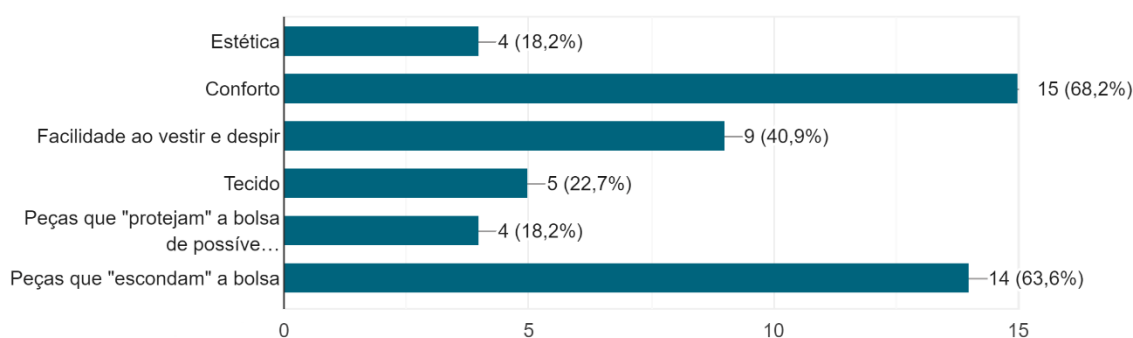
Female	+70 years	permanent ileostomy	Familiar adamasto polyps
Female	31-40 years	permanent colostomy	Stenosis
Female	+70 years	permanent colostomy	rectum cancer
Female	60-70 years	permanent ileostomy	colon cancer
Female	Up to 18 years old	temporary ileostomy	Chronic Inflammation in the Bowel
Male	50-60 years	temporary colostomy	Diverticulitis
Female	50-60 years	permanent colostomy	Medical error
Female	50-60 years	temporary colostomy	Colorectal cancer
Female	+70 years	permanent colostomy	chronic diverticulitis
Male	19-30 years old	permanent colostomy	rectum cancer
Male	31-40 years	temporary ileostomy	Post-surgical complication
Female	50-60 years	permanent colostomy	rectum cancer
Female	50-60 years	temporary colostomy	fecaloma
Female	31-40 years	temporary ileostomy	colon cancer

It was questioned how long these people had used their ostomy bags and the longest use time was 7 years and the shortest time of 1 month. After the questions about the individual and their ostoma, we moved on to the questions that involved the relationship of people with an ostomy to clothing. Thus, when asked about the amount of clothing changes per day (including nightwear), 11 people (50%) answered that they change clothes 3 times a day, 8 people (36.4%) answered that they change clothes 2 times a day, 2 people (9.1%) answered that they change clothes once a day and one person (4.5%) answered that they change clothes more than five times a day.

When asked about which criteria are important when choosing garments, 15 people (68.2%) answered comfort, 14

people (63.6%) answered hiding the bag, 9 people (40.9%) answered ease of dressing and undressing, 5 people (22.7%) answered fabric, 4 people (18.2%) answered protecting the bag and 4 people (18.2%) answered aesthetics (Figure 3). It should be noted that it was possible to select more than one answer for this question.

Figure 3. Graph on the important criteria when choosing garments, according to the ostomized people



SOURCE: the authors (2021).

IMAGE DESCRIPTION: bar graph, in the following order: aesthetics (4 people, 18.2%), comfort (15 people, 68.2%), ease of dressing and undressing (9 people, 40.9%), fabric (5 people, 22.7%), pieces that "protect" the bag (4 people, 18.2%) and pieces that "hide" the bag (14 people, 63.6%).
End of description.

When asked if they change their mind and change their clothes after starting to dress and, if so, why this occurs, some of the answers were: (I) "Yes. I never think the bag is properly accommodated"; (II) "Yes. I feel that the bag is exposed"; (III) "Yes, I'm afraid of being bullied because of the bag"; (IV) "Yes, because the scholarship cannot appear"; (V) "Yes, if I notice that you are marking the bag, I change"; and (VI) "Yes, because many of my clothes keep squeezing the bag and I feel as if it were going to leak".

For a better understanding of the complaints of people with an ostomy in relation to clothing, Table 3 summarizes the responses obtained according to the number of times the item was mentioned. When asked if they stopped wearing any garment after surgery and, if so, the reason, some

respondents stated that: (I) "Clothes that mark the waist, such as jeans and denim shorts. The waistband catches on top of the stoma"; (II) "Yes, jeans. It bothers because it is too hard"; (III) "Yes, underwear"; (IV) "Yes, jeans and my shorts. I have to leave the zipper open and cover it with a blouse"; (V) "Many. In order not to show the bag, I only wear a loose blouse and low-slung pants"; (Yes, I've seen that. The ones with lighter and more transparent colors"; (VII) "jeans, because I'm having a hard time finding pants that don't go over the ileostomy"; and (VIII) "Yes, beach and pool pieces".

When asked if they started to use any part after surgery and the reason, some respondents asserted that: (I) "Yes, gowns"; (II) "Yes, long blouses"; (III) "Yes, dresses"; (IV) "Yes, dresses and shorts and shorts with light cloths and high waistband. They make me more comfortable and don't mark the bag much"; (V) "Longer-covering blouses"; (VI) "Yes, skirts, as they are easier to adjust around the waist"; (VII) "Yes, pants with an elastic waist"; and (VIII) "Yes, I started using only sweaters".

long blouses"; (III) "Yes, dresses"; (IV) "Yes, dresses and shorts and shorts with light cloths and high waistband. They make me more comfortable and don't mark the bag much"; (V) "Longer-covering blouses"; (VI) "Yes, skirts, as they are easier to adjust around the waist"; (VII) "Yes, pants with an elastic waist"; and (VIII) "Yes, I started using only sweaters".

Table 3. Answers obtained according to the number of times the piece was cited

Items of clothing that you no longer use	Items of clothing you started using
Jeans (cited by 11 people)	Larger/larger numbered blouses (cited by 6 people)
Short blouses (quoted by 4 people)	Dresses (cited by 5 people)
shorts jeans (cited by 3 people)	Elastic pants (cited by 3 people)
Light and transparent colored clothes (cited by one person)	Skirts (cited by one person)
Underwear (quoted by one person)	Sweaters (cited by one person)
Bikinis (quoted by one person)	

SOURCE: the authors (2021).

After collecting the answers (Chart 3), the following question was asked: "Do you find it difficult to buy clothes after surgery? If so, which one and why?" Some of the answers obtained were: (I) "Yes, blouses are a problem, they have to be a little bigger so the bag doesn't appear and with dark colors or prints"; (II) "Yes, fair pieces due to the fact that they mark the bag"; (III) "Yes, I need loose clothes that don't 'stick' in the stoma"; (IV) "Yes, ready-made clothes have very restricted sizes and the modeling is very small"; (V) "Almost all the pieces are marked too much, if the bag is full, it is very visible"; and (VI) "Yes, high-waisted fashion is a problem for those who wear a purse, especially if it's a piece in jeans". Finally, regarding clothing suggestions for people with an ostomy, some respondents mentioned that: (I) "Loose blouses — with thick elastic at the hem — and prints are great"; (II) "Shorts and pants with an adapted place to fit the bag. I feel I would have more security. If nothing is holding the bag, it moves"; and (III) "The shirt or shirt should have a pocket to adapt the pocket, so it would not be left out of the clothes".

Based on the answers obtained from the questionnaire, the results were discussed and the booklet was prepared in order to meet the objective proposed in this article.

3.2 Discussion of results

It is considered that, despite the greater number of people with an ostomy being older than 50 years, there are men and women of different ages — as seen in Table 2 — who, while ostomized, do not feel well with their clothing. In this sense, the biggest complaints are in the tissues (jeans, for example) and in the modeling (slight pieces or pieces that squeeze the ostoma).

Among the responses collected, it was found that most of the ostomas originate from some type of intestinal cancer. Thus, it is believed that it is necessary to take into account that, in most cases, the individual is already psychologically shaken by the presence of cancer and by all the challenges he faces from the initial phase to the postoperative treatment phase. In other words, the ostomy not only alters your physiology, but also requires a certain psychological stability to be able to understand the situation and remain socially and physically active.

As an adaptation to clothing in order to meet the needs of ostomized individuals, it is recommended the use of fabrics with natural fibers, which do not tighten or choke the ostoma, and models that are not fair and do not show the bag collector. In addition, it is suggested to apply dark prints on garments, as these reflect less light and can help increase the confidence of these users since. In case of possible leaks, dark pieces easily hide what happened, in addition to disguising the bag — a need that was mentioned by some of the research participants.

It is also recommended that a spare band at waist height be attached to the garment. The band must present: (I) tissues that, as mentioned above, do not afflict the ostoma; (II) an adequate space to insert the bag; and (III) an aesthetic aspect that helps the user's perception of safety. For

beach garments, it is suggested to create bathing suits or beach shorts with space to attach the bag or abdominal bands in the same color or print as the other pieces.

All of the above recommendations were brought together in a booklet, presented in Figure 4 in its preliminary structure and in the form of a leaflet. The booklet is intended to guide the development of garments for people with an ostomy and is aimed at apparel creators and people with an ostomy, as well as their family and friends. It is estimated that the booklet can promote the reduction of social exclusion that affects individuals with ostomy, as it encourages understanding and acceptance of their conditions and needs.

Figure 4. Preliminary structure of the guide for the development of clothing for ostomized people



SOURCE: the authors (2021).

IMAGE DESCRIPTION: preliminary structure of a primer. The first face of the booklet has a yellow

background, in addition to the first figure in this article and the explanation of what an ostomy is.

The second side has an orange background and defines what you should be thinking about when developing clothing for people with an ostomy. The third face features a yellow background and the continuation of the topic on how to develop clothing for people with an ostomy. End of description.

Finally, as a research limitation, the sampling of participants and the theoretical contribution of the article's body of knowledge are cited. In this sense, it is suggested that new scientific itineraries include larger samples to support the accuracy of the study, as well as that other authors be investigated through the literature in the area.

4 FINAL CONSIDERATIONS

In light of what has been exposed in this article, it is believed that its objective — to present a preliminary structure of a booklet for the development of clothing for people with an ostomy — was fulfilled as established. Displayed in the form of a leaflet, the booklet gathers recommendations with the aim of guiding the proposition of garments for individuals ostomized for the Textile and Apparel Industry.

In this sense, in addition to the marketing contribution of this article to the industry, it is estimated that other perspectives have been reached: (I) socially, the developed booklet can help in the conception that the ostomized person has about their body in relation to clothing, as well as, instrumentalize family and friends on the subject; and (II) academically, it is considered that the article can expand the existing literature on inclusive clothing, as well as on the needs of ostomized individuals.

Finally, for the construction of a research agenda, it is suggested that future works carry out the booklet and test it in the field with the contribution of scientific scales. After the study has been validated, it is recommended that the booklets

be distributed and shared with hospitals, medical clinics, private offices, universities and third sector entities so that the information obtained is spread throughout society.

REFERENCES

BRASIL. **DECRETO Nº. 3.298, DE 20 DE DEZEMBRO DE 1999.** Regulamenta a Lei no 7.853, de 24 de outubro de 1989, dispõe sobre a Política Nacional para a Integração da Pessoa Portadora de Deficiência, consolida as normas de proteção, e dá outras providências., Brasília, DF, dez 1999. Disponível em: http://www.planalto.gov.br/ccivil_03/decreto/d3298.htm. Acesso em: 17 fev. 2018.

BRASIL. **LEI Nº. 13.146, DE 6 DE JULHO DE 2015.** Institui a Lei Brasileira de Inclusão da Pessoa com Deficiência (Estatuto da Pessoa com Deficiência), Brasília, DF, jul 2015. Disponível em: http://www.planalto.gov.br/ccivil_03/_ato2015-2018/2015/lei/l13146.htm. Acesso em: 17 fev. 2018.

BROGIN, B.; MERINO, E. A. D.; BATISTA, V. J. Contribuição da ergonomia e antropometria no design do vestuário para crianças com deficiência física. **Design e Tecnologia**, Porto Alegre, v. 4, n. 08, p.1-10, 31 dez. 2014. Disponível em: <https://bit.ly/3tkUomF>. Acesso em: 01 fev. 2020.

CALLAN, G. O'H. **Enciclopédia da moda**: de 1840 à década de 80. São Paulo: Companhia das Letras, 2007.

CANCASTER, B. Choosing an ostomy bag. **Vitaly medical**, 2015. Disponível em: <https://www.vitalitymedical.com/blog/choosing-an-ostomy-bag.html>. Acesso em: 26 out. 2019.

DICIONÁRIO MICHAELIS. **Inclusão**, 2015. Disponível em: <http://michaelis.uol.com.br/moderno-portugues/busca/portugues-brasileiro/inclus%C3%A3o/>. Acesso em: 4 mar. 2018.

GIL, A. C. **Métodos e técnicas de pesquisa social** . 6. ed. São Paulo: Atlas, 2008.

GODINHO, S. de S. Além das aparências. **ModaPalavra e-periódico**, Florianópolis, v. 10, n. 19, p. 82-97, jan./jul. 2017. Disponível em: <https://bit.ly/3yPtvdU>. Acesso em: 20 mar. 2021.

GONÇALVES, E.; BEIRÃO FILHO, J. A.. Usabilidade: vestuário infantil. **ModaPalavra e-periódico**, Florianópolis, v. 1, n. 1, p.107-118, jan./jun. 2008. Disponível em: <https://bit.ly/3uIpk0q>. Acesso em: 01 fev. 20.

IBGE: CENSO DEMOGRÁFICO 2010. **Características gerais da população, religião e pessoas com deficiência**. Rio de Janeiro: IBGE, 2012. Acompanha 1 CD-ROM. Disponível em: https://biblioteca.ibge.gov.br/visualizacao/periodicos/94/cd_2010_religiao_deficiencia.pdf. Acesso em: 15 fev. 2018.

KRONE, S. M. F.; OLIVEIRA, A. H. P. de; RIZZI, S. Desenvolvimento de vestuário para crianças com deficiência visual: uma abordagem

inclusiva. **Projética**, Londrina, v. 11, n. 1, p. 246, 1 jun. 2020. Disponível em: <https://bit.ly/2OY3k22>. Acesso em: 20 out. 2020.

MODA INCLUSIVA: perguntas e respostas para entender o tema. São Paulo: SEDPcD, 2012.

MORAIS, D. **Mulher com ostomia você é capaz de manter o encanto**. 7ª ed. Goiânia: Editora Kelps, 2015. Disponível em: https://abcd.org.br/wp-content/uploads/2016/09/Cartilha_da_Mulher_Com_Ostomia-7Ed_web.pdf. Acesso em: 26 out. 2019.

OLIVEIRA, T. S. de. **Moda**: um fator social. 2013. Dissertação (Mestrado em Têxtil e Moda) — Escola de Artes, Ciências e Humanidades, Universidade de São Paulo, São Paulo, 2013. Acesso em: 28 fev. 2018.

POCKET NURSE. *Site*. 2019. Disponível em: <https://www.pocketnurse.com/default/11-81-0906-nasco-life-formr-ostomy-care-simulator>. Acesso em: 28 out. 2019.

SOUSA, R. E. de; XAVIER, L. A.; ALBUQUERQUE, S. S. de. Moda inclusiva: reconhecendo a necessidade da criança cadeirante. **ModaPalavra e-periódico**, Florianópolis, v. 10, n. 19, p.2-22, jan./jun. 2017. Disponível em: <https://bit.ly/3tc4pCn>. Acesso em: 01 fev. 2020.

STUMM, E. M. F.; OLIVEIRA, E. R. A.; KIRSCHNER, R. M. Perfil de pacientes ostomizados. **Scientia Medica**, Porto Alegre, v. 18, n. 1, p. 26–30, jan./mar. 2008.

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