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Consumer Preferences in the Portuguese Ostomy Care Market

Market perception based on consumer reality, needs
and preferences

Cindy Gabriely de Freitas Perella

Dissertation report presented as partial requirement for
obtaining the Master's degree in Information Management
with emphasis in Marketing Intelligence

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by

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ABSTRACT

Advertising is a paid form of presentation of goods, services, ideas by an identified sponsor. Companies spend huge amount of money on advertising and try to focus on solving consumer needs and address their preference. To run a good and strategic campaign, Marketing departments must know their costumers' preferences. This is one of the lacks in the segment of Ostomy Care, which is the field of medicine that takes care of chronic patients with a stoma. From one day to another, after a surgery, they need to live with a stoma to be able to address physiologic needs. Since the beginning of this therapeutic care patients have listened to their nurses and used the products they recommend. However, once this product is 100% reimbursed, since 2017, by the government in Portugal, patients have the change of choosing it no matter how much it costs. It is estimated that those patients have chosen their own products. This research intended to study if they really choose their products and what are their criteria when taking the decision of using it. With these answers, Marketing department could develop better campaigns, focused on what they really care. As results, it was found that yes, most Portuguese ostomized people do choose their products and the most valued criteria are stick well on the skin, have a secure fit and being comfortable. In this sense, marketing departments of OC companies should focus on promoting it.

KEYWORDS

Ostomy care, quality of life, consumer preferences, people living with an ostomy, marketing, consumer preferences and needs

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1. INTRODUCTION

According to the *American Marketing Association* advertising is a paid form of non-personal presentation of promotion of goods, services, ideas by an identified sponsor (Jain, 2009).

Customer satisfaction is currently one of the main criteria in determining the quality that is offered to the customer by products and services. The various questions related to customer satisfaction arise from the concept of marketing, which seeks the adequacy between what is offered and what customers need or want.

The creation of consumer trust and loyalty is increasingly difficult, and because of this, this role pays special attention to the elements that are important in the process of creating a successful strategy (Descotes e Delassus, 2015).

In general, marketing can be considered as a form of "applied economy" (Shaw e Jones, 2005). Its emergence is often attributed to the fact that, despite the variety of academics working in the various disciplines of economics in the late nineteenth and early twentieth centuries, there was a great concern that the economic effects of the market were not used to formulate guidelines for managers in practice. In addition, the information available was identified through obscure academic sources that few could access and read (Fernandez-Morales, 2017).

So that, Marketing strategies are proven to be important, but to satisfy consumer needs it is needed to know them and define what are the things they considerer important and what they are looking for.

This is one of the lacks in the segment of Ostomy Care, which is the field of medicine that takes care of chronic patients with a stoma. From one day to another, after a surgery, they need to live with a stoma to be able to address physiologic needs, something that was discreet and natural before the disease. Since the beginning of this therapeutic care patients have listened to their nurses and used the products they recommend. However, once this product is 100% reimbursed by the government in Portugal patients have the change of choosing it no matter how much it costs. Besides that, people have been more curious and independent in terms of their own treatment, with the growth of internet, and consumer's feedback, it is normal that people look for information. There are many blogs online where people with an ostomy change experience and recommend small tricks and products.

This segment has not many studies, experts in the Ostomy market think end-users choose their own product, others say they just use what nurses recommend, but in fact nobody knows. This is one of the aims of this study, figure out whether people with an ostomy choose or not their own products.

The second aim of this study is, in case they do choose their products, which experts believe so, what are their main drivers? This study intends to find what is important for people with an ostomy and help industry to develop more strategic Marketing campaigns.

I work as a Marketing Manager at a Danish company that develops Ostomy Care products. I have to develop and implement Marketing campaigns every day, those campaigns have always been focused on nurses, once they have a very important role in the decision making process, however, over the past two years we have observed that end users seem to be more curious about their own solutions, so I think it could be benefic to develop campaign to end users as well, but in fact, we have no idea about what they like, take into consideration and even if they really choose their own products. So that, this study is going to be very important and helpful to my academic and professional carrier.

2. LITERATURE REVIEW

2.1 MARKETING CAMPAIGNS BASED ON CONSUMER NEEDS

Customers are one of the main sources of development projects and understanding of product needs. While customer involvement in product development does not always result in desired needs, customer interaction can reduce uncertainty and develop forecasting to better meet their future needs.

Consumers determine their preferences for products and services based on a number of factors such as product attributes and their personal attitudes toward the product. However, there is another factor that plays a key role, the shared and unique aspects of the products as a whole of the relevant choice. The decision to buy a product considers its unique characteristics, its quality and the brand name (Piqueras-Fiszman, & Spence, 2012).

Customer orientation is a key element of the market orientation strategy, and various methods for identifying customer needs have been proposed. As developments and changes in the economy, technology and consumer buying behavior have led suppliers to adapt their business, products and services that provide the way they communicate with customers (Dunne et al., 2014.).

The development of new technologies has allowed suppliers and producers to customize their offerings based on consumers' purchasing history. The technology has also enabled them to communicate with the customer anytime, anywhere, based on their needs and desires (KPMG, 2013.).

Due to its specificity, healthcare marketing is an interdisciplinary area because it uses certain content and techniques specific to classical marketing as a social. In this context, healthcare marketing includes services and markets, and its effectiveness in the application can be seen in the image of a healthy population, higher quality of life, in the development of a chronic disease, ensuring the treatment of patients and their rehabilitation.

The application of marketing in the field of healthcare was imposed by the health problems of society. In this sense, the effective marketing approach involves in-depth research into patients' needs, identifying their latent needs, and providing new healthcare services and products (Purcarea, 2019).

Nevertheless, the involvement of patients in performing the medical act has become a necessity of current life with broad and complex meanings, not only beyond changing the mentality of providers, but also with significant changes such as lifestyle, consumption habits and drugs. The healthcare Marketing services differs mainly by its nature of the need for healthcare products and services, and the beneficiary may not be the target of the marketing campaign, being the doctor who decides what, where and how much will be provided (Suttle, 2014).

Although the consumer generally receives most of the information about a product via social media, the most important information comes from recommendations from independent authorities available to the public. At a time when products are becoming increasingly similar and customers have more places and ways to make their purchases, e-commerce companies need to stand out from other markets. The brand experience is vital in the eyes of the consumer to allow the differentiation of products. In this context, marketers should look for innovative methods to attract new customers and retain them using experience in the context of internet-based marketing (Urdea et al., 2021).

In addition, for business it is important to follow the new trends of digital consumer experience that satisfy customers looking for companies that meet their needs (Li et al., 2020). Some of these experiences include artificial intelligence and augmented reality, which allow consumers to interact with virtual content in a real-world environment and omnichannel experience (Adikari et al., 2020).

2.2 CONSUMER BEHAVIOR

Through experiential marketing, the consumer can understand that the value lies in the hedonic and experiential elements that involve the product, not only in the functional benefits of that same product (Barari & Moss, 2020). This is the main reason why companies that successfully manage the online shopping experience achieve the "sustainability of the competitive advantage of companies (Barari & Moss, 2020, p.53).

Consumer behavior represents the study of how customers, groups or organizations select, buy, use and dispose of ideas, goods and services to meet their needs and desires (Verma & Gustafsson, 2020). It is related to consumer actions in the market and the underlying reasons for these actions. There are three main factors that influence consumer behavior: (Jagdish, 2020)

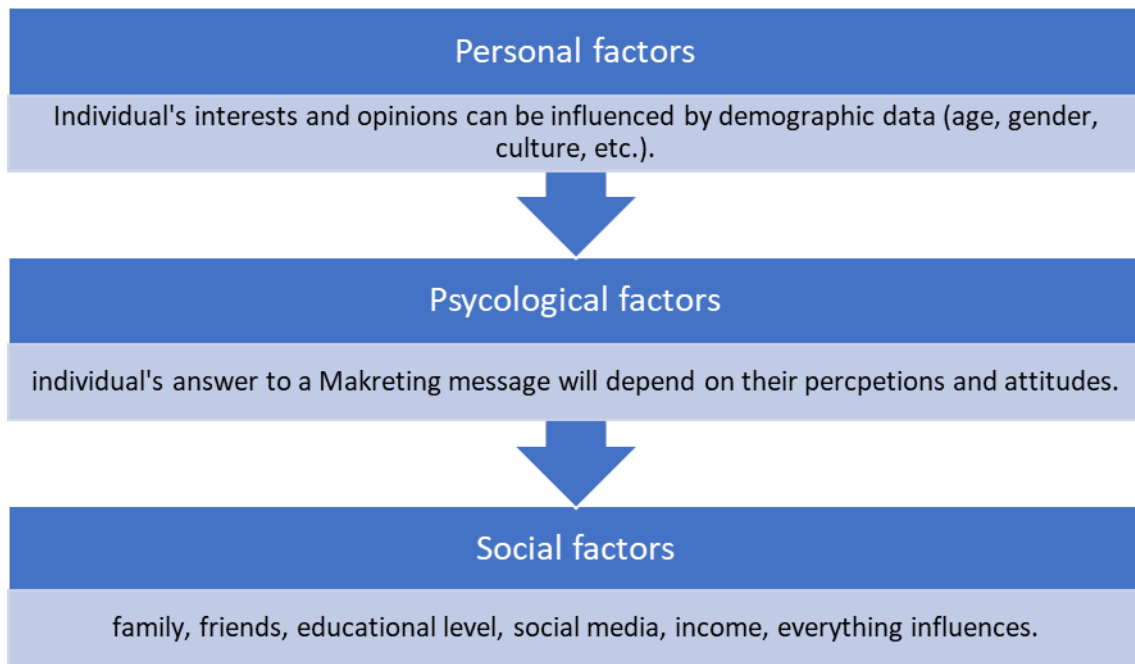


Figure 1 – Three main factors influencing consumer behavior

Studies related to behavioral economics suggest that consumers may be affected by rationality, through which they make suboptimal choices due to the difficulty of processing complex information and other factors that limit critical thinking skills.

There are a few key factors that influence consumer choices about healthcare and health products, such as product prices and attributes. It should be noted that the literature on consumer choice began in the neoclassical economy, direct costs and product attributes influence rational consumers (Schwartz et al., 2013; Politi et al., 2014).

On the other hand, the interactive and participatory nature of social media has provided broad benefits for consumers. The use of social networks for health communication has increased in recent years (Zhao & Zhang, 2017). Aligned with the global awareness of interactive activities users have used social networks for public health communication. Community members use Facebook or Instagram to discuss and share information and promote the well-being of people with certain pathologies (Välimäki et al., 2016).

According to Song et al. (2016) each user of social networks is able to create, disseminate and access and use health information as a producer or consumer of content. Thus, as content producers, users create and publish health-related content based on their own experiences and family history.

Sometimes results vary in accuracy and quality because content written by non-professionals lacks proper evaluation and rigorous review by a responsible institution and authority.

In addition to being considered a risk, anyone can be a content producer, select reliable and valid content on social networks, making it more arduous (Puspitasari et al., 2017). Health information can be misleading and can cause serious impacts on a person's health, such as cyberchondria phenomenon, i.e. excessive fear of symptoms resulting from review of research results and web references, and poor quality of life due to health care management (Mackert et al., 2016).

2.3 PEOPLE LIVING WITH AN OSTOMY

An elimination ostomy is an artificial opening created surgically in the abdominal wall to allow the exit of feces and urine. The stoma device is a device designed to attach around the stoma and harvest the output of the stool and contain any odors, being safer for the patient's skin (Vonk-Klaassen et al., 2016).

Intestinal ostomies are classified according to the segment of the intestine that is brought to the surface of the body. Small bowel ostomies (ileostomies) are distinct from large bowel ostomies (colostomies), loop ostomies and urostomy (Ambe et al., 2018). It can be temporary, when the organ needs time to heal or it can be permanent, when the organ must be removed. This kind of treatment / condition can be performed on people of all ages, including children and babies, however it is more common in elderly people.

Currently, the most common indication for the creation of an intestinal ostomy is bowel cancer. The oncological resection of the rehest is associated with 6 to 22% of the risk of mortality and represents the most serious complication of colorectal surgery. However, there are many factors that lead a person to have an ostomy, such as, bladder cancer, inflammatory bowel disease (Crohn's Disease or Ulcerative Colitis), diverticulitis or an obstruction to the bladder or bowel, radiation therapy or even trauma. A protective ostomy can also be performed in the medical routine, and formed to mitigate the consequences of any pathological situation.

The creation of an intestinal ostomy is associated with a set of physiological changes, mainly a decrease in the surface area available for resorption and loss of continence. Especially in the ileostomy (small intestine), but also in the colostomy (the proximal large intestine), the reduction of the resorption area can lead to loss of fluids and electrolytes. Every day 1.5 to 2 L of fluid passes through the Bauhin valve. About 90% of this amount is reabsorbed. However, amounts greater than

1.5 L/day are not found in clinical practice. For colostomies the extent of physiological change depends on the site of the ostomy.

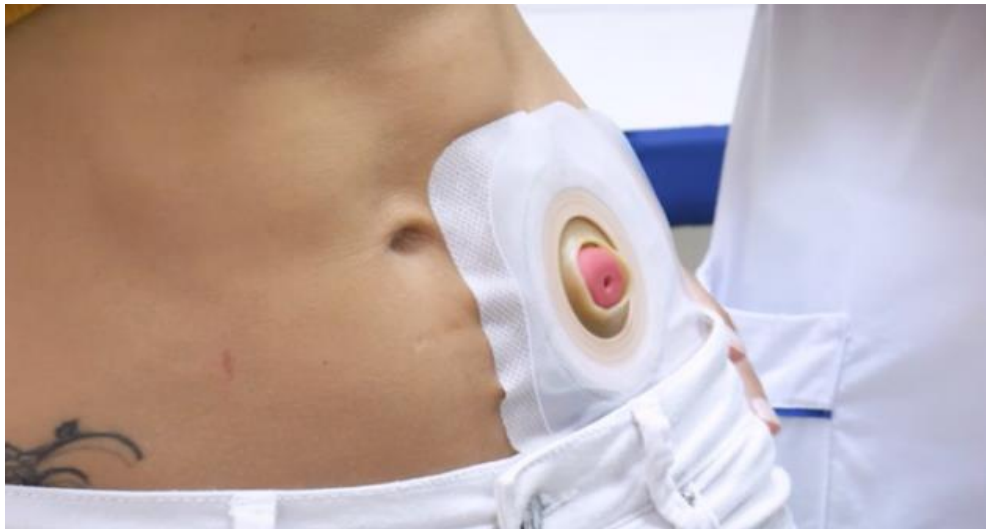


Figure 2 – A stoma

Besides physiological alterations, an ostomy drastically changes the patient's life, and the physical, psychological and social consequences on quality of life have been described in many scientific studies (Nichols, 2016). In this respect, the results of the systematic review of the literature by Vonk-Klaassen et al. (2016) pointed to a link between complications related to stoma and deterioration of the patient's quality of life. In this sense, it reinforces the importance of adequate care for patients living with an ostomy.

Ostomy care includes a wide spectrum of pre-op and postoperative tasks that encompass the manipulation of various types of ostomy. Thus, for ostomy care, the main preoperative task is the provision of professional counseling and training for the potential future ostomized person, as well as family members. Together with direct patient care with stoma, clinical, psychosocial and nutritional aspects should be discussed. Stoma pre-op mark is a typical example of something that is really important, in case it is not done, the patient can have many challenges future in their daily life.

The positive effects of good advice and the training of the quality of life of ostomized patients were described in a systematic review by Danielsen et al. (2013), which report that providing adequate care to ostomized patients in the environment outside the hospital can be challenging. The adjustment includes the patient's intention and willingness to manage new situations and challenges (Reis, 2015).

Nevertheless, the identification of the personal and environmental transition of the conditions will guide the teaching and action of nursing to allow the development of skills that help in the experience of a more independent, interactive and healthy life (Zhou et al., 2019). At one point, understanding the transition phase that patients are experiencing and at another, providing them with nursing therapies that promote self-confidence, well-being and autonomy are fundamental for the transition of the situation of these patients (mota et al., 2015).

Several studies have emphasized the effect of psychosocial adjustment to ostomy should be initiated in the pre-operative phase and continue after hospital discharge, as it will strengthen its early involvement and management of self-care and the construction of more proactive attitudes towards new life circumstances (Miranda et al., 2018).

The study done by Fernandes and Brito (2020) aimed to evaluate the effect of a nursing intervention program on Ostomy Care on the adaptation of the person to a life with an ostomy. The sample of 105 people with an elimination ostomy (EO) was broken down into two groups (intervention group and control group), with evaluation at the first and sixth month after hospital discharge. The information was collected with the Scale of Adaptation to the Elimination Ostomy. At the first month, the adaptation to the EO was satisfactory and similar in both groups, being at the sixth month, statistically more favorable in the intervention group with statistically significant differences between the two evaluation moments in the intervention group.

Thus, structured patient education programs aimed at increasing knowledge and focusing on the psychological needs of patients with an stoma can improve their QoL. It is challenging to teach these patients with an ostomy about self-care after surgery (Pouresmail et al., 2017).

An ostomy causes changes in the patient's physiology, self-esteem and body image contributing to the significant deterioration of QoL (VonkKlaassen et al., 2016; Silva et al., 2021; e Salome et al., 2017). In order to minimize this effect, the follow up of specialized professionals and a multidisciplinary team is extremely important (Silva et al., 2021).

Stomacare nurses work daily to make the life of people with a stoma better, they get a trustful relationship with their patients, that is one of the main reasons why they have had always followed nurses' recommendation in terms of products.

It is estimated that there were around 15000 people living with a stoma in Portugal in 2020 (hmR data – MAT august 2021 – ES cube), and at least 92% of those live their lives worried about something that affect their QoL. (Ostomy life study, 2018)

2.3.1 PEOPLE LIVING WITH AN OSTOMY – FREEDOM OF CHOICE

People with an ostomy can cope well with their condition, but they usually deal with some adjustment problems in everyday life, mainly in the beginning of their ‘stoma journey’ (Bossom e Beard, 2009). Problems may include how the patient perceives his situation to others, although many ostomized wear tighter clothing without the stoma being visible (Capilla-Díaz et al., 2019).

Thus, living with ostomy negatively affects the general quality of life (QoL), its presence is associated with a set of complex problems such as psychological and sexual problems, dissatisfaction with altered body image, changes in daily routine, travel difficulties and tiredness. Some factors such as age, gender, and time since treatment may affect ostomy-specific QoL (Yan et al., 2020).

In this sense, the practice of healthcare includes the situations in which choices are made and decisions made, providing frequent opportunities for patients to exercise their own choices and professionals to respect these choices. Thus, respecting the patient's choices is a way of recognizing his moral status as an individual and his capacity for self-determination (Zokelfli, 2017).

According to Jonsen et al. (2015) providing patients with options is related to their satisfaction. It has also been suggested that patient preferences are essential for good clinical care because patient’s cooperation and satisfaction reflect the degree to which the average intervention meets their choices, values and needs. This cooperation in decision-making results in greater confidence in the professional-patient relationship (Elwyn et al., 2016).

In addition, patients are likely to get greater satisfaction with the goods and services they purchase if they choose them. It is plausible that they better appreciate certain goods if they chose them from a series of alternatives than someone else. (Beauchamp & Childress, 2010).

At the core of health literacy is knowledge, motivation and skills of access, understanding, evaluation and application of information to form judgment and make decisions related to healthcare, disease prevention and health promotion. In this context, access is related to the ability to search for and require health information. Understanding refers to the ability to understand health-related information and accessibility. The evaluation refers to the ability to interpret, filter, judge and evaluate the health information that was accessed. Applying is related to the ability to communicate

and use information to decide to maintain and improve health (Von Wagner et al., 2009; Sørensen et al., 2012)

Health literacy can also affect health behavior and the use of health services, the impact on health outcomes and health costs in society. On the other hand, knowledge about health affects disease prevention and screening, health behavior, patient history and interpretation of diagnostic (salem et al., 2018).

In the clinical scope, health literacy is considered as a "set of capacities that facilitate the patient's access to medical care, the lack of which represents a health risk" (OMS, 2015).

Considering the Portuguese reality, it has been the nurse who decides which devices the patient is going to use. Until April 2017, ostomy products were not 100% paid by the government, some people had to spend much money on it, others had to re-use their products, unfortunately this is still a reality in many other countries, such as China. In 2017 the 100% of reimbursement was approved in Portugal continental, and from April 1st ostomized people would have enough products and their dignity back, without worrying about money. From this moment on, all brands are commercialized by the same price and end-users could still listen to the stomacare nurse, but they now could have more freedom of choice.

According to the perception of specialists who work in this field, sales agents, marketing managers, nurses that I've been working and talking with, patients seem to be more interested in products features, benefits, information in general and are more likely to choose what is better for them; specially those who deal well with their stoma and try to get over. However, this is just a perception.

2.4 FACTORS THAT MAY INFLUENCE THE QUALITY OF LIFE OF OSTOMIZED PEOPLE

Most existing quality of life designs share characteristics of general well-being, feelings of positive social participation, and opportunities to achieve personal potential. Quality of life can be better contextualised by defining awareness relevant to the general public, policy-making, evaluating services and developing innovative programmes specific to patient recovery.

Initially, due to the subjective nature of the individual, quality of life was a difficult concept to measure and define, but in general terms it can be seen as a multidimensional concept that gives an emphase to the self-perceptions of the current state of mind of an individual (Roberts et al., 2015).

One of the main challenges in defining quality of life is to explore the areas to be covered, however, most research studies indicate that to obtain an effective explanation it is essential to consider quality of life as a concept consisting of a set of social, environmental, psychological and physical values (Theofilou, 2013).

The concept of quality of life includes the evaluation of numerous aspects of individual life. These assessments integrate emotional reactions to life occurrences, disposition, sense of accomplishment and satisfaction with life and work and personal relationships (Ruževičius, 2012).

Thus, there are broad scans of QoL that cover satisfaction with employment, with living standards, health system, interpersonal relationships, health. With regard to health-related quality of life (HRQoL) it can be noted that it is based on the concept of health and QoL, influenced by an individual's experiences, beliefs, expectations and perceptions.

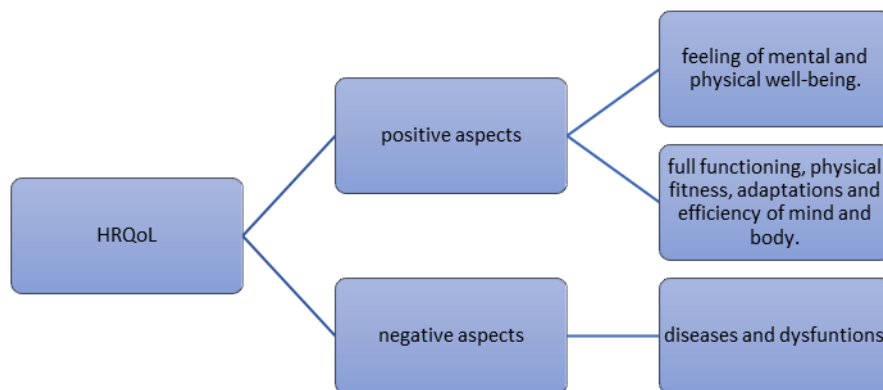


Figure 3 – Concept of HRQoL

Searse: adapted from Sajid et al., 2008

Patients that live with a stoma must deal with problems related to technical problems and complications that develop as a result of stoma. They must deal with changes in their body image, odor, loss of control over the elimination of feces and gases, stoma management and the continuity of their normal activities. These additional tensions can lead to psychological distress, stigma embarrassment, and social isolation (Cakmak et al., 2013).

Some studies have shown that optimism predicts less psychological distress and increased quality of life in these patients (Liao & Quin, 2014). Cancer-related hope is a state of optimism about the good outcome of treating this type of disease. Issues related to knowledge and self-care have previously

been identified as the most common barriers during the rehabilitation period (Parker, 2012; Danielsen et al., 2013).

The study by Silva et al. (2018) aimed to assess the QoL of ostomized patients according to gender, age, type of surgery, primary disease, duration and type of stoma, in a sample of patients evaluated at the Stomatotherapy consultation between January and May 2017. Patients with urostomy had Total, SeSi and FF scores, significantly higher than patients with colostomy and ileostomy. Regarding the SeSi score, patients aged 70 years and over and malignant disease had significantly higher scores than younger patients with benign diseases, respectively.

Emotional regulation is broadly defined as the ability to manage one's own emotional responses, including strategies to increase, maintain or decrease the intensity, duration, and trajectory of positive and negative emotions (Hofman et al., 2012). Learning to regulate emotions is an essential socio-emotional skill that allows flexibility in emotionally evocative situations. There are clear changes in the development of how we manage emotional responses.

One of the biggest challenges in the study of emotional regulation is the definition and operationalization of construction. The theoretical models of emotion regulation provide the organizational structures within which the different regulatory strategies are evaluated. The structure used is the emotion regulation process model, which differentiates the strategic ones over the time of development of the emotional response.

One of the main differences in this model is between the strategies focused on antecedents that generate an emotional reaction before it occurs and the response-focused strategies that are invoked during the continuous emotional reaction. In the sense, a common strategy that focuses on the antecedents is cognitive reassessment, the process by which individuals consider a situation differently. Reevaluation is an adaptive regulatory strategy, in which the response is expressive by suppression, through which individuals try to reduce or suppress facial, vocal or other expressions of emotions (Fussner et al., 2015).

According to the psychological point of view, the relevant situation attracts attention and leads to a process of evaluation of the situation. This assessment can occur in several dimensions that include the novelty of the situation, that is, the degree to which attention is attracted or oriented to change in the environment, the pleasant or the valence of the situation that can lead to behaviors of approximation or evasion and the motivational relevance of the situation to the individual (Hahn et al., 2011).

The presence of an ostomy impacts the entire way of life of patients, and for this reason the patient with an ostomy will have to change their daily activities and lifestyle. These factors should be worked in such a way as to assist in the adaptation of the individual in his new reality, considering his limitations and possibilities (Mols et al., 2015).

The elimination of unwanted gases and secretion to the ostomy bag cause embarrassment to the patient, causing emotional changes that require adaptation. In addition, the presence of the ostomy bag changes the reach of sexuality and coexistence with other people, making it difficult to restore or maintain relationships (Coelho et al., 2015).

In relation to gender, it was observed that women tend to have a lower quality of life compared to the opposite sex, this because body image changes, deprivation of household chores and fear of rejection increases social isolation (Andrade et al., 2016)., making adaptation more difficult and decreasing self-esteem and quality of life.

The struggle and difficulty of adaptation are exaggeratedly reported in women, while men learn not to show much concern about these issues. In this sense, women are more likely to seek emotional support and develop recovery strategies (Grant et al., 2011).

With regard to family income, evidence shows that the high cost of products and materials intended for ostomy care is established by a lower level of quality of life (Maydick, 2014). After ostomy is carried out, new expenditure will be required and the deprivation of these assets due to the low economic level hinders the adaptive process and decreases welfare levels (Menezes et al., 2013). Since in Portugal those products are paid by the government, people living with an ostomy tend to feel better and increase these factors.

In relation to the age group of patients, a study was identified that demonstrated the association between low levels of quality of life in young people, in the case of their emotional state, future prospects and economic situation, in contrast to the relationship of lower QoL in older people in physical terms (Li et al., 2014). It should be noted that the aging process brings to the body, physical and psychological changes that hinder the performance of tasks and restricts the independence of the elderly, thus, there are signs of separation from work activities and distance in social interaction. It is important to note that young adults when unable to perform their daily and work activities face obstacles such as the impossibility of maintaining their usual financial situation, because these are often the ones that often sustain their families, and for this reason the reduction of self-esteem levels and changes in QoL are observed (Castro et al., 2010).

Regarding the clinical domain, it was found that complications with ostomy, skin problems, comorbidities, including obesity, ostomy time and its reason, were the most important variables. Among the most common reasons for ostomy is neoplasia that ends with definitive colostomies (Stumm et al., 2015).

According to Mota et al. (2012) aspects associated with the psychological domain are identified as depression, psychology, mental health, anxiety and body image associated with the worse quality of life of people with ostomy. When the individual is informed about the diagnostic and the need for surgical intervention that will result in an ostomy, it goes through a period of difficult acceptance. This puts people at threat to your life project and reality, with a great risk of breaking their identity (Mahjoubi et al., 2015). The emotional status of the patient is shown to be suffering, and this very often expresses feelings such as depression, loneliness, suicidal thoughts, in addition to anger, does not accept his condition.

Once the patients accepts their new condition and get used to their new stoma life, they can be able to recognize what fits them better, which feature is most important, which criterias are the decision making factors when choosing their own solution, in case they do.

Considering all the aspects mentioned above, there are many factors that might influence people living with a stoma when choosing their own solution, which can be, parte properly on skin, do not leave residue on the skin, neutralize odors, having anatomical design that adapts to the body, be discreet and don't notice on clothes, be comfortable, be easy to apply, be easy to remove, safe fixing system, do not unfix easily, plate easy to cut with an appropriated scissor, do not make noises, having a bag that doesn't fill with air, having a flexible bag, light, doesn't fill all suddenly, the same color of the skin, be recommended by a known person, being of a well-known bran or the brand offers a supporting program.

2.5 OSTOMY DEVICES

As mentioned before, the opening of the ostomy is called a stoma. This word comes from Greek and means opening.

The procedure improves the patient's quality of life, although sometimes he may lose continence, as the reto is bypassed. In this sense, waste is picked up passively in ostomy plastic bags, which adhering directly to the abdomen around the ostomy and should be replaced every 2 to 3 days.



Figure 4 - An ostomy device

The Ostomy Device can be two types different: one or two pieces. The one-piece system must be replaced entirely periodically depending on the type of ostomy. The two-piece system consists of a plate that glues to the skin and a bag that is fixed through the plate. This fixation can be mechanical or adhesive. All these components combined form a device that allows the ostomized patient to harvest and manage their physical waste, avoiding its leakage, known as leakage, and at the same time simplify the process of device exchange.



Figure 5 - Ostomy devices one piece



Figure 6 - Ostomy devices two pieces mechanical fixing



Figure 7 - Ostomy devices two pieces adhesive fixing

Despite the functionality and safety of the device have been tested through a configuration to be effective for these patients and all studies aim to further improve ostomy devices and develop innovative technical means to regain control over the discharge of body waste to avoid the problems associated with the use of bags (Hubbard et al., 2017), it is related to the usage, confidence, self-care, and unique anatomical issues, which makes the whole area to be challenging as mentioned before.

3. METODOLOGY

With the aim of understanding better the preferences and choosing behavior of the Portuguese ostomized patient, a questionnaire was created. The research was exploratory with strategic questions including a list of all criteria that may influence their choices and an evaluation scale.

The hypothesis were:

- H1: Most Portuguese ostomized patients choose their own products.
- H2: Portuguese ostomized patients are willing to choose their own products according to their diagnostic.
- H3: Portuguese ostomized patients are willing to choose their own products according to their type of ostomy.
- H4: Portuguese ostomized patients are willing to choose their own products according to their ostomy location.
- H5: Portuguese ostomized patients are willing to choose their own products according to their leakage experience.
- H6: Portuguese ostomized patients are willing to choose their own products according to their complications
- H7: The Portuguese ostomized patients that chose their own products have some main criteria they take in consideration when selecting it.

This study was run to discover whether these patients choose their own products and for those who do, what are the main product's characteristics they take into consideration. In addition to study if there is any health issue that can influence this behavior.

3.1 DEFINITION OF RELEVANT CRITERIA OF PRODUCT'S CHOICE

The first step to run this research was to define which were the relevant factors that could be relevant when ostomized patients choose a product. In order to get there, it was run 5 interviews with very experienced people that work in the field, 3 sales representants, 1 Stoma care nurse and 1 Consumer specialist. The interview had only 2 questions:

- A) When speaking about Ostomy Care, the stoma care nurse has a very important role in their patient's life, not only helping them when leave surgery room, but also telling them which

products are better to use. However, with the growth of globalization and internet connection, people have been more and more aware and informed about their solutions. According to your perception and experience, the Portuguese ostomized patient have chosen their own products over the last few years?

- B) In your opinion, what are the criteria/factors that may influence a user in their decision-making process when deciding to use a particular ostomy product? What do they consider as important?

Each interview took approximately 15 minutes.

The aim of the initial interviews was to define the most possible relevant factors that usually lead a Portuguese consumer to choose an ostomy product, once only very experienced people answered the short and very qualitative interview, those people had been working for more than 20 years in the ostomy field.

When answering if they think Portuguese ostomized patient have chosen their own products over the last few years instead of just listening to what their nurse recommends, they all said yes. According to their perception they do have been more interested in knowing more about their own treatment and choosing their own products, they strongly believe that most (more than 50%) Portuguese ostomized consumers choose their own product nowadays.

When answering about what were the criteria/factors that in their opinion may influence a user in their decision-making process when deciding to use a particular ostomy product and what do they consider as important, they all listed and described a lot of factors, but none of them could say which were the most important. They had not talked to each other before neither saw the questions, but in general listed similar factors.

3.2 QUESTIONNAIRE ELABORATION

After running the interview, collecting, and studying the data, it was possible to elaborate a questionnaire. It was built considering demographic, social, economic, health and strategic questions about the users, such as their age, schooling level, professional activity, diagnostic, type of ostomy, location, self-care, follow-ups, leakage, frequency of those things, skin complications and two main questions:

- A) Regarding the products you use, you are the one who chooses that or do you use those that are recommended by your nurse?

B) When choosing a product, how important is each of the following criteria? Use the scale above to rate each factor.

1. Nothing important
2. Little important
3. Something important
4. Moderately important
5. Very important

List of factors:

- a) Stick well on the skin
- b) Do not leave residue on the skin
- c) Ability to neutralize odors
- d) Anatomical design
- e) Discreet and don't be visible on clothes
- f) Comfort
- g) Easy to apply
- h) Easy to remove
- i) Secure fit
- j) Plate easy to cut and proper scissors
- k) Do not make noises
- l) A bag that doesn't fill with air
- m) Flexible bag
- n) Several options of size
- o) Bag with a color like my skin
- p) Bag that doesn't fill suddenly
- q) Developed and sold by a prestigious brand
- r) Recommended by someone you know
- s) Light bag
- t) The brand offers a supporting program

One of the aims of the survey was also evaluate if there was some correlation between choosing their own products and sociodemographic variables such as gender, age, educational level and professional situation.

The questionnaire was built on Qualtrics, had 17 questions and it was supposed to be complete in approximately 5 minutes. The whole questionnaire is available in the attachment.

3.3 DATA COLLECTION

For data collection it was used two channels, off and online, however the majority of answers came via online. The questionnaire was sent to Portuguese pharmacies all over the country, so when

patients went to buy their products the pharmacist offered the survey; and online channel, the survey was posted on Social Media and more specifically on a Facebook group dedicated to customized Portuguese people. The data were collected between August 20 and October 31 of 2021.

3.4 STATISTICAL ANALYSIS

Statistical analysis involved descriptive statistical measures (absolute and relative frequencies, averages and their standard deviations) and inferential statistics. The significance level to reject the null hypothesis was set at $(\alpha) \leq .05$. The Chi-square test of independence and the Fisher test were used.

Statistical package for the Social Sciences (SPSS) version 27.0 was performed.

4. RESULTS AND DISCUSSION

4.1 SAMPLE SAILING

In total, 67 people answered the questionnaire that was anonymous. However, the data refer to a total of 57 patients, the other 10 answers were incomplete, so those were not used. The main channel was online, 95% of answers came through online channels, so people who answered had access to the internet connection and were active on social media. The mean age was 49.4 years, ranging from a minimum of 16 to a maximum of 75 years. The majority were aged 40-60 years (50.9%), female (78.9%), secondary education (45.6%) and professionally active (56.1%).

Table 1 – Sociodemographic characterization (N = 57)

	N	%
Age (Avg; SD)	49.4	13.8
until 40	17	29.8
40-60	29	50.9
> 60	11	19.3
Gender		
Female	45	78.9
Male.	12	21.1
Educational level		
Basic (up to year 9)	7	12.3
Bachelor	20	35.1
Master Degree	3	5.3
Primary (up to year 4)	1	1.8
Secondary	26	45.6
Professionally active		
No	25	43.9
Yes	32	56.1

Most part of the sample is female, which lead us to think this survey may show more about women's preferences and that women are more willing to answer, share opinion and participate, so these results may reflect the perception and preferences of female patients.

It is important to emphasize that 95% of the 57 respondents came through internet, more specifically a Facebook group called 'Ostomizados e Capazes', so these results may reflect the perception and

preferences of patients that are connected to the internet. It was very difficult to reach out offline patients.

4.2 RESULTS AND DISCUSSION

The average time since those people had their surgery was 5.4 years, this is good because new patients discharged (those who had been ostomized for less than a year) usually are still very vulnerable and said, so they may have different feeling about choosing products, since they are still getting used and adapting to their new reality, and not only that, they might be thinking their stoma is temporally, so that, they probably don't think a lot about it. The patient that had the surgery the longest did it 36 years ago and the one shortest did it one year ago. This result may lead us to the fact that those who answered the questionnaire know and feel what they shared, because they have been living with that for a significant time.

The most frequent diagnostics were Cancer (49.1%) Crohn's disease (23.6%) and Ulcerative colitis (18.2%), with is aligned with the literature. The sample was quite mixed.

Table 2 – Diagnostic

	N	%
Cancer	27	49.1
Ulcerative colitis	10	18.2
Diverticulitis	2	3.6
Crohn's disease	13	23.6
Undefined	4	7.3
Trauma	1	1.8

This result makes sense, once Cancer is the main reason why people end up having a stoma and lead us to believe that this sample may represent the reality of people living with a stoma. If we had more ileostomy for example, the answers could not represent the opinion of the ostomized community. In others, the results may be reliable because represents the opinion of a group of people with a stoma that has most people living with a stoma due to cancer issues, such as the whole community.

The most frequent types of Ostomy were Ileostomy (48.1%) and Colostomy (42.3%).

Table 3– Type of ostomy

	N	%
Colostomy	22	42.3
Colostomy,Ileostomy	1	1.9
Ileostomy	25	48.1
Urostomy	4	7.7

This result is not in line with literature, once the most frequent type of Ostomy (according to hmR 2021) is Colostomy. This may lead us to think that people with an Ileostomy might be more willing to answer online questionnaires or are more present online, since the main source of answers was online (it will be discussed in detail further on). One of the possible problems of having most people with an Ileostomy is that the result of this survey may not represent the real opinion of the whole ostomized community. Ileostomies are more complex, so people could be more afraid of changing their products or choosing it, because they usually have more complications. One of the aim of this study is also try to prove if Colostomized people tend to choose more their products then Ileostomized and Urostomized people. It will be discussed further on.

A high percentage of patients had permanent stoma (73.1%), while 26.9% had temporary stoma. This is good for the purpose of this study, because people with temporary stoma may not really worry about their products and just follow what the nurses say once they think that situation is not permanent. After a while and after knowing that situation is permanent, as the literature says, people tend to be happier and more satisfied if they make decisions in their own treatment. Having 73% of respondents with permanent stoma is good because may reflect the opinion of those who really care about what they are using, because it is not a temporally situation.

In terms of stoma location, 54.7% of the respondents had it in the bending line and 43.4% below the bending line.

Table 4 – Stoma Location

	N	%
Under bending line	23	43.4
Above bending line	1	1.9
On bending line	29	54.7

It can or not be related to the fact of having more complications. The most worrying location is Above bending line, due to the proximity to the ribs. In this case it is not relevant because only one respondent had the stoma above bending line.

Regarding the frequency of follow ups (how often the patients go to see a specialized nurse), most patients indicate that they were being monitored periodically by nurses (80.4%). Almost half of the patients do follow-up more than once every six months (42.2%).

Table 5 – Follow up frequency

	N	%
Only in the presence of a problem	9	20.0
More than once every six months	19	42.2
Once a six months	9	20.0
Once a year	8	17.8

Being followed by a specialized nurse is very good as the literature said, many studies described above say so, however, for the purpose of this study it could be better to have more respondents that are not followed by a nurse, there might be a correlation of not following up frequently and being more willing to choose their own products. With this data, it won't be possible to evaluate that.

When asked about their self-care ((replacement of devices, cleaning, irrigation, etc.), 96.4% of the respondents take care of their selves, which is good for the purpose of this study, because they know what they need, feel and care about features and products, what they shared represents their own opinion.

In terms of leakage, although new products technologies and products have been improved and developed, according to this survey leakage is still an issue, 60% of the respondents deal with that and most of the leakage experiences taking place at least once in the last six months (39.4%).

Table 6 – Leakage frequency

	N	%
Only during an early stage	6	18.2
At least once over the last six months	13	39.4
Once a month	7	21.2
Once a week	7	21.2

Dealing with leakage may scare people of choosing their own product, this correlation will be tested further on. Leakage is the main source of skin complications.

Complications are very common, however, according to this survey, only 30,4% of the respondents had some type of complications; about 63% of the complications occurred at an early stage, in the beginning of the treatment, which is normal, since the patient is still learning about his new life and.

Table 7 – Complications frequency

	N	%
Only during an early stage	10	62.5
At least once over the last six months	5	31.3
Once a month	1	6.3

When asked about choosing their own products or using what nurses recommend 56.9% of the respondents said they choose their own products.

Table 8 – Choosing products

	N	%
I choose my own products	29	56.9
I use the nurses' recommendation	23	45.1

This is one of the main questions of the research. This result shows that even being followed by a specialized nurse (80.4%), more than half of the group prefer to choose their own products and to have more control of their treatment. With this number it is possible to say that the hypothesis

number one is proved, according to this survey, most Portuguese ostomized patients choose their own products.

When patients were asked to classify the factors they value most when choosing a product, the criteria that most valued form were to stick well on the skin (4.88), have a secure fit (4.71) and be comfortable (4.69). The least valued were having a bag with color like that of my skin (3.61), Being recommended by someone known (2.80) and developed and sold by a prestigious brand (2.80). All the factors and grades can be seen in the table 19 bellow.

Table 9 – Selection criteria among the whole group

	Average	Std. Dev.
Stick well on the skin	4.88	0.43
Do not leave residue on the skin	4.39	0.88
Ability to neutralize odors	4.53	0.83
Anatomical design	4.26	0.98
Discreet and don't be visible on clothes	4.18	1.07
Comfort	4.69	0.65
Easy to apply	4.55	0.70
Easy to remove	4.40	0.80
Secure fit	4.71	0.61
Plate easy to cut and proper scissors	4.45	0.90
Do not make noises	4.21	0.96
A bag that doesn't fill with air	4.37	0.97
Flexible bag	4.43	0.77
Several options of size	4.14	1.03
Bag with a color like my skin	3.61	1.32
Bag that doesn't fill suddenly	4.16	1.01
Developed and sold by a prestigious brand	2.80	1.39
Recommended by someone you know	2.80	1.24
Light bag	4.18	1.07
The brand offers a supporting program	3.62	1.12

scale: 1 – Nothing important 5 – Very important

4.3.2 – CORRELATION OF VARIABLES

4.3.2.1 - Sociodemographic x Product's choice

This test was done to find any correlation between gender, age, educational level of professional situation and the fact they decide the products they are going to use. In order words, the idea was to

identify if the young people tend to make their own choice, or if those who are professionally active tend to be more willing to take risk and try other products.

This test was done through the Fisher test, and the relationship between sociodemographic variables and product choice (whether the nurse himself or chooses the recommendation) couldn't be proved, no statistically significant associations ($p > .05$) were found.

Table 10 - Sociodemographic x Product's choice

	Their own		Nurse		p value.
	N	%	N	%	
Gender					.735
Female	22	53.7%	46.3%	19	
Male	7	63.6%	36.4%	4	
Age					.999
Up to 40	9	56.3%	43.8%	7	
40-60	15	55.6%	44.4%	12	
> 60	5	55.6%	44.4%	4	
Educational level					.463
Secondary or less	16	51.6%	48.4%	15	
Superior	13	61.9%	38.1%	8	
Professionally active					.573
Yes	16	51.6%	48.4%	15	
No	13	61.9%	38.1%	8	

4.3.2.2 - Sociodemographic x Follow up on any ostomy nurse care service

This test was done to find any correlation between gender, age, educational level of professional situation and the fact they do follow up with specialized nurses. In order words, the idea was to identify if the young people tend to make their own choice, or if those who are professionally active tend to do more follow ups with nurses.

This test was done through the Fisher test, and the relationship between sociodemographic variables and frequent follow up couldn't be proved, no statistically significant associations ($p > .05$) were found.

Table 11 - Sociodemographic x Follow up on any ostomy care service

	No		Yes		p value.
	N	%	N	%	
Gender					.673
Female	8	17.8%	37	82.2%	
Male	3	27.3%	8	72.7%	
Age					.747
Up to 40	3	17.6%	14	82.4%	
40-60	5	17.2%	24	82.8%	
> 60	3	30.0%	7	70.0%	
Educational level					.498
Secondary or less	8	23.5%	26	76.5%	
Superior	3	13.6%	19	86.4%	
Professionally active					.741
Yes	7	21.9%	25	78.1%	
No	4	16.7%	20	83.3%	

4.3.2.3 - Sociodemographic x having any complications

This test was done to find any correlation between gender, age, educational level of professional situation and the fact they have complications with their stoma. In order words, the idea was to identify if the young people tend to make their own choice, or if those who are professionally active tend to have more complications.

This test was done through the Fisher test, and the relationship between sociodemographic variables and presence of complications couldn't be proved, no statistically significant associations ($p > .05$) were found.

Table 12 - Sociodemographic x having any complications

	No		Yes		P value.
	N	%	N	%	
Gender					.732
Female	31	68.9%	14	31.1%	
Male	7	63.6%	4	36.4%	
Age					.407
Up to 40	12	70.6%	5	29.4%	
40-60	21	72.4%	8	27.6%	
> 60	5	50.0%	5	50.0%	
Educational level					.380
Secondary or less	25	73.5%	9	26.5%	
Superior	13	59.1%	9	40.9%	
Professionally active					.566
Yes	23	71.9%	9	28.1%	
No	15	62.5%	9	37.5%	

After testing it and not finding any statistically significant number, the hypothesis where tested. Considering that the group of patients that choose their own products is the target market, after all, this is the group that consumer marketing campaigns are developed for, more analyses were done to try to find any correlation between the action of choosing the products and other variables.

4.3.2.4 – Testing hypothesis → Correlation between choosing their own products and other variables

To discover if the proposed hypothesis were true which means finding any correlation between the fact of choosing their products and any other variable such as type of diagnostic, type of oc, stoma location, dealing with leakage, having some complications, Crosstabulation and Chi-square tests were done.

H2: Portuguese ostomized patients are willing to choose their own products according to their diagnostic.

The idea of this hypothesis is, is it possible that there a link between the kind of diagnostic and the fact they choose their own products. We wanted to analyze if those with Cancer tend to choose more, or even those with Chron, that usually get the diagnostic earlier because this is a chronic disease.

Table 13 - Diagnostic * respondents that choose their products Crosstabulation

		Choose products			
		Yes	Nurse	Total	
Diagnostic	Cancer	Count	15	9	24
		% within choose	53.6%	39.1%	47.1%
	Ulcerative colitis	Count	5	4	9
		% within choose	17.9%	17.4%	17.6%
	Diverticulitis	Count	2	0	2
		% within choose	7.1%	0.0%	3.9%
	Crohn's disease	Count	5	7	12
		% within choose	17.9%	30.4%	23.5%
	Crohn's disease, Ulcerative colitis, Undefined	Count	1	0	1
		% within choose	3.6%	0.0%	2.0%
	Undefined	Count	0	2	2
		% within choose	0.0%	8.7%	3.9%
	Trauma	Count	0	1	1
		% within choose	0.0%	4.3%	2.0%
Total		Count	28	23	51
		% within chosse	100.0%	100.0%	100.0%

A chi-square test of independence was performed to examine the relation between described above and it was not significant: $\chi^2(6, N = 51) = 7.527, p = 0.275$. After running the test, it is possible to say that no evidence was found to prof the correlation between choosing the product and kind of diagnostic, since the values are not statistically relevant.

H2 was no proved, which doesn't mean it is false, but with this survey and data, it is not possible to affirm such a claim.

H3: Portuguese ostomized patients are willing to choose their own products according to their type of ostomy.

The main idea of this hypothesis is: is it possible that there a link between the type of ostomy and the fact they choose their own products. Maybe, those that have a colostomy could choose it, since they

have less complications and their treatment usually is simpler. In the same way, maybe the patients with more complex cases are more afraid to make this decision, once they think they can take a risk. This test was done to evaluate if we could say such things with this data.

Table 14 - Type of OC * respondents that choose their products Crosstabulation

		Choose products		Total	
		Yes	Nurse		
Type of OC	Colostomy	Count	14	8	22
		% within choose	48.3%	36.4%	43.1%
	Colostomy.Ileostomy	Count	1	0	1
		% within choose	3.4%	0.0%	2.0%
	Ileostomy	Count	14	11	25
		% within choose	48.3%	50.0%	49.0%
	Urostomy	Count	0	3	3
		% within choose	0.0%	13.6%	5.9%
Total		Count	29	22	51
		% within choose	100.0%	100.0%	100.0%

A chi-square test of independence was performed to examine the relation described above. The relation between these variables was not significant: $\chi^2(3, N = 51) = 5.132, p = 0.162$. After running the test, it is possible to say that no evidence was found to prove the correlation between choosing the product and type of ostomy, since the values are not statistically relevant.

Once more, H3 was not proved, which doesn't mean it is false, but with this survey and data it is not possible to affirm such a claim.

H4: Portuguese ostomized patients are willing to choose their own products according to their ostomy location.

In this case, what we wanted to find was any link between the stoma location and choosing their own products. Maybe it could be possible to think that in case the stoma is on a more difficult position, this person could have more complications and could be more afraid of having any leaking and consequently wouldn't feel so comfortable to change.

Table 15 - Location * respondents that choose their products Crosstabulation

		Choose products		Total	
		Yes	Nurse		
Location	Abaixo da linha do umbigo	Count	13	9	22
		% within Choose	46.4%	39.1%	43.1%
	Na linha do umbigo	Count	15	14	29
		% within Choose	53.6%	60.9%	56.9%
Total		Count	28	23	51
		% within Choose	100.0%	100.0%	100.0%

A chi-square test of independence was performed to examine the relation described above. The relation between these variables was not significant: $\chi^2(1, N = 51) = 0.274, p = 0.601$. After running the test, it is possible to say that no evidence was found to prove the correlation between choosing the product and location of the stoma, since the values are not statistically relevant.

H4 was not proved, which doesn't mean it is false, but with this survey and data it is not possible to affirm such a claim.

H5: Portuguese ostomized patients are willing to choose their own products according to their leakage experience.

Leakage is the main concern of people with living with a stoma, they are always afraid of that. The aim of this test was to evaluate if there was any link between the fact that the patient that experiences more leakage could be less willing to choose their own products for example. They could be more insecure and give up of choosing their own treatment, because it could end up in a leakage experience.

Table 16 - Leakage * respondents that choose their products Crosstabulation

			Choose products		Total
			Yes	Nurse	
Leakage	No	Count	11	8	19
		% within Choose	37.9%	34.8%	36.5%
	Yes	Count	18	15	33
		% within Choose	62.1%	65.2%	63.5%
Total		Count	29	23	52
		% within Choose	100.0%	100.0%	100.0%

A chi-square test of independence was performed to examine the relation described above. The relation between these variables was not significant: $\chi^2(1, N = 52) = 0.550, p = 0.815$. After running

the test, it is possible to say that no evidence was found to prove the correlation between choosing the product and dealing with leakage, since the values are not statistically relevant.

H5 was not proved, which doesn't mean it is false, but with this survey and data it is not possible to affirm such a claim.

H6: Portuguese ostomized patients are willing to choose their own products according to their complications

Complications are a step further after leakage and can really scare people. In this case, it was intended to try to find any link between making the decision of choosing their products and having more or less complications. Maybe, those who have more complications wouldn't be comfortable to choose their own products.

Table 17 - Complications * respondents that choose their products Crosstabulation

		Choose products		Total	
		Yes	Nurse		
Complications	No	Count	20	15	35
		% within Choose	69.0%	65.2%	67.3%
	Yes	Count	9	8	17
		% within Choose	31.0%	34.8%	32.7%
Total	Count	29	23	52	
	% within Chosse	100.0%	100.0%	100.0%	

A chi-square test of independence was performed to examine the relation described above. The relation between these variables was not significant: $\chi^2(1, N = 52) = 0.820, p = 0.775$. After running the test, it is possible to say that no evidence was found to prove the correlation between choosing the product and having complications, since the values are not statistically relevant.

H6 was not proved, which doesn't mean it is false, but with this survey and data it is not possible to affirm such a claim.

4.3.2 – PREFERENCES OF THOSE WHO CHOOSE THEIR PRODUCTS

H7: The Portuguese ostomized patients that chose their own products have some main criteria that they take in consideration when selecting it.

In order to test H7, patients were asked to classify the factor they value most when choosing a product (only those who choose), the criteria that were most and least valued were the same as those related to the whole group, but with a higher score. In this sense, H7 was proven, they do have main factors they take into consideration when deciding for a product, we just didn't know yet.

The most important criterias when choosing a product were: Stick well on the skin, valued as 4.93 among those who really choose their products and 4.88 among the whole group of respondents; Secure fit valued as 4.79 among those who really choose their products and 4.71 among the whole group of respondents and Comfort valued as 4.71 among those who really choose their products and 4.69 among the whole group of respondents.

Regarding the factors they care less when choosing a product the criterias were: Bag with color similar to the skin valued as 3,61 among those who really choose their products and 3,61 among the whole group of respondents; Recommended by a known person valued as 2,93 among those who really choose their products and 2.80 among the whole group of respondents and Developed and sold by a prestigious brand valued as 2,93 among those who really choose their products and 2,80 among the whole group of respondents. In this sense, H7 was proven.

Table 18 shows the values given to each criteria just by the 56.9% that really choose their own products, and the results compared to the answers of the whole group are quite similar, which means that even though they use only what nurses recommend, they have the same concerns.

Table 18 – Selection criteria for those who choose their products

	Mean	Std. Deviation
Stick well on the skin	4.93	.262
Do not leave residue on the skin	4.44	.847
Ability to neutralize odors	4.57	.790
Anatomical design	4.32	.983
Discreet and don't be visible on clothes	4.04	1.138
Comfort	4.71	.600
Easy to apply	4.46	.744
Easy to remove	4.50	.694
Secure fit	4.79	.499
Plate easy to cut and proper scissors	4.46	.838
Do not make noises	4.14	1.044
A bag that doesn't fill with air	4.21	1.101
Flexible bag	4.37	.742
Several options of size	4.25	1.005
Bag with a color like my skin	3.61	1.286
Bag that doesn't fill suddenly	4.11	.994
Developed and sold by a prestigious brand	2.93	1.386
Recommended by someone you know	2.93	1.152
Light bag	4.07	1.184
The brand offers a supporting program	3.75	1.143

These results are very interesting and good to the purpose of this study. Marketing Managers spend a lot of time on planning campaigns and choosing topics to talk about. Since they don't know yet what ostomized people looks for, it might be very helpful. Running a campaign focused on comfort and sickness may have better results than one focused on lightness and supporting program for example.

5. CONCLUSIONS

In conclusion, this research reflects the preferences of Portuguese Ostomized people that are online, 95% of respondents came from online sources. Considering that most part of the Marketing campaigns nowadays tend to be online these results are relevant for the purpose of the study.

Since most respondents are female it can lead us to the fact that they are more willing to answer online surveys, or they have a predominance presence online. The ideas gotten in this study could be helpful to develop marketing campaigns focused on online women that live with a stoma.

The results show that more than 96% of ostomized people take care of themselves, in this sense, marketing campaigns can be directed to the patients / end users. From a personal point of view, I've never been sure about the percentage of people that really takes care of themselves, I thought they were more dependents. I was always concerned about directing Marketing content to end users and their carer.

In the opposite way of what it was expected, it wasn't found any statistically significant association between sociodemographic factors and product's choice, neither frequency of follow ups nor having complications, which doesn't mean those affirmations are not true, but based on these data and tests, it is not possible to state such claims. More study, answers and test should be run to evaluate it better.

In terms of choosing products, the hypothesis H1 was confirmed, most Portuguese ostomized people choose their own product, more specifically 56.9%, they have been more independent and taken more control of their own treatment instead of just following nurses' recommendation once they have more access and interest to ostomy care treatment and products. However, it is not possible (with date and analyses taken away from this study) to affirm that the fact they choose their own products is related to any other variable (diagnostic, type of ostomy, stoma location, frequency of follow up, number of complications and leakage frequency experience) since H2, H3, H4, H5 and H6 were also not proven because no statistically significant number were found regarding it. Again, it doesn't mean these hypotheses are false, but with the data taken away from this study, it is not possible to say such claims. It would be necessary to have more data and then to run more tests and try to find statistically significant numbers.

Regarding to what matters the most and least to ostomized consumers when choosing a product, this study shows that the main criteria of selection are: *Stick well on the skin*, *Secure fit* and *Comfort*, while the three least valued were: *Color of the bag* (similar to skin), *being recommended by a known person* and *being developed and sold by a prestigious brand*. These results can be very helpful and may lead us to the fact that when developing a Marketing Campaign, it is better to focus on one of these three parameters instead of any specific disease or type of ostomy for example. Those preferences are transversal to the type of ostomy, it is general, independent on specific conditions, they are more worried about comfort, stickiness, and security. As a Marketing Manager I would say the best focus for Ostomy product Marketing campaigns in Portugal are stickiness, fit and comfort, and the results of this research are going to be very helpful for me as a Marketing Manager in terms of defining my strategies. For example, I've been spending much time on promoting supporting programs and this is one of the less relevant topics for consumers, for example.

6. LIMITATIONS AND RECOMMENDATIONS FOR FUTURE WORKS

Once no evidence was found for H2, H3, H4, H5 and H6, it would be necessary to increase this sample significantly. The more answers I got, the bigger is the chance of finding real evidence.

It was very difficult to reach out offline respondents, next time I would think about another strategy to get different profiles of respondents, maybe the research could also reflect the preferences of offline Portuguese ostomized people. I could print a QR code and deliver at pharmacies around the country, maybe try to talk to the nurses so they could help with respondents and leave the questionnaire open for longer period.

If I had talked personally with end-users, I could have had more information, maybe next time some interviews could be done.

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8. ATTACHMENT

Questionnaire in Portuguese, the language spoken in Portugal where the study was run.

- 1) Data de nascimento
- 2) Sexo
 - a. Fem.
 - b. Masc.
 - c. Outro
- 3) Grau máximo de educação que atingiu:
 - a. Primário ou menos
 - b. Básico
 - c. Secundário
 - d. Licenciatura
 - e. Mestrado
 - f. Doutoramento
- 4) Tem atividade profissional?
 - a. Sim, continuei a trabalhar depois do estoma.
 - b. Não, parei as atividades profissionais depois do estoma.
 - c. Não, sou reformado (a).
- 5) Data da cirurgia
- 6) Hospital onde realizou a cirurgia
- 7) Diagnóstico (fazer uma lista)
- 8) Tipo de ostomia:
 - a. Colostomia
 - b. Ileostomia
 - c. Urostomia
- 9) Estoma é:
 - a. Temporário
 - b. Permanente
- 10) Localização do estoma
 - a. Acima da linha do umbigo
 - b. Na linha do umbigo
 - c. Abaixo da linha do umbigo
- 11) Faz acompanhamento em algum serviço?
 - a. Sim
 - i. Mais de 1 vez a cada seis meses
 - ii. 1 x a cada seis meses

- iii. 1 x por ano
- iv. 1 x a cada dois anos
- v. Apenas quando tenho problemas
- b. Não
 - i. Porquê?

12) Faz autocuidado (definir o que é o autocuidado)?

- a. Sim
- b. Não

13) Experiencia fugas?

- a. Sim
 - i. 1 x por semana
 - ii. 1 x por mês
 - iii. Pelo menos 1 x nos últimos 6 meses
 - iv. Tive apenas no início
- b. Não

14) Tem ou já teve algum tipo de complicações? Das complicações abaixo quais delas já experienciou?

- a. Sim
 - i. 1 x por semana
 - ii. 1 x por mês
 - iii. Pelo menos 1 x nos últimos 6 meses
 - iv. Tive apenas no início
- b. Não

15) Em relação aos dispositivos que usa, você (ou o seu cuidador) os escolhe ou usa o que a enfermeira recomenda?

- a. Sim, eu uso apenas o que a enfermeira me recomenda.
- b. Justifique a sua resposta
- c. Não, eu mesmo escolho os meus produtos.
- d. Justifique

16) Usa sistema de

- a. Uma peça
- b. Duas peças

17) Quando da escolha de um produto, quão importante são os critérios (para você ou o seu cuidador) listados abaixo? Use a seguinte escala para classificar cada parâmetro.

- 1 – Nada importância
- 2 – Pouco importante
- 3 – Algo importante
- 4 – Moderadamente importante
- 5 – Muito importante

- a. Colar bem a pele
- b. Não deixar resíduos na pele
- c. Neutralização de odores

- d. Ter design anatómico que se adapte ao corpo
- e. Ser discreto e não se notar na roupa
- f. Ser confortável
- g. Ser fácil de aplicar
- h. Ser fácil de remover
- i. Ter um encaixe seguro. que não desencaixe facilmente e transmita segurança (apenas para sistemas de duas peças)
- j. Ter uma placa fácil de cortar e uma tesoura adequada
- k. Não fazer barulhos/ruídos
- l. Ter um saco que não enche de ar
- m. Ter um saco flexível
- n. Ter várias opções de tamanho
- o. Ter um saco da cor da minha pele
- p. Ter um saco que não encha de repente
- q. Ser de uma marca conhecida
- r. Ser indicado por um conhecido
- s. Ser leve
- t. A marca me oferecer um programa de apoio
- u. Outro
- v. Outro
- w. Outro

Há mais alguma coisa que queira partilhar que possa ser relevante sobre a escolha dos dispositivos?
(Pergunta aberta).

