

## KANO Model: A study to identify important attributes for customer satisfaction in a shoe store

Gustavo Alves Pereira<sup>1</sup>, Federal University of Sergipe, Aracaju, Brazil  
Wiliam Santos Souza<sup>2</sup>, Federal University of Sergipe, Aracaju, Brazil  
Willyans Santos de Jesus<sup>3</sup>, Federal University of Sergipe, Aracaju, Brazil  
Emerson Cleister Lima Muniz<sup>4</sup>, Federal University of Sergipe, Aracaju, Brazil  
João Artur de Souza<sup>5</sup>, Federal University of Santa Catarina, Florianópolis, Brazil

### RESUMO

**Objetivo** – Identificar quais requisitos são mais importantes para geração da satisfação de clientes de uma empresa do ramo de calçados, por meio da aplicação do Modelo de KANO.

**Desenho / metodologia / abordagem** – Aplicou-se questionário por amostragem não probabilística para coleta de informações, criado com base na literatura sobre o tema em estudo. Para garantir sua confiabilidade aplicou-se  $\alpha$  de Cronbach como parâmetro. Para análise e categorização dos requisitos a pesquisa seguiu as diretrizes do Modelo de Kano.

**Resultados** – Constata-se enquadramento dos requisitos em atributos obrigatórios, unidimensionais e atrativos. Destes, os atributos obrigatórios, essenciais à garantia da satisfação dos clientes, já vem sendo priorizado pela gestão. Constatou-se também que as estratégias utilizadas pela empresa atendem cerca de 88% dos requisitos identificados.

**Originalidade/Valor** – A identificação prévia dos principais requisitos dos clientes no setor de atuação da empresa, sua análise detalhada e categorização em atributos é a chave de valor da pesquisa, trazendo benefícios diretos à gestão e seus clientes. Os resultados permitiram à gestão visualizar analiticamente quais das suas ações contribuem diretamente na satisfação dos clientes. E quais demandavam esforço conjunto da empresa, porém sem agregar muito valor na satisfação dos clientes. Isto, por sua vez, contribui diretamente no melhor alinhamento estratégico das ações da empresa, que agora priorizam a entrega e melhoria de produtos/serviços que beneficiem todos os stakeholders.

**Palavras-chave** - Modelo de KANO. Satisfação de clientes. Loja de calçados. Melhoria dos serviços.

### ABSTRACT

**Purpose** – To identify which requirements are most important for generating customer satisfaction in a footwear company, through the application of the KANO Model.

**Design/methodology/approach** – A questionnaire was applied by non-probabilistic sampling to collect information, created based on the literature on the subject under study. To ensure its reliability, Cronbach's  $\alpha$  was applied as a parameter. For analysis and categorization of requirements, the research followed the guidelines of the Kano Model.

**Findings** – The requirements are framed in mandatory, one-dimensional and attractive attributes. Of these, the mandatory attributes, essential to guarantee customer satisfaction, have already been prioritized by management. It was also found that the strategies used by the company meet about 88% of the identified requirements.

**Originality/value** – The prior identification of the main customer requirements in the company's sector, its detailed analysis and categorization into attributes is the key value of the research, bringing direct benefits to management and its customers. The results allowed management to visualize analytically which of its actions directly contribute to customer satisfaction. And which demanded a joint effort from the company, but without adding much value to customer satisfaction. This, in turn, directly contributes to a better strategic alignment of the company's actions, which now prioritize the delivery and improvement of products/services that benefit all stakeholders.

**Keywords** - KANO model. Customer satisfaction. Shoes store. Service improvement.

1. gustavoavs23@gmail.com, <https://orcid.org/0000-0002-9039-8766>; 2. wiliam\_s.s@hotmail.com, <https://orcid.org/0000-0003-4895-6290>; 3. will.prod@yahoo.com.br, <https://orcid.org/0000-0002-8489-5408>; 4. eng.prod.emerson@gmail.com, <https://orcid.org/0000-0002-9233-0618>; 5. jartur@gmail.com, <https://orcid.org/0000-0002-7133-8944>.

PEREIRA, G.A.; SOUZA, W.S.; JESUS, W.S.; MUNIZ, E.C.L.; SOUZA, J.A. Kano Model: A study to identify important attributes for customer satisfaction in a shoe store **GEPROS. Gestão da Produção, Operações e Sistemas**, v.17, nº 1, p. 01 - 17, 2022.

DOI: <http://dx.doi.org/10.15675/gepros.v17i1.2616>

## 1. INTRODUCTION

Services gained strength, space and importance in the world economy from the 1980s onwards (FREITAS, 2001). According to the Continuous National Household Sample Survey – “PNAD Contínua”, by the Brazilian Institute of Geography and Statistics -IBGE, in the second quarter of 2016 about 67.7% of the Brazilian population worked in the tertiary sector (services), highlighting although this sector is made up of 62.4 million workers, thus demonstrating its strength in the Brazilian economy (IBGE, 2016).

For service companies to achieve success and longevity, it is necessary to dedicate themselves a good deal to the satisfaction of their customers, as this satisfaction will attract new customers, in addition to retaining the older ones. Thus, Shemwell *et al.* (1998) emphasizes that this satisfaction is the result of the quality of the services offered, structuring itself as fundamental to achieve a competitive advantage. On the other hand, Tontini and Sant'ana (2007) state that in order to achieve satisfaction, the company must have a good performance of all its attributes and, consequently, meet the implicit and explicit needs of its customers.

In the same context, Kotler (2000) points out that dissatisfied consumers report their negative experiences to more than twice the number of people who report positive experiences. Therefore, keeping the level of customer satisfaction high is of paramount importance for companies in this sector. Given this context, there are several tools in the literature that can be used in order to identify the main attributes that generate customer satisfaction.

Among these, we can mention the model proposed by Noriaki Kano (KANO *et al.*, 1984), which seeks to classify and prioritize customer needs based on how they affect customer satisfaction. This tool is able to identify the attributes, that is, which characteristics are most important for customer satisfaction, allowing the company to get to know its customers better and to choose different competitive strategies. In view of the above, this article seeks to identify which requirements are most important for generating customer satisfaction in a footwear company located in the city of Itabaiana in the state of Sergipe, through the application of the KANO Model.

## 2. THEORETICAL FOUNDATION

### 2.1 Customer satisfaction

Over the years, quality and satisfaction have been linked to manufactured products and consumer goods, however, with the growth in the service sector, there has been a great increase in the interest in studying customer satisfaction in this area. Johnston (2001) states that since the origins of marketing, customer satisfaction has been considered a key part of business success, as it is the starting point for customer loyalty. Paladini (1997) states that consumer satisfaction is one of the basic objectives of the company, being corroborated by Kotler (2000) when stating that satisfaction will depend on the performance of the service in relation to their expectations. In addition, Lima (2006) states that it is the main success factor of a company.

In view of this, some items are necessary to achieve satisfaction with consumers, such as good service, varied mix of products, good infrastructure and even the location where the store is situated can be mentioned. In addition, Sampaio *et al.* (2009) adds that an easy location, organized environment, adequate lighting and a good display of goods also bring benefits. Parente and Barki (2008) point out that clients still consider the effort and financial expense of commuting.

In the footwear sector, the focus of this work, Alves and Moyano (2016) highlight as main elements in customer satisfaction the service time, general service, air conditioning, location, fashion trend, product quality, among others. Garcia (2013) highlights safety, internal environment, product quality and technical knowledge about them. In addition to these, the price of products and parking area are also mentioned.

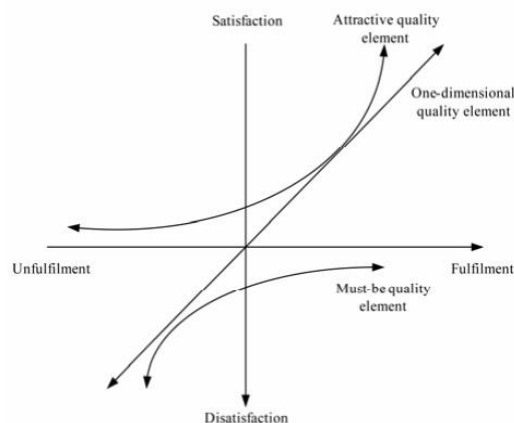
### 2.2 The KANO model

Researchers traditionally believed that satisfaction was proportional to the level of performance, that is, the higher the performance of the service, the greater the customer satisfaction and the lower the performance, the lower the satisfaction, this concept being known as one-dimensional quality theory (CHEN; CHUANG, 2008). In addition to this theory, Kano *et al.* (1984) revealed an asymmetric and non-linear relationship between satisfaction and performance, thus proposing a two-dimensional theory of quality, and generating its model.

Created by Noriaki Kano in 1970, the KANO Model describes the relationship between two important aspects for consumer satisfaction: the objective and the subjective (KANO et al., 1984). The first relates to performance and the second to customer satisfaction, both having a two-dimensional point of view and based on the ideas of philosophers such as Aristotle and John Locke (PICCOLO, 2005).

The model evaluates the characteristics of objective aspects (functional and dysfunctional) and five possible attributes: mandatory, attractive, one-dimensional, neutral and reverse, as shown in Figure 1. The model uses an orthogonal axis system to describe the relationship between customer satisfaction and functions and characteristics of the product/service (LIAO *et al.*, 2015).

**Figure 1 - KANO Model**



Source: Adapted from Tontini (2003).

As can be seen in Figure 1, the attributes do not have a linear variation of the result, and this characterizes the two-dimensional analysis present in the model. Using this method, it is possible to verify the attributes that need to be improved and identify which ones do not add value to the customer. However, Tontini (2003) points out that the KANO model does not assess the level of customer satisfaction, it only knows those elements that can contribute to it.

In analyzing the attributes, the mandatory ones (M) are recognized by customers as prerequisites of the product or service, but when not present or not met, they generate extreme consumer dissatisfaction. The one-dimensional (U) is positively and linearly related to customer satisfaction, the more you have, the more satisfied and vice versa. Attractiveness

(A) is linked to characteristics with greater influence on customer satisfaction with a particular product. Neutral (N) is a requirement that is not essential for the user and the presence or absence will not cause satisfaction or dissatisfaction. The reverse, when present, will result in dissatisfaction and its absence brings satisfaction (LEE; HUANG, 2009; VIOLANTE; VEZZETTI, 2017; TONTINI, 2003; ROOS *et al.*, 2009).

The application of the KANO Model is divided into four steps: identification of attributes (application of qualitative research to restrict the number of items to be studied); construction of the questionnaire (aims to specify the identified attributes); classification of attributes (via a combination of functional and dysfunctional responses) and the construction, for each interviewee, of a summary table with the counts and percentages of each attribute (BERGER *et al.*, 1993; FIGUEREDO, 2005).

And if the percentage results are close, causing ambiguity in the interpretation, Matzler *et al.* (1996) proposes the use of the following tie-breaking sequence “M>O>A>N”. Another classification method is the one proposed by Berger *et al.* (1993), called Customer Satisfaction Coefficient, CSC, which indicates the percentage of consumers who are satisfied with the fulfillment or sufficiency of a requirement and customers who are dissatisfied with the lack or insufficiency of this requirement.

The CSC is determined through the Coefficient of Satisfaction (CS) and Coefficient of Dissatisfaction (CI). In summary, this coefficient indicates the importance that the requirement has on customer satisfaction or dissatisfaction (TONTINI, 2003) and can be calculated according to Equations 1 and 2.

$$CS = \frac{\%A + \%O}{\%A + \%O + \%M + \%N} \quad (1)$$

$$CI = \left( \frac{\%O + \%M}{\%A + \%O + \%M + \%N} \right) * (-1) \quad (2)$$

They will help to determine the degree of influence that each attribute influences on customer satisfaction, showing how satisfied/dissatisfied customers are, highlighting that the negative value in CI reinforces the dissatisfaction being measured (TONTINI, 2003).

### **3. METHODOLOGICAL PROCEDURES**

#### **3.1. Research Characterization**

The procedure adopted in this research occurs through a study in the literature on customer satisfaction and retail trade, aiming to support the study and identify more attractive attributes for consumer satisfaction. Thus, the work was carried out in the municipality of Itabaiana, state of Sergipe, with customers of a shoe store.

Therefore, the research aims to identify elements that may or may not contribute to customer satisfaction, classifying it as exploratory and descriptive. Mattar (1996) states that exploratory research aims to promote greater knowledge about a topic, in addition to being appropriate for the first stages of investigation.

The research is descriptive, because according to Barros and Lehfeld (2007) in this type of research, the study, analysis, recording and interpretation of the facts of the physical world are carried out without the interference of the researcher. In addition, questionnaires were used for data collection, as according to Gil (2002) it is one of the fastest and cheapest means of obtaining information, in addition to not requiring personnel training and guaranteeing the anonymity of those who are responding.

#### **3.2. Population and Sample**

Sampling is a very important step in the development of research and its concept refers to the collection of data related to some elements of the population and its analysis (MATTAR, 1996). And for this research, a non-probabilistic sampling was used for accessibility and convenience, due to the fact that the population studied was not fully known, given that the company has customers from several municipalities surrounding its location. According to Gonçalves (2009), non-probability sampling is more indicated, since there is an operational restriction in relation to the use of probability sampling.

As for data collection, it took place between December/2017 and January/2018, being applied online and in person with customers present in the store. In all, 184 responses were obtained, 110 of which were physical and 74 online.

#### **3.3. Steps Taken in Research**

Initially, a bibliographic research was carried out to deepen the study topic in national and international articles and journals, theses, dissertations and periodicals. Subsequently, the

dimensions and requirements to be analyzed by customers were raised, totaling 22 requirements divided into five dimensions, as illustrated in Table 1.

**Table 1-** Dimensions and Requirements Surveyed

Dimensions	Requirements
Service	Qualified employees
	Helpful staff for resolving issues or complaints
	Number of employees available for service
	Good looking employees
Price	Competitive pricing
	Granting of discounts
	Promotions offer
Structure	Site maintenance and cleaning
	Air conditioning
	Product exhibition
	Store location
	Security of the neighborhood in which the store is located
Facilities	Store size
	Free Wifi
	Interactive social network
	Opening hours (open at lunchtime)
	Exchanges and returns policies (exchange facilities)
	Advertisements and disclosures
Tangibles	Variety of payments (card, installment, cash)
	New offer
	Availability of different brands
	Product mix

Source: Prepared by the authors.

In possession of the dimensions, a questionnaire divided into three blocks was structured, where the first analyzed the profile of the interviewees, the second analyzed the functional part and the third the dysfunctional part of each requirement. Questionnaire responses were based on the method used by Berger *et al.* (1993) and Tontini (2003), where there are five items for functional and dysfunctional responses, ranging from 1- Satisfied to 5- Dissatisfied.

After application of the questionnaire, the analysis and combination of functional and dysfunctional responses were performed, which were analyzed individually and categorized following the same model used by Berger *et al.* (1993). For the analysis and classification of each requirement, the attribute that received the highest percentage was taken into account. However, when the differences in values for each requirement is higher, automatically it is noticed which category the attribute fits into. However, for occasions when this does not

happen, the research used the scale proposed by Matzler *et al.* (1996) and exposed in section 3.

To analyze the reliability of the research instrument, the work used Cronbach's  $\alpha$  as a parameter, which measures the correlation between responses through the analysis of the response profile, allowing to determine the extent to which the items are related to each other (CORRAR *et al.*, 2007; HORA *et al.*, 2010). To classify the reliability of the questionnaire, the classification by Freitas and Rodrigues (2005) illustrated in Table 2 was used.

**Table 2 - Reliability Rating**

Reliability	Very low	Low	Moderate	High	Very high
		$0,30 \leq \alpha \leq$	$0,60 \leq \alpha \leq$	$0,75 \leq \alpha \leq$	
<b>Value of <math>\alpha</math></b>	$\alpha < 0,30$	0,60	0,75	0,90	$\alpha \geq 0,90$

Source: Adapted from Freitas and Rodrigues (2005).

From Table 2,  $\alpha$  greater than 0.60 will be considered satisfactory, however, the decision regarding the minimum desired value of reliability will depend on each researcher. However, the higher this index, the greater the degree of reliability of the instrument.

#### 4. RESULTS AND DISCUSSION

First, the  $\alpha$  values were calculated for both the functional and dysfunctional forms of the questionnaire. For the functional, an  $\alpha$  of 85.8% was obtained, thus implying a high reliability, while for the dysfunctional, the degree of reliability of the questionnaire was very high, with a value of 96.2%, which validates the questionnaire applied.

As for the analysis of the interviewees, it can be seen that most clients identify themselves as women (65.40%), predominantly married, with a family income of up to 03 minimum wages and a median age of 30 years. In addition, it was found that the majority of the public comes from the city of the store and got to know it through "word of mouth" advertising. In this way, strategies to achieve this profile can be adopted, highlighting the need for greater investments in women's products, with an affordable selling price, thus fitting into the budget of the majority of the company's public, in addition to products for a younger profile.



Through this first analysis, it can be seen that some strategies applied by the company were not producing the expected result, such as investments in advertising, for example, given that most customers know the store through other people. Thus, the expenditure on this advertising can be allocated to other strategies, such as the stronger use of social networks, as these can intensify the word-of-mouth dissemination perceived in the sample.

#### 4.1. Analysis and classification of requirements

Initially, the 22 analyzed requirements were classified based on the method exposed in Tontini (2003), which combines functional and dysfunctional responses individually. Thus, table 3 presents the classified attributes.

**Table 3** - presents the classified attributes.

Requirements	A	O	M	N	R	Cat
1- Qualified employees	7%	78%	12%	3%	0%	O
2- Helpful staff for problem solving	5%	59%	33%	2%	0%	O
3- Number of employees available for service	40%	39%	9%	13%	0%	A
4- Good looking employees	9%	41%	39%	11%	0%	O
5- Competitive pricing	12%	38%	40%	10%	0%	M
6- Granting of discounts	17%	68%	11%	4%	0%	O
7- Promotions offer	26%	59%	11%	4%	0%	O
8- Site maintenance and cleaning	7%	34%	55%	4%	0%	M
9- Air conditioning	52%	24%	11%	13%	0%	A
10- Product exhibition	17%	54%	23%	5%	0%	O
11- Store location	43%	36%	5%	16%	0%	A
12- Security of the neighborhood in which the store is located	13%	57%	20%	11%	0%	O
13- Store size	26%	52%	12%	11%	0%	O
14- Free Wifi	39%	18%	5%	38%	0%	A
15- Interactive social network	45%	24%	10%	21%	0%	A
16- Opening hours (open at lunchtime)	35%	34%	5%	26%	0%	A
17- Exchanges and returns policies (exchange facilities)	9%	60%	24%	7%	0%	O

18	Advertisements and disclosures	30	29	4%	37	0	
-		%	%		%	%	N
19	Variety of payments (card, installment, cash)		60	27		0	
-		9%	%	%	4%	%	O
20	New offer	13	63	22		0	
-		%	%	%	2%	%	O
21	Availability of different brands	13	60	22		0	
-		%	%	%	5%	%	O
22	Product mix	10	63	23		0	
-		%	%	%	4%	%	O

Source: Prepared by the authors.

From Table 3, it can be seen that some are classified directly because they have scores greater than 50%, thus being classified automatically. However, requirements 3, 4, 5, 11, 14, 16, 18 could not be classified at this first moment since the percentages obtained were very close. To solve this problem, we used the satisfaction and dissatisfaction coefficients of Berger *et al.* (1993) and shown in Table 4.

**Table 4 - Customer rating coefficient**

Requirements	CS	CI
1- Qualified employees	0,848	0,897
2- Helpful staff for problem solving	0,647	0,924
3- Number of employees available for service	0,783	0,478
4- Good looking employees	0,505	0,799
5- Competitive pricing	0,500	0,777
6- Granting of discounts	0,853	0,788
7- Promotions offer	0,848	0,701
8- Site maintenance and cleaning	0,402	0,888
9- Air conditioning	0,761	0,348
10- Product exhibition	0,717	0,772
11- Store location	0,793	0,413
12- Security of the neighborhood in which the store is located	0,690	0,766
13- Store size	0,772	0,636
14- Free Wifi	0,571	0,239
15- Interactive social network	0,690	0,343
16- Opening hours (open at lunchtime)	0,696	-

GEPROS. Gestão da Produção, Operações e Sistemas, v.17, n. 1, p. 01-17, 2022.

-			0,391
17	Exchanges and returns policies (exchange facilities)	0,690	0,848
-			-
18	Advertisements and disclosures	0,587	0,332
-			-
19	Variety of payments (card, installment, cash)	0,690	0,864
-			-
20	New offer	0,761	0,853
-			-
21	Availability of different brands	0,728	0,821
-			-
22	Product mix	0,728	0,859
-			-

Source: Prepared by the authors.

To classify each item, the classification of requirements was used through their coefficients exposed in Table 5, which was created from the studies by Sauerwein *et al.* (1996), Tontini (2003) and Roos *et al.* (2009).

**Table 5 - CSC Classification**

Classification	CS	CI
One-dimensional	> 0,5	< -0,5
Attractive	> 0,5	> -0,5
Mandatory	< 0,5	< -0,5
Neutral	< 0,5	> -0,5

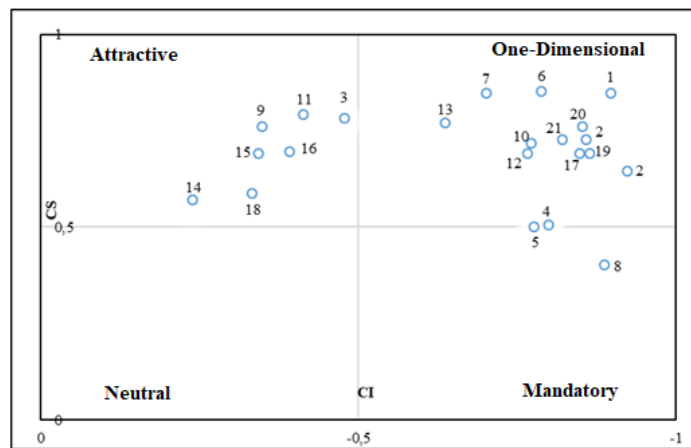
Fonte: Sauerwein *et al.* (1996), Tontini (2003) e Roos *et al.* (2009).

Through the data in Table 3 and analyzing the results of the requirements in Table 4, starting with requirement 3, it is observed that it presented itself as attractive and unidimensional in its classification. This item has a satisfaction level of 0.783, that is, its presence generates satisfaction in 78.3% of customers. The dissatisfaction coefficient -0.478, on the other hand, implies that the same requirement generates dissatisfaction in 47.8% of customers if the company does not present it. Thus, according to Table 5, this requirement can be treated as attractive, as its satisfaction coefficient is greater than 0.5 and its dissatisfaction coefficient is greater than 0.5.

Requirement 11 generates satisfaction in 79.3% and dissatisfaction in 41.3%, while requirement 14 causes satisfaction in 57.1% and dissatisfaction in 23.9%. In addition to these, requirement 16 generates satisfaction in 69.6% of customers and dissatisfaction in 39.1%, thus allowing to classify all these requirements as attractive attributes.

When analyzing requirement 18, it can be seen that it presented similar percentages in Table 4, making its analysis difficult, as 58.7% of customers perceive satisfaction and dissatisfaction in 33.2%. Thus, to better analyze these classifications, a scatter plot was created based on the discussions by Tontini (2003), which is illustrated in Figure 2.

**Figura 2 - Requirements Scatter Chart**



Source: Prepared by the authors.

Even after applying the customer satisfaction coefficient and the scatter plot, two requirements still showed difficulty in classifying, namely requirements 4 and 5, as they are concentrated on the horizontal axis. Thus, the scale proposed by Matzler *et al.*, (1996) was used, which suggests the classification  $M > O > A > N$ . Through this, the requirements were then classified as mandatory attributes and Table 6 presents the final classification of requirements.

**Table 6 - Classification of requirements**

	<b>Requirements</b>	<b>Attribute</b>
1	Qualified employees	O
2	Helpful staff for resolving issues or complaints	O
3	Number of employees available for service	A
4	Good looking employees	M
5	Competitive pricing	M
6	Granting of discounts	O
7	Promotions offer	O
8	Site maintenance and cleaning	M
9	Air conditioning	A
10	Product exhibition	O
11	Store location	A

1 2	Security of the neighborhood in which the store is located	O
1 3	Store size	O
1 4	Free Wifi	A
1 5	Interactive social network	A
1 6	Opening hours (open at lunchtime)	A
1 7	Exchanges and returns policies (exchange facilities)	O
1 8	Advertisements and disclosures	A
1 9	Variety of payments (card, installment, cash)	O
2 0	New offer	O
2 1	Availability of different brands	O
2 2	Product mix	O

Source: Prepared by the authors.

After applying different methods to classify the 22 analyzed requirements, it can be seen that most of them fit as one-dimensional (54.54%), which in turn implies the need for a careful observation of these requirements, since the improvement and their constant maintenance are directly perceived by customers. Attractive attributes represented 31.8% of the total, while mandatory attributes corresponded to only 13.63% of the total. In this sense, it is also observed that the attractive attributes have good representation, thus being important for increasing satisfaction, since they are not expected by the customer and provide a higher level of satisfaction if present.

In general, it is essential to highlight that no requirement was classified as a reverse or neutral attribute, however, it is important to note that the reverse attributes are not taken into account when calculating the CSC, but since the first analysis, no requirement was included in this classification. In the neutral classification, requirement 18 obtained the highest percentage to be classified as one, however, after analyzing it through the Satisfaction Coefficient and the scatter plot, it was found that this requirement was attractive, since 58.7% of the customers would be dissatisfied with your absence rather than your presence.

## 6. CONCLUSION

After the research and analysis, it was possible to better understand the company's customers through the KANO model, knowing the profile of consumers and the requirements that are responsible for bringing satisfaction to them. Ensuring the excellence and presence of these requirements is extremely important for greater satisfaction to be achieved.

With the application of the KANO model and the analysis of the customer satisfaction coefficient, it was found that most company attributes are classified as one-dimensional, that is, the higher the performance of this attribute, the greater the customer satisfaction and vice-versa. Thus, there must be great attention to these, so that the insufficiency of the service does not generate dissatisfaction.

Attractive attributes also gained prominence in the survey, totaling 31.8% of the items surveyed. This type of attribute is important in maintaining and obtaining new customers, as they are treated as differentials for a company. In this context, investing in elements that were considered “attractive” will help to attract a new range of customers, in addition to generating great satisfaction, as the customer did not expect to receive these attributes.

As for the mandatory attributes, it is concluded that three were in this classification, which in turn, are attributes of great value to the company due to the great dissatisfaction with their absence. With this, attention should be focused so that these attributes do not fail, avoiding great consumer dissatisfaction. At work, it is noted that even without knowing the mandatory attributes, the company was already concerned and invested in these.

Finally, it is important to realize that the research achieved its main objective, as it identified the main attributes responsible for customer satisfaction through the application of the KANO model, which will help the manager to make specific investments for his company, as well as produce a more structured analysis.

For future work, it is suggested to apply it to other stores in the same city, in order to understand the position that the current company has against its competitors with regard to meeting customer requirements. As well as a survey to compare the most important attributes of each company, observing how their respective customers analyze each store.

## References

- ALVES, L.; MOYANO, C. A. M. **Avaliação Da Satisfação Das Consumidoras Do Varejo de Roupas e Calçados Feminino de Candelária/RS**. XI Seminário Interinstitucional de Pesquisa em Administração. UCS, Caxias do Sul, 2016. Disponível em: <http://www.ucs.br/etc/conferencias/index.php/mostraucspgga/sipad11/paper/viewFile/4787/1500>. Acesso em: 17 abr. 2019.
- BARROS, A. J. S.; LEHFELD, N. A. S. A pesquisa e a iniciação científicas. *NAS*, p. 81-104, 2007.
- BERGER, C. *et al.* KANO's methods for understanding customer-defined quality. *Center for Quality Management Journal*, v.2, n.4, p.3-35, 1993.
- CHEN, C.C.; CHUANG, M.C. Integrating the Kano model into a robust design approach to enhance customer satisfaction with product design. *International Journal of Production Economics*, v. 114, p. 667-681, 2008.
- CORRAR, L. J.; PAULO, E.; DIAS FILHO, J. M. **Análise multivariada: para os cursos de administração, ciências contábeis e economia**. São Paulo: Atlas, 2007.
- FIGUEREDO, M. S. **Percepções sobre os atributos de qualidade da associação educacional do Vale do Itajaí Mirim a partir da integração dos modelos SERVQUAL e KANO**. Dissertação (Mestrado em Programa de Pós-Graduação em Administração) – Fundação Universidade Regional de Blumenau. 165 p., 2005.
- FREITAS, A. L. P., **Uma Metodologia Multicritério de Subordinação para a Classificação da Qualidade de Serviços sob a Ótica do Cliente**, Tese de Doutorado - Programa de Pós-Graduação em Ciências de Engenharia - UENF, jul 2001.
- FREITAS, A. L. P.; RODRIGUES, S. G. Avaliação da Confiabilidade de Questionários: uma Análise Utilizando o Coeficiente de Alpha de Cronbach. In: SIMPÓSIO DE ENGENHARIA DE PRODUÇÃO. *Anais...* XII SIMPEP, Bauru, SP, Brasil, 2005.
- GARCIA, E. F. L. **Qualidade Percebida dos Serviços Prestados no Varejo do Vestuário na Cidade de Natal/RN**. Natal, RN, 2013. Dissertação (Mestrado), Universidade Potiguar, Programa de Pós-graduação em Administração, 2013.
- GIL, A. C. **Como elaborar projetos de pesquisa**. 4.ed. São Paulo: Atlas, 2002.
- HORA, H. R. M. da.; MONTEIRO, G. T. R.; ARICA, J. Confiabilidade em questionários para qualidade: um estudo como coeficiente alfa de Cronbach. *Produto e Produção*. Porto Alegre, v. 11, n. 2, p. 85 - 103, 2010.
- GONÇALVES, J. B. **Amostragem: conceitos básicos**. 2009. Disponível em: <http://www.ebah.com.br/content/ABAAAAVCsAA/amostragem>. Acesso em: 10 nov 2017.
- IBGE – Instituto Brasileiro de Geografia e Estatística. **Pesquisa Nacional por Amostra de Domicílios Contínua**, 2016. Disponível em: [www.ibge.gov.br](http://www.ibge.gov.br). Acesso em: 10 set 2017.
- JOHNSTON, R. Linking Complaint Management to Profit. *International Journal of Service Industry Management*, v. 12, n.1, p. 60-69, 2001.

- KANO, N., SERAKU, N., TAKAHASHI, F., TSUJI, S. Attractive quality and must-be quality. **The Journal of the Japanese Society for Quality Control**, v. 14, n. 2, p. 39-48, 1984.
- KOTLER, P. **Administração de marketing**: a edição do novo milênio. São Paulo: Prentice Hall, 2000.
- LEE, C. Y., HUANG, S. Y. A new fuzzy concept approach for Kano's model. **Expert Systems with Applications**, v. 36, p. 4479–4484, 2009.
- LIAO, Y., YANG, C., LI, W. Extension Innovation Design of Product Family Based on Kano Requirement Model. **Procedia Computer Science**, v. 55, p. 268-277, 2015.
- LIMA, A. **Gestão de Marketing Direto: da conquista ao relacionamento com o cliente**. São Paulo: Atlas, 2006.
- MATTAR, F. **Pesquisa de marketing**. Ed. Atlas. 1996.
- MATZLER, K.; HINTERHUBER, H. H.; BAILOM, F.; SAUERWEIN, E. How to delight your customers. **Journal of Product & Brand Management**, v.5, n.2, p.6-18, 1996.
- PARENTE, J. G., BARKI, E. **Valor no varejo direcionado ao segmento de baixa renda**. Porto Alegre: Bookman, 2008.
- PALADINI, E. P. **Qualidade Total na Prática: implantação e avaliação de sistemas de qualidade total**. São Paulo: Atlas. 1997.
- PICOLO, J. D. **Influência do desempenho de atributos de produtos ou serviços na satisfação dos clientes**: uma análise comparativa entre diferentes técnicas de pesquisa. Dissertação (Mestrado em Programa de Pós-Graduação em Administração) – Fundação Universidade Regional de Blumenau. 196 p., 2005.
- ROOS, CRISTIANO; SARTORI, SIMONE; GODOY, LEONI PENTIADO. Modelo de KANO para a identificação de atributos capazes de superar as expectativas do cliente. **Revista Produção Online**, v. 9, n. 3, 2009.
- SAMPAIO, C. H; SANZI, G; SLONGO, L; PERIN, M. G. Fatores visuais de design e sua influência nos valores de compra do consumidor. **RAE-Revista de Administração de Empresas**, v. 49, n. 4, p. 373-386, 2009.
- SAUERWEIN, E. *et al.* The KANO Model: How to Delight Your Customers. **International Working Seminar on Production Economics**, v.1, p.313-327, 1996.
- SHEMWEILL, D.J.; YAVAS, U.; BILGIN, Z. Customer-service provider relationships: na empirical test of a model of service quality, satisfaction and relationship-oriented outcome. **International Journal of Service Industry Management**, v. 9, n. 2, p. 166-168, 1998.
- TONTINI, G. Como identificar atributos atrativos e obrigatórios para o consumidor. **Revista de Negócios**, Blumenau, v. 8, n.1, p. 19-28, 2003.
- TONTINI, G.; SANT'ANA, A. Identificação de atributos críticos de satisfação em um serviço através da análise competitiva do Gap de melhoria. **Gestão & Produção**. São Carlos, v. 14, n. 1, p.43-54, 2007.



VIOLANTE, M. G; VEZZETTI, E. Kano qualitative vs quantitative approaches: An assessment framework for products attributes analysis. **Computers in Industry**, v. 86, p. 15–25, 2017.